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ENTREPRENEURIAL BEHAVIOUR OF DISADVANTAGED URBAN YOUTH:

A STUDY OF THE EFFECTS OF AN EXPERIENTIAL INTERVENTION.

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A thesis submitted to the Faculty of Management, Department of Business Administration, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Philosophy.

Johannesburg 1993

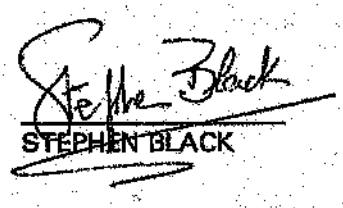
DECLARATION

I Declare that this thesis entitled:

ENTREFRENEURIAL BEHAVIOUR OF DISADVANTAGED URBAN YOUTH:

A STUDY OF THE EFFECTS OF AN EXPERIENTIAL INTERVENTION

is my own, unaided work. It is being submitted for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.



STEPHEN BLACK

Thirteenth Day of September, 1993

ABSTRACT

Disadvantaged students in the last few months of their matriculation studies, and afterwards in the transition stages of their career development, were the subjects of this research. The emphasis is on those young adults who were not able to go to a tertiary education institute, or to get permanent employment.

The very depressed economic conditions of recent times has resulted in increased unemployment in the black community in particular. The identification and development of entrepreneurial talent in this community is of prime importance. The formal sector cannot make a meaningful contribution to the unemployment situation. This research has developed an experiential intervention which serves as a model to encourage informal business development. It is based upon the initiation and running of a mini-business by high school students, conducted extra curricularly, and known as the Junior Achievement programme.

The study measured the increase in the achievement motivation values and internality of the Experimental Group due to the intervention, compared with a Control, using various validated instruments. There was a positive

change in the motivational values of the Experimental compared with the Control students. The males in the former increased their internality compared with the females in the two groups. It was also established that there was an increase in business knowledge between those in the intervention and the rest of the participants.

The results of the application of the skills as well as the knowledge gained 1-2 years after the main inputs had been given confirmed the effectiveness of the intervention interest. The business ventures established by the Experimental entrepreneurs were the result of a better understanding of the elements needed in the formation of a new business. A similar understanding of what is needed to set up a new venture was not displayed by the entrepreneurs in the Control Group. This finding demonstrates the value of the experiential method of learning.

Two results which explained to some extent contradictory previous findings were obtained involving all of the students in the study. In the first it was found that the males were more pro-active and self-reliant than the females (i.e. more internal). In the second, business owners were found to be significantly different using measures of time awareness, action orientation and goal

directedness compared with non-entrepreneurs. In addition, the business owners were more internally orientated compared with the others in the study.

The outcomes of the research demonstrated an increase of entrepreneurial behaviour in the young persons as a result of the intervention. There is evidence that the matriculation results of the Experimental Group were better than those of the Control. It was an objective of the study to make the recipients of the inputs more enterprising and to empower them to take charge of their lives. The statistical evidence, the results of field visits, student interviews and the ex-students' career aspirations provide evidence that the increase in motivational values and internality did take place.

The research provides the first quantitative measure of what urban disadvantaged school leavers do with their time, what they aspire to, their family circumstances, and what they do to make a little money.

KEY WORDS

ACHIEVEMENT MOTIVATION; DISADVANTAGED YOUTH,

BLACK MATRICULANTS; INFORMAL BUSINESS DEVELOPMENT,

CAREER DEVELOPMENT; YOUTH,

ENTERPRISE,

ENTREPRENEURIAL PERSONALITY TRAITS,

ENTREPRENEURSHIP,

EXPERIENTIAL BUSINESS EDUCATION,

EXPERIENTIAL MODEL; INFORMAL BUSINESS DEVELOPMENT,

JUNIOR ACHIEVEMENT,

LOCUS OF CONTROL,

URBAN DISADVANTAGED YOUTH.

NOTE: ON THE USE OF UPPER AND LOWER-CASE LETTERS IN DESIGNATING RACE.

This is a subject of considerable debate in South Africa at the present time. The lower-case letters "b" "c" and "w" for blacks, "co-called" coloureds and whites respectively are used throughout this thesis. This is for purposes of stylistic simplicity only and no other connotations are intended.

DEDICATED

to

My wife Sheila

ACKNOWLEDGEMENTS

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C O N T E N T S

CHAPTER 1: BACKGROUND TO THE RESEARCH

		Page
1.1	Introduction	1
1.2	The Changing Environment	3
1.3	World Economic Trends and Employment in South Africa	8
1.4	The Challenge for Education	14
1.5	Unemployment	22
1.6	Urbanization: The Extent of the Problem	29
1.6.1	Urbanization and Township Life	30
1.7	Situational Factors of Township Businesses	37
1.7.1	Unemployment and the Black Informal Sector	38
1.7.2	Township Formal and Informal Businesses	48
1.7.3	Black Business and Legal Restrictions	48
1.7.4	Black Business and the Community	58
1.8	Solutions to the Problems of Youth	63
1.8.1	Education and Enterprise	64
1.8.2	Enterprise and Entrepreneurship	68
1.9	Entrepreneurial Characteristics	69
1.10	Research Objectives	75
1.11	Research Problems and Hypotheses	76
1.12	Research Summary	78

CHAPTER 2: LITERATURE SURVEY

		Page
2.1	Introduction	81
2.2	Individual Characteristics and Entrepreneurship	84
2.2.1	The Trait Approach	85
2.2.2	The Behavioural Approach	86
2.2.3	The Contingency Approach	89
2.3	General Personality Characteristics and Entrepreneurial Success	89
2.4	A Model for the Study of the Entrepreneurial Process	93
2.5	Entrepreneurship and Personality Traits	98
2.5.1	The Development of the Achievement Motivation Construct	98
2.5.2	The Achievement Motive and Entrepreneurship.	100
2.5.3	The Internal-External Locus of Control	113
2.5.4	The Relationship Between Locus of Control and Achievement Motivation	114
2.5.5	Locus of Control and Entrepreneurship	117
2.5.6	Youth, Black Entrepreneurship and Locus of Control	124
2.5.7	The Entrepreneur and Risk Taking Propensity	128
2.5.8	The Adaptive-Innovative Approach to Change	130
2.6.	Education and Enterprise	135
2.6.1	Concepts of Work Experience	146
2.6.2	Entrepreneurship and Young Persons	153
2.7	Chapter Summary	161

CHAPTER 3: A THEORETICAL MODEL FOR THE STUDY

		Page
3.1	Introduction	163
3.2	Psychological Characteristics of the Entrepreneur	164
3.2.1	The Achievement Motive	164
3.2.2	Development of the Achievement Motive Questionnaire (AMQ)	166
3.2.3	Dimensions of the AMQ	169
3.2.4	Reliability and Validity of the AMQ Construct	170
3.2.5	Rotter's Social Learning Theory	172
3.2.5.1	Development of Rotter's Construct	171
3.2.5.2	Reliability and Validity of Rotter's Construct	179
3.2.6	Kirton's Adaptive-Innovative Theory	180
3.2.6.1	Reliability and Validity of the KAI Instrument	184
3.3	The Research Model for a New Venture Initiation	185
3.3.1	The Credible Example	185
3.3.2	Business Resources	189
3.3.3	New Venture Initiation and the "Triggering Event"	191
3.3.4	New Venture Initiation and Psychological Characteristics	191

CHAPTER 4: RESEARCH METHODOLOGY

		Page
4.1.	Population Studied	193
4.1.1	Township areas selected	193
4.1.2	Proportion of Population Represented by Students Selected for the Research	196
4.2	Selection of Research Groups	199
4.2.1	Preliminary Student Selection Procedures	199
4.2.2	Sample Selection Procedure	201
4.3	Nature and Format of Research	203
4.4	Nature of the Intervention	210
4.4.1	Post-intervention Business Knowledge Test	215
4.4.2	Post-intervention Research	216
4.4.3	Individual Participant Interviews	218
4.4.4	Identification of Informal Businesses Established by the Participants in the Study	222
4.5	Data Collection and Preparation	225

CHAPTER 5: ANALYSIS OF VARIABLES - RESEARCH RESULTS

		Page
5.1	Data Analysis	228
5.1.1	Strategy Adopted for the Analyses	229
5.2.1	Testing of Hypothesis No 1	231
5.2.2	Testing of Hypothesis No. 2	235
5.2.3	Testing of Hypothesis No. 3	237
5.3	Study of Relationship between Independent and other Key Dependent Variables	239
5.3.1	Correlation of the Entrepreneur Business Owner with Key Variables	239
5.3.2	Comparison of Business Entrepreneurs with the Other Respondents	242
5.3.3	Relationship between Achievement Motivation Values (pre- and post-Intervention) and Key Variables	248
5.3.4	Relationship between Post-intervention Rotter Score (V29) and Key Variables	250
5.3.5	Relationship between the Experimental Group and Key Variables	252
5.3.6	Relationship between the Control Group and Key Variables	252
5.3.7	Relationship between Career Intentions and Key Variables	255
5.3.8	Relationship between Occupations and Key Variables	260
5.3.9	Relationship between Gender and Key Variables	264
5.4	Study of the Matriculation Results and the Impact of the Intervention	270

CHAPTER 6: DISCUSSIONS OF RESULTS

		Page
6.1	Summary of Research Findings	278
6.2	Answers to the Research Problems	279
6.2.1	Research Problem on the effect of the Intervention on the Participants' Personality Values, compared with the Control Group	280
6.2.2	Comparison of Descriptive Statistics for the Achievement Motivation Measurement (AM)	285
6.2.3	Rotter Locus of Control I-E Measurement Results	287
6.2.4	The Kirton Adaptive Innovative Measurements	288
6.2.5	Research Problem on the gain in Business Knowledge by the Experimental compared with the Control Group	292
6.2.6	Research Problem on the Understanding of the Elements required for a Business Venture	294
6.2.7	Research Problem on the Gender Differences on Rotter's Internality Measurement and Business Knowledge, as a result of the Intervention	295
6.3	Other Significant Outcomes of the Research	297
6.3.1	Relationship between the Entrepreneurs with Own Businesses and the remainder of the Research Participants	297
6.4	Results of Matriculation Examinations related to Key Variables	300
6.5	Participant Feed-back	301
6.5.1	Investigation of Informal Businesses	301
6.5.2	Post Intervention Student Interviews	303
6.5.3	Summary of Post Intervention Interview Findings	303
6.5.4	Activities since the Intervention Period	304
6.5.5	Near and Long Term Career Plans	307
6.5.6	Informal Activities	308

6.5.7	Family Details	309
6.5.8	General Observations and Interviews	310
6.6.	Chapter Conclusion	310

CHAPTER 7: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

7.1	The Economic Situation	312
7.1.1	The Educational Challenge	312
7.1.2	Unemployment and Urbanization	313
7.1.3	Urbanization and Township Life	314
7.2	Situational Factors	314
7.2.1	Legal Restrictions and Black Businesses	315
7.2.2	Black Business and the Community	316
7.3	Education and Enterprise as a Solution to the Problems of Youth	317
7.4	Entrepreneurial Characteristics	318
7.5	The Research Problems and Hypotheses	318
7.6	Literature Survey	320
7.6.1	The Achievement Motive and Entrepreneurship	320
7.6.2	Rotter's Internal-External Locus of Control	321
7.6.3	Personality Characteristics and Entrepreneurship Success	322
7.6.4	Kirton's Adaptive-Innovative Theory	323
7.6.5	Education, Enterprise and Entrepreneurship in Young Persons	323
7.7	A Theoretical Model for the Study	324
7.7.1	The Achievement Motive Questionnaire (AMQ) and Rotter's Internal-External Instrument	324
7.7.2	Kirton's Adaptive Innovative Theory (KAI)	325
7.7.3	The Study Research Model	326
7.8	Research Methodology	327

Chapter 7 continued

7.8.1	Research Population Studied and Methodology Employed	327
7.8.2	The Nature of the Intervention	327
7.9.	Analyses of Data	328
7.10	Limitations of the Research	332
7.11	Contribution to Knowledge	339
7.12	The Research Model	344
7.13	Recommendations for Further Research	344

LIST OF TABLES

No.	Title	Page
Chapter 1		
1.1	Factors Responsible for the Changing Socio-economic Patterns from the 1960's - 1980's	5
1.2	Matriculation Examination Results: Black Pupils versus White	16
1.3	Increase in Expenditure on Education by the State on Pupils of Different Races	20
1.4	Average Annual South African GDP Growth Rates	23
1.5	Analysis of South Africa's Economically Active Population	24
1.6	Comparison of the Economically and Non-economically Active Population	26
1.7	Analysis of Black Economically Active Persons and Unemployment	27
1.8	The Differentiation of the Roles in Urban and Rural Families	36
1.9	Involvement of the Black Population in the Informal Sector by Geographic Area	45
1.10	Comparison of Traditional and Progressive Educational Systems	65
Chapter 2		
2.1	Competencies which are Characteristic of Successful Entrepreneurs in India, Malawi and Ecuador	108
2.2	Review of Literature of Rotter's Locus of Control Theory and Entrepreneurship	123
2.3	Research Results for Selected Locus of Control Studies with Students	125
2.4	Behaviour Descriptions of Adaptors and Innovators	132
2.5	Some of the Outcomes of Enterprise Education	145
2.6	A Comparison of what Small Business Owner/Managers need to Know in Running a Successful Venture	158

Chapter 4

4.1	Number of Matriculants in Kwa Thema, Vosloorus and Soweto in 1988	194
4.2	Analysis of the Population Data for the Four Research Township Areas	197
4.3	Proportion of Matriculants in Research Areas to Total Population: 1988	198
4.4	Schedule of Research Activities	207

Chapter 5

5.1	Difference between Pre-intervention Values for Experimental and Control Groups for the AMQ, Rotter and KAI Tests	230
5.2	Differences between Pre and Post Intervention Values for the AMQ, Rotter tests and KAI tests: Comparison of Experimental and Control Groups	233
5.3	Distribution of Business Ownership	238
5.4	Correlation analysis: Business Ownership (V51) with Key Variables	240
5.5	Cross Tabulation of Business for Own Account (V42) with Business Ownership (V51)	240
5.6	Analysis of the Entrepreneurs in the Two Research Groups Compared with the Respondents who do not have their Own Businesses	243
5.7	Business Ownership (V51), Achievement Motivation (V27) and Business Knowledge (V38)	243
5.8	Differences between Post and Pre-intervention Values for the AMQ, Rotter and KAI Tests: Comparison of Business Owners and the Remainder of Participants	244
5.9	Comparison of Business Owners with the Remainder of Participants: KAI Score, Post-intervention (V37)	246
5.10	Achievement Motivation and Key Variables	249
5.11	Achievement Motivation and Age	249
5.12	Relationships Post Rotter and Key Variables	251

5.13 Rotter and Gender Differences: Pre and Post Values 251

5.14 Relationship between Experimental Group and Key Variables 253

5.15 Control Group and Key Variables 254

5.16 Career Aspiration and Interest Distribution 256

5.17 Occupation Distribution (Post-intervention) 261

5.18 Gender Distribution between Experimental and Control Groups 265

5.19 Analysis of Variance: Mean Differences Male and Female (Experimental Group) and Achievement Motive Values 265

5.20 Gender Differences in Experimental and Control Groups: Relationship with Key Variables 268

Chapter 6

6.1 Comparison of Previous Research Work on Achievement Motivation 286

6.2 Comparison of Previous Research Work with the Locus of Control Instrument 286

6.3 Comparison of Previous Research Work with the KAI Inventory 291

6.4 Resumé of Hypothesis Testing 298

6.5 Results of the Assessment of the 51 Informal Businesses Visited 302

6.6 Summary of Interviewed Student Details and Academic Performance 305

6.7 Academic Pursuits of Interviewed Students 306

Chapter 7

7.1 Study of Significant Relationships between Dependent and Key Independent Variables 330

LIST OF FIGURES

No	Title	Page
1.1	Model of Research Study	79
2.1	Entrepreneurial Behaviour Framework	92
2.2	The Process of Entrepreneurship	94
2.3	Person/Situation Influences on Entrepreneurship	97
2.4	Model of Enterprising Behaviours, Skills and Attributes	137
2.5	The Mini-company Learning Mode	142
2.6	The Learning Pyramid	144
2.7	A Linear Transition Model between School and Work	148
2.8	The Interactive Model of Transition between School and Work	151
3.1	Model of the Achievement Motivation Dimensions Relationships	168
3.2	Model of New Venture Initiation	186
5.1	Results of Matriculation Examination and Key Variables	271
7.1	Revised Model of Small Business Initiation	345

LIST OF APPENDICES

No.	Description	Page
1	Foreword on the Junior Achievement Programme.	374
	Description of the Junior Achievement Programme (JA)	376
2	Outline of the Activities and Learning Points of the JA Programme	378
3	Junior Achievement Programme:	
	Week 2 Agenda	379
	Week 3 Agenda	380
4	Junior Achievement Model of What a Business is	381
5	Junior Achievement Programme: Pricing and Costing	382
6	Matriculation Examination Results: Black Pupils versus White	383
7	Per Capita Expenditure on Education by the State on Pupils of Different Race Groups	384
8	Matriculation Results: Indexing of School Subjects, Grades and Symbols	385
9	Application Form for Students to Attend the Intervention Youth Enterprise	387
10	Questionnaire on Academic Performance, Occupation and Business Activity	389
11	Follow-up Questionnaire on Attendance at Tertiary Level Institutions, and/or Involvement in Economic or Other Actvities	391
12	Follow-up Questionnaire: Appeal Letter Sample	392
13	Participant Data Summary Sheet	393
14	Details on Research Variables	394
15	Check List for Informal Businesses	396
16	Investigation of Informal Business: Data Sheet	398
17	Achievement Motive Questionnaire (AMQ)	400
18	Rotter Locus of Control (I-E Scale) Questionnaire	405
19	Kirton's Adaptive Inventory (KAI) Response Sheet	407

20	Numeracy Test	408
21	Business Knowledge Test	409
22	Coding of Business Knowledge Test	410
23	Summary of Student Interviews, 1989	411
24	Descriptive Statistics of Achievement Motivation Dimensions (AMQ) and Rotter Internal-External Questionnaire (I-E)	415
25	Relationships with Occupational Groups and Key Variables	417
26	Relationships with Matriculation Results and Key Variables	420
27	Cross Tabulations: Participants with Own Businesses and Key Variables	425
28	Study of Career Intentions: Key Variables	427

CHAPTER 1 : BACKGROUND TO THE RESEARCH

1.1. INTRODUCTION

In to-day's uncertain world there is a need for indivicuals to learn to cope with the changing patterns of life around them. In order to do so persons have to be more enterprising in their daily living.

Enterprising behaviour is characterised by creativity and innovativeness in dealing with unfamiliar situations; in the ability to identify problems and to work out solutions; in being more pro-active, i.e. seeking and creating a different future instead of waiting for the situation "to come right".

The main research question dealt with in this work is: Can a group of disadvantaged students who are completing their matriculation studies, prior to writing their final examinations before leaving high school, become more enterprising in their behaviour as a result of receiving an experiential intervention?.

The groups participating in the research live in the urban areas of the Witwatersrand close to Johannesburg, the largest city in, and the commercial centre of, South Africa.

The experiential intervention is based on the Junior Achievement model which is run on an extra carricula basis. In Junior Achievement 25-30 students come together once a week over a 3 month period to initiate and run a mini-manufacturing business. The participants are selected from all socio-economic sectors of the community. The business, which is owned by the students, is a real one. Products are made and sold, records kept and bank accounts operated. Capital is raised by a share issue and a loan is obtained. (For a description of the Junior Achievement programme, see Appendix 1)

In order to learn more about the outcomes of the programme and its effect on disadvantaged students, it was decided to conduct this research using the same format as the regular programme, but extending the input and adding a field exercise.

Before proceeding with the details of the research, it is necessary to understand the background to the businesses found in the townships on the Witwatersrand, as well as the socio- economic and the school environmental factors impinging upon the lives of the people living in these areas. Since South Africa has a very open economy, it is necessary to understand the changing economic

circumstances in an international context, since changes that take place elsewhere in the world will have their effect locally.

1.2. THE CHANGING ENVIRONMENT

The post-war boom of the 1950s and 1960s resulted in near full employment in South Africa, following the pattern of countries abroad. In this period predictions of future prospects could be made with confidence. Careers, for instance, often consisted of a single job, or at least job changes following a well defined path. The job market was flexible and could absorb the inflow of young people as they finished school. There were a variety of openings available. The era is known as the "industrial society" in which social organization is dominated and shaped by the needs of mass production (Bell 1974). It has been argued that the function of education in this society is to produce workers willing to take up their nominated places in the social hierarchy (Bowles and Gintis 1976, Watts 1985). Large corporations and the government provided the job opportunities and there existed a choice for those seeking employment or wanting to switch positions.

Since the 1960's a variety of factors have combined to change the socio-economic situation drastically. The most important of these factors are summarized in Table 1.1.

Handy C, (1984:X) states "taken separately each of these changing patterns could perhaps be absorbed without too much trouble. Together they add up to a frontal assault on our view of work, the way in which it is organized and the place it occupies both in our lives and the way society is run". The changes are irreversible and likely to continue indefinitely.

Toffler (1980:15) in his book " The Third Wave" writes:

> "A powerful tide is surging across much of the world to-day, creating a new, often bizarre, environment in which to work, ... businessmen swim against highly erratic economic currents, politicians see their ratings bob wildly up and own ... institutions battle desperately against inflation. Value systems splinter and crash ..." Toffler does not regard these violent changes as the result of instability, breakdown and disaster, but rather as "parts of a much larger phenomenon, the death of industrialization and the rise of a new civilisation" (1980:15).

Table 1.1

FACTORS RESPONSIBLE FOR THE CHANGING SOCIO-ECONOMIC PATTERN FROM THE 1960'S TO THE 1980'S

1. Employment in the manufacturing sector and rate of creation of new jobs has declined.
2. Rapid advances in technology have made redundant many unskilled and semi-skilled people.
3. An increase in the size and diversity of the services sector has taken place.
4. The rise and rapid development of the information and knowledge industries has occurred.
5. A world-wide economic recession has been experienced.
6. Structural, rather than temporary, youth and adult unemployment has resulted from the above changes.

(Source: Crompton 1987:6)

Handy (1984) analyses the likely work patterns in the years ahead in his book "The Future of Work". He observes that an individual's working life will be characterized by several careers and not just one. There will be an increase in part-time work and more self-employment. Short contract work will become more popular. Individuals will have to be prepared to tackle jobs they have not done before, and for which they have not been trained. For many, a new job will be started for which little or no experience will have been gained.

Gershuny (1978) describes the Western World's economy as a self-service one, which is made possible by the increased level of technology of consumer goods. Self-diagnosing checks for high blood pressure or pregnancy testing are examples of products developed as a result of this trend. Job sharing, job rotation and early retirement are some of the methods being adopted to share the available work between as many people as possible. Very few new positions are being created by the large companies, and this tendency is likely to continue.

South Africa's economy considered as a whole is more representative of the Third World than the First. However the urban sector is the closest to that of the Western

World's economy and hence the above argument is valid for the township areas studied on the Witwatersrand.

In the mid 1980's writers researching the changing nature of society, and in particular the high incidence of unemployment in the Western World, suggested ways in which the problem could be addressed. An equitable method of sharing available work by part-time employment or rationing of jobs was suggested by Watts (1983). This author makes the point that society should recognize that paid work is no longer the norm against which to judge an individual's contribution. Those who perform work for no pay (e.g. in the home, or in performing charitable tasks) make a contribution to the economy. Persons who make no meaningful contribution are part of the "leisure society" (Watts 1983). This same author calls for a widening of views on the "work" scenario.

Before dealing with local issues, it is necessary to consider the economic background, starting with a global perspective, and how the current situation has led to increased unemployment.

1.3 WORLD ECONOMIC TRENDS AND EMPLOYMENT IN SOUTH AFRICA

The discontinuities that have occurred in the global economy in the 1980's are a consequence of a shift in the focus of trade from the nation-state to the global economy (Drucker 1985). Fundamental changes identified by Drucker are a decline in the demand for raw materials by the developed nations, shifting employment patterns resulting in decreasing job opportunities, and modifications in international capital flows. Trade in goods and services is no longer the basis of the world economy. Movement of capital is independent of trade. Due to changes in the major economies of the world, capital shifts take place rapidly between the major financial centres, as investment managers and speculators move funds from one country to another to maximise returns.

In the late 1980's a series of unusual and remarkable events took place in the international environment. These included the collapse of communism in Russia, the re-unification of the two Germanys, a universal acceptance of market economics and the European decision to move towards a uniform monetary policy in the EEC countries.

No such dramatic events have taken place in the early 1990's. The world's economies in the 1990's have been

unable to expand due to a number of factors. The unresolved trade issues arising from the failure of the Uruguay Round of talks on the General Agreement on Tariffs and Trade (GATT) by the major powers has inhibited the expansion of the world's trade. A long term weakness in all the leading economies has served to inhibit the increase in wealth over the short term. This has had its effect on the South African economy.

There is political uncertainty in many countries reflecting the economic problems with no acceptable practical solutions. Based upon historic business cycles, the recession of recent years should have given way at this stage to global economic recovery. This however cannot take place as quickly or as vigorously as has been the case in previous cyclical movements. Unusual structural changes have taken place in the level of global indebtedness as a result of the boom years of the late 1980's. The changes taking place have resulted in profound social and economic upheavel, and this has also taken place in this country.

Global recovery is heavily dependent on the willingness by the world's consumers to increase personal consumption expenditure. In the uncertain economic (and political) situation in most countries individuals are displaying

great caution. Existing personal indebitedness is a further factor in most countries in the Western World. Lowering of interest rates in the major economies has failed to stimulate economic recovery in recent times. This is contrary to historic patterns. Experience of previous business cycles and recovery from downturns has not been useful in predicting recovery rates due to structural changes in world economies not encountered previously (Financial Mail October 30 1992:20).

Individual perceptions regarding consumer spending are a very important component of total output as measured by the Gross Domestic Product (GDP) of a nation. Personal consumption expenditure accounts for between 55% and 70% of total GDP in each of the world's major economies (Standard Bank 1992:2).

South Africa as a country has an open economy. Foreign trade accounts for a higher share of gross national product than is the case with many other countries (South African Yearbook 1991). Real merchandise exports as a percentage of GDP rose from 12.5% in 1983 to 21.9% in 1990. Real merchandise imports to GDP rose from 19.0% in 1983 to 20.5% in 1990 (South African Reserve Bank 1961-1991). The country is very susceptible to trends and developments in the economies of its largest trading

partners. These include the major nations of the world.

Absence of a sustained recovery in the world economies diminishes the potential and demand for imports, especially commodities, which could support an economic revival in South Africa. Medium-term prospects for the global economy are better than the shorter term due to low inflation, structural adjustments supervised by the International Monetary Fund in a number of developing countries, and increasing monetary stimulus. The economic recovery will be gradual, more soundly based and less spectacular than those recorded in the 1980's. Global recovery should translate eventually into increasnd demand for South Africa's exports.

Internationally there is a pent-up demand with low inventory levels. Locally if good rains result in normal agricultural seasons, and if political stability can be attained, a return to positive rates of growth, absent since 1988, can take place in South Africa. Global economic developments will determine this in the next 12-18 months.

The global recession impinges on everybody in this country. The multiplier effect at the lower end of the job scale is probably greatest for the young unqualified and

inexperienced persons. For young people struggling to survive in the current economic climate in this country and overseas, the non-availability of job opportunities in the formal sector is a major worry. South Africa's high population increase adds to the problem and complicates the situation enormously.

Handy (1984:XII) calls for a "paradigm" shift in the perception of work and life. This author describes his view of the future as one with a "risky society". More uncertainty will exist with less security. Individuals will have to take the initiative to a much greater extent than was the case in former decades. Crompton (1987) observes that this has occurred in industrialized countries where large industry has moved out and unemployment increased. Law (1985) comments on the "enterprise" shown by young people in coping in a jobless area where major industries have disappeared. Law was instrumental in initiating the development of classroom material based upon his study of jobless youth in a depressed area. This is of particular interest for this study, since the classroom intervention which Law (1985) developed is similar to the one carried out in this research. The reader interested in comparing the two interventions is refered to Law and Storey (1986). In Handy's description of the "risky society" he points

out that those with confidence, energy and vision will do well. These characteristics are developed by educational initiatives which have a key role to play in shaping the future, Handy (1984:132) maintains.

The setting up and running of a "mini-enterprise" by a group of young people is valuable as a vehicle for learning (Jamieson 1984). In its narrowest sense, the simulation teaches the students to run their own enterprise. The skills, attitudes and values appropriate to the starting of, owning, managing or working in a small business are fostered. The simulation in a wider context concerns the same benefits and behavioural changes necessary for young people to create their own futures, to be more self-reliant, more confident and innovative i.e. to become more enterprising. This is the prime objective of the Junior Achievement programme, which has its origins in the United States of America. It was for this reason that the research intervention was based on the experiential format of setting-up and running of a mini-business. The author has accumulated expertise in the field in his work in establishing and directing the Junior Achievement programme in South Africa (Appendix 1).

The intervention is a learning process for the students

involved and to understand the difficulties the participants had in the intervention, it is necessary to appreciate their poor schooling background.

1.4 THE CHALLENGE FOR EDUCATION

Historical evidence has shown that unless a country has developed a very good educational infrastructure, it will not become a leading economic power. Britain in the mid-19th Century, the United States of America and Germany later in the same century, Japan since World War II and South Korea in recent times, are all examples of countries that have become economically important following extensive development of their education.

In South Africa the increasing incidence of unemployment, and the greater number of young people from a disadvantaged background entering school, make the re-structuring of the system essential, but difficult to do. The changing socio-political environment and the greater aspiration level of young people add further complications. Dewey (1977:37) writes: "The conception of education as a social process and function has no definite meaning until we define the kind of society we have in mind". The primary objective of education is to prepare young persons for the future. Its shape will

determine what should be taught and how. But South Africa's society is in transition and the composition of the social structure in the years ahead will differ from today's. Certainly, the economic demands placed on our society will be substantially different from current demands.

In recent years a crisis has developed in black education. This is due, in part, to incidents of unrest, intimidation, violence and vandalism. As a result of the instability, the black matriculation pass rate has fallen (Table 1.2).

As an explanation of the deterioration in the year-end results for the years 1986-88 compared with 1989-91, Hartshorne (1992:84) writes:

> "It is difficult to avoid the conclusion that in the years 1986-88 the results were artificially boosted by a far too generous application of the (statistical) controls ... the 1989 results were in fact a truer reflection of the state of affairs in the schools. Certainly, it is difficult to reconcile the improved results of the years 1986-88 with what was actually going on in the schools, the cumulative deterioration of the learning environment and the collapse of teacher morale. Unpalatable as it may seem, the 1989 results came much nearer to the truth of the state of affairs in black secondary schooling."

Table 1.2

MATRICULATION EXAMINATION RESULTS: BLACK PUPILS VERSUS WHITE

	1988	1989	1990	1991
Percent passes African matriculants:	56.3	57.9	41.1	37.0
Percent passes White matriculants:	94.7	96.1	96.0	96.0
Matriculation exemptions African students:	28.6	16.4	9.7	8.0
Matriculation exemptions White students:	42.5	41.9	42.4	41.0

Note: The Institute of Race Relations refers to black persons as "Africans".

(Source: Cooper, C et al 1986/7 to 1991/2 Race Relation Surveys.)

Black teachers aggravated the situation at the beginning of 1990 by staging stayaways and protest marches. They demanded reform of the education system and improved conditions of service (Bureau of Information, 1991). It is important to understand the effect on students in the black education system, as the participants were drawn from this group.

The extent of the discrepency in the education provided to black compared with white pupils has led to great dissatisfaction among black pupils, leading to demotivation, anger and rejection of the schooling with stayaways taking place regularly. In recent years substantially increased financial input by the public and private sector in the building and modification of schools and the upgrading of teaching skills has occurred. The improvements in the school system have not been reflected in better examination results. They have been very disappointing in recent years (Table 1.2).

"The forces at work, political, social and economic, are clearly such that only the transformation of the total ecology in which secondary schooling (perhaps more than any other level of education) exists, holds out any hope of providing a foundation on which educational reconstruction can begin to take place. Until this is realized, the 'morbid symptoms' of the interregnum in which the old

authority is dying and the new is yet to be born will continue, together with the increasing disintegration of that level of schooling which is most vunerable to social and political pressures, from wherever they come." (Hartshorne 1992:85)

The extent to which it is possible to address the expectations of the disadvantaged within a realistic time frame is open to question. The severe shortages in the infra-structure due to increasing numbers of scholars, of skilled school administrators, of well trained teachers and motivated scholars (currently demotivated because of their socio-economic situation) will probably turn out to be an on-going situation since expenditure, even if equalised between different sectors of the community, may not result in equal effects, due to more subtle social factors and norms in the family background of children (Schlemmer 1991:18).

The educational dilemma, given the poor conditions in the system, is worsened by rapid rises in real unit costs, a low demand for the present school leaver recruits in commerce, industry and mining, (but a high demand for particular skills and qualifications in commercial, technical, scientific and quantitative functions). The quantitative and technically orientated people that need to be attracted

and trained as teachers are not being produced by the educational system (Schlemmer 1991:18).

Economically speaking, the country cannot afford to spend continually increasing amounts of scarce financial resources to improve black education as this will lead to distortions in spending on other high-priority social and developmental needs. If this were done, further destabilisation would occur, resulting in reduced employment opportunities for school leavers (Schlemmer 1991). Greater financial allocations have been made over the years however, in order to redress the imbalance in per capita spending between the various race groups (Table 1.3).

An interesting parallel exists between the South African and the Zimbabwean educational systems, both of which are in transition (Reynolds 1991).

On assuming power in 1980, the new Zimbabwe government instituted a vastly expanded educational system and free primary schooling for all. The changes took place at a very rapid rate, well ahead of the country's economic resources and government's ability to finance them. The rate of growth was unequalled anywhere in the world. (Primary education 300% expansion and secondary education 700% in the years 1980-85 (Reynolds 1991:14)).

Table 1.3

INCREASE IN EXPENDITURE ON EDUCATION BY THE STATE ON PUPILS OF DIFFERENT RACES

GROUP	EXPENDITURE PER CAPITA (R000'S) 1986/87	1989/90	% CUMULATIVE INCREASE IN EXPENDITURE	% INCREASE IN NUMBERS OF PUPILS
Africans (white areas only)	477	930	95	75
Coloured	1021	1983	94	53
Indian	1904	2659	40	54
White	2508	3739	49	13

Note: The Institute of Race Relations refers to black persons as "Africans".

(Source: Cooper, C et al 1986/7 to 1989/90 Race Relation Surveys.)

Despite the channeling of vast resources into its schooling system, Zimbabwe has a legacy of a 60% failure rate of 16 year olds leaving secondary school at the "O" level examination (Reynolds 1991:14). In England, approximately 35% of the school going children write "O" levels; the balance are streamed into the various avenues of vocational training early on in their school going lives (Reynolds 1991:14). The lack of trained people capable of vocational teaching and the greater training costs per pupil compared with the instructional teaching of conventional subjects in the classroom, is hindering progress of the Zimbabwean educational system's reform (Reynolds 1991:14).

In all probability it will be many years before all the educational systems in South Africa are on a par with one another. Increased attention is being given to improve black education in this country by the private and public sectors. The general level has to be increased so that every South African child can be assured of a good education.

The disadvantaged youth in this research is a product of the poor educational system described above. This chapter will now deal with other factors which shape the lives of the respondents living in urban townships.

1.5 UNEMPLOYMENT

One of the main reasons for high unemployment in South Africa is the decline in the GDP growth rates since the first half of the 1960's. The average annual real growth rates started to decelerate at the beginning of the 1970's (Table 1.4).

Mid-way through the decade of the 1970's the GDP growth started to fall below the real per capita level. By 1987 the per capita GDP at constant 1985 price terms had declined to the 1970 level. Population growth has continued to exceed that of economic growth. Since 1985 the average growth rate in GDP has been 0.9% per annum. The average population growth rate has been 2.5% per annum. (Table 1.5 indicates the economically active population growth since 1970, with its racial breakdown).

One of the problems with the official population statistics has been the exclusion of the four "independent" states in the estimates. There has also been undercounting. Corrections for undercounting have been made in the most recent surveys. If the official sources are combined with those made by the Development Bank of Southern Africa and the Urban Foundation the total South African population in 1991 was 39.3m (m = million) (Standard Bank 1992:1).

Table 1.4

AVERAGE ANNUAL SOUTH AFRICAN G.D.P. GROWTH RATES

(Growth rates at constant 1985 prices)

1960-64	6.7%
1965-69	5.5%
1970-74	4.8%
1975-79	2.0%
1980-84	2.5%
1985-88	1.2%
1989	0.5%
1990	-0.6%
1991	-0.7%
1992	-1 to -1.5%*

(South African Reserve Bank Quarterly Bulletins 1961 - 1991)

* (Financial Mail 31.7.1992:39).

Table 1.5

ANALYSIS OF THE SOUTH AFRICAN ECONOMICALLY ACTIVE POPULATION (ALL SECTORS)

Population group	1970	1980	1985	1990
	('000'S)			
Total	7 655	8 705	10 053	11 073
Whites	1 548	1 894	1 982	2 049
Coloureds	761	955	1 142	1 241
Asians	191	251	324	350
Blacks	5 155	5 605	6 605	7 433

(Mid-year estimates)

(Source: Central Statistical Services 1992:16)

Growth in the black population accounted for 88.3% or 5.3m of the 6m increase between 1985 and 1992. The age of the white sector is relatively old (16.8% are over 54 years of age compared with 8% for other races), whilst 42.7% of the black population is currently under the age of 15 years compared with 23.5% for the white sector (Standard Bank 1992:1). It is estimated that by the year 2010 the country's population will have increased by nearly 53% over 1991. At this stage, due to the influences of urbanization, better education and Aids, the total population figure will start to decrease (Standard Bank 1992:1).

Table 1.6 gives the break-down in the economically active and non-economically active population of the country, based upon the Central Statistical Services' 1990 Survey.

The details of unemployment and the economically active population are given in Table 1.7. The 1990 figures show that 67.1% of blacks are economically active and 83.1% are unemployed. These are official Central Statistical Services' figures, but exclude the four "independent" States.

Table 1.6

COMPARISION OF THE ECONOMICALLY AND NON-ECONOMICALLY ACTIVE POPULATION

1990 (000'S)	Economically active		Non-economically active		Total population
	Number	%	Number	%	Number
Blacks	7 433	24.1	14 176	46.0	21 609
Whites	2 049	6.7	2 969	9.6	5 018
Coloureds	1 241	4.0	1 973	6.4	3 214
Asians	350	1.1	606	2.0	956
Total	11 073	36.0	19 724	64.0	30 797

(Mid-year estimates 1990)

(Source: Central Statistical Services 1992:16)

Table 1.7

ANALYSIS OF BLACK ECONOMICALLY ACTIVE PERSONS (E.A.P.) AND UNEMPLOYMENT

YEAR	TOTAL E.A.P. (000's)	ESTIMATE BLACK E.A.P.	PERCENT BLACK E.A.P. TO TOTAL	TOTAL UN-EMPLOY-MENT (000's)	ESTIMATE BLACK UN-EMPLOY-MENT (000's)	PERCENT BLACK TO TOTAL UN-EMPLOY-MENT	PERCENT BLACK UN-EMPLOY-MENT OF TOTAL E.A.P.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1980	8732	5632	64.5	521	456	87.5	5.2
1985	10053	6605	65.7	-	-	-	-
1988	10652	7090	66.6	-	823	-	7.7
1990	11073	7433	67.1	1940	1612	83.1	14.6

Note: 3 = 2/1 6 = 5/4 7 = 5/1

(Mid-year estimates)

(Source: Central Statistical Services 1992)

The 1991 Population Census puts the total unemployment in the country at 2.1m ("independent" states not included). 23.3% of blacks considered themselves unemployed, compared with 4% of whites. If the excluded areas were counted in, the black unemployment figure would be considerably higher. The South African Reserve Bank data (SARB 3rd quarterly report 1992) shows that less than 7 out of every 100 new entrants to the labour force will find employment in the formal or First World sector of the economy. It is estimated that half-a-million additional economically active people are entering the labour market every year. The lack of employment opportunities is central to South Africa's population crisis (Standard Bank 1992:2).

The formal sector does not have the capacity to create employment under the present economic circumstances. In 1990 only 12-13% of the new entrants into the labour market found employment (Schlemmer 1991). In 1987 the total non-agricultural level of employment in the formal sector in South Africa was the same as that of five years previously (De Vries 1989:6).

The above resumé of the deteriorating employment situation for those wishing to work for the bigger businesses is a tragic situation, especially for young

people keen to get work experience on leaving school. For those who are unskilled the situation is even more desperate than those who have acquired a useful skill. There is little alternative for most school leavers but to enter the informal sector to survive, in the present depressed economic state of the country. Successful entrepreneurship is therefore a vital ingredient for an improved future.

1.6 URBANIZATION: THE EXTENT OF THE PROBLEM

Since 1985 the process of urbanization has been the greatest factor in demographic change. The urbanized proportion of the black population has risen from 45.5% in 1985 to 50.8% in 1992 (Standard Bank 1992 b:1). This compares with 10.4% in 1904 and 32.1% in 1980. The proportion of whites in cities was 88.8% in the year 1980 (Simkins 1984).

The movement to the cities has been facilitated since 1985 by the removal of legislation which previously hampered this. The disintegration of the rural economy has also been a factor. Increased use of mechanization on commercial farms and poor conditions in drought-stricken rural areas have compounded the problem.

Since 1985 an increase of 4m in the black urban population has taken place. By 1995 the informal economy will need to provide work for as many as 6m people, or 40% of the economically active population (Standard Bank 1992:3).

It is estimated by the year 2000 that 64% of the population will reside in the cities. This will rise to 67% (of which 60.5% will be black) by the year 2010. The increase is due principally to the movement of the black population to the urban areas. In the geographic area of the Witwatersrand and the rest of the Pretoria - Vereeniging area, the population will have increased to 16m people - twice the 1991 size (Standard Bank 1992:3). The greater proportion of the younger age group will be concentrated in the metropolitan areas, thus increasing the unemployment problem in the cities.

1.6.1 URBANIZATION AND TOWNSHIP LIFE

In order to understand the social situation in an area such as Soweto, and hence the background of the respondents involved in this research, it is necessary to consider briefly the history of the detribalization and urbanization of the inhabitants who live in the townships. One of the factors which has had a big impact on life in these areas is urbanization.

This phenomenon is one of the most dramatic and far-reaching factors moulding society in South Africa to-day. The process of urbanization is linked to the concept of civilisation. Every great civilisation has been based on the city, since the commencement of human history as we know it (Godsell,R.1984:99).

Urbanization is also linked to progress and is regarded as an essential part of the creation of modern society; and indeed is a highly reliable index of modernisation (Godsell,R.1984:99).

In South Africa the pattern of urbanization is a function of race. Since the late 1940's and the subsequent two decades successive governments have planned for the existing black inhabitants in the urban areas to be consigned back to their areas of origin. This, despite the fact that some families had lived in the adjoining areas of the cities on a temporary basis for at least three generations (Marais and van der Kooy 1979:12). The strategy has not worked, and has been abandoned by the government with the repeal of the Influx Control Act.

The effect of urbanization on residents in the Soweto

area was studied by Edelstein (1974). He found that:

> "Urban living, with its social pecularities, its economic emphasis, its cultural clashes and its environmental pressures in terms of laws, regulations and various restrictions, is a type of living, which for the African (i.e. black) requires a compromise between three socities: The tribal society, the urban township society, and the European (i.e. white) society" (Edelstein 1974:65).

Many of the communal characteristics, the problems of urban living and the general phenomenon of cities and city life are the same anywhere in the world. Physical crowding, anonymity, lawlessness, contrasts between poor and rich, fine houses and slums, squatting, overcrowding and lack of infrastructure, are common. A prominent role in the structure and functioning of the areas concerned is the political factor, which is a big problem in South Africa, and complicates the administration.

The process of urbanization results in a new way of life, closer to the Western style, but with the gradual shedding of traditional culture. Acculturation to new surroundings occurs following the cut-off of tribal links. With time and the reduction in contact with the area of origin, tribal affinities dwindle. The strength

of the genealogical link is also of importance. Under intense inter-ethnic and inter-tribal contact, the most important aspect of the process of acculturation is the retention of tribal and ethnic consciousness (Edelstein 1974).

One of the most serious aspects of urbanization is the breakdown of family life. Edelstein (1974) researched this aspect of township life and contrasted the stability of the family and marriage in a traditional society, compared with the urban situation. He found that the husband's role as head of the family, the wife's economic status, and the pressure emanating from the family as well as social pressures in general, tended to hold the unit together in the rural situation.

The status of the wife in the rural economy, although recognised as being important, is not equal to that in the city, where absolute freedom is enjoyed. In tribal society divorce and separation are practically unknown. This is not the case in urban areas.

The stabilizing influences in the rural society are absent in the city, and the family unity is continually under threat. Children are neglected, inadequately trained and subjected to bad influences from outside. The

way of disciplining and bringing up children is not as uniform as in tribal tradition. Due to the family background and origin, tribal group differences are exploited and are contributors to the lawlessness amongst children (De Ridder 1961).

The money-motivated urban economy has resulted in great stress being placed on the family in contrast to the self-sufficient and well-knit joint family in the traditional setting. The desire for money as a means to every end contributes to a break-down in the harmony of the household, leading to disruption and alienation in the family.

In the rural areas, marriage is a tribal concern, which follows precedent closely, and is arranged between families. Sexual behaviour in children is kept under strict parental control.

In contrast, the behaviour pattern in the cities is very different from that in the country districts. Men choose their own wives and are not overly concerned with the family and its place of origin. To be certain that their future partners are fertile, De Ridder (1961) found in his study that 95% of the wives were pregnant at the time of marriage, or had already borne children.

Steyn (1966) summarized the results of studies on family life in the townships and concluded that the family in the city areas did not play a clearly defined role within a stable social structure, as was the case in the rural areas. In many cases the drift to the cities was made by individuals from different cultural heritages. It is probable that the men went to the cities in search of a job first, and may have been followed by the rest of the family. Families were divided, in these instances. This was an additional reason for the changing role of the family in the cities.

The traditional influences were partly replaced by urban ones of Western origin. Those stemming from other traditional cultures also had their effects. The role differentiation between the urban and rural families may be summarized in Table 1.8 (De Ridder 1961).

Additional insight into the conditions in the township areas is given by De Ridder (1961). He found that the urban township male's personality was characterised by a basic motivation for money, but job opportunities were restricted by legislation (however this has since been changed). The black male is aggressive, anxious, frustrated and insecure. He commits crime and is violent because he has insufficient self-control.

Table 1.8

THE DIFFERENTIATION OF THE ROLES IN URBAN AND RURAL FAMILIES

FUNCTION	RURAL FAMILY	URBAN FAMILY
The family as an economic unit.	Role is productive and consumer one.	Role only as consumer. Dependency on breadwinners.
Reproductive role.	Children legitimate.	A greater number of illegitimate children.
Socialisation function.	Ethnic group responsible for socialisation and preparation for adulthood.	Family responsible for socialisation of children but not for their economic participation in the economic system. This participation is done by the schools, in theory. The socialisation function is inadequately performed as parents lost control over their children.
Legal functions.	Man has status in society and represented his family.	Status of household head limited with little authority over wife and children.
Family status.	Based on sex and seniority.	Achievement in education, career and economic position conferred status.
Religion.	Practised as a family unit.	Practically none practised.

(After De Ridder 1961:153)

Morals are lax and the youth in particular are sexually uninhibited.

Those who are in the process of detribalization amongst the township dwellers recognise others around them from their tribal origins. Western customs and dress have been adopted but many of the cultural norms, beliefs and practices of ethnic origins are retained. The male is an exhibitionist and is influenced by local juvenile deliquents who are known as "tsotsis".

Discriminatory practices have led to frustration and antagonism particularly towards those in authority.

The above picture of the social conditions in an urban township area gives an insight into the benaviour patterns and the motivations of young people. The participants in the research group are influenced by social conditions in their environment. They do however possess an elevated status in society as senior high school students, and matriculants.

1.7 SITUATIONAL FACTORS AND TOWNSHIP BUSINESSES

The research population for this study lives in the

township areas in and around Johannesburg, the country's commercial and financial hub. It is the centre of the communication network, the biggest city and it is surrounded by satellite towns. The majority of the disadvantaged communities live in the townships adjacent to the city and its satellites. To understand the environment in which the students of the study live, it is necessary to examine some of the most important factors affecting life at home.

As was shown above the most important and pressing problem of township life is unemployment. This is mitigated by the many informal businesses, mostly home- based. The formal and informal sectors are discussed in this section. The legal restrictions to business and the community view of business are also noted. The demographics and job situation are affected severely by the population movement to the cities. The pace of urbanization has been discussed under Section 1.6 of this chapter.

1.7.1 UNEMPLOYMENT AND THE BLACK INFORMAL SECTOR

There are a number of possible solutions to alleviate the unemployment situation. If the economy is weak, then

government intervention may be the only way to overcome the problem. Socialist type welfare programmes, or short term public works activities are examples of employment initiatives. They are expensive and do not necessarily provide long term benefits. Subsistence agriculture is another solution, but with high poverty levels on the land this method would have to be extensive in scope to be effective to the degree necessary to meet the needs. The best and least costly alternative is to allow the informal sector to develop.

Informal businesses are usually very small and remain so. Capital in excess of R1500 is rarely employed and the venture usually remains a one person activity (Hesketh 1989:113). For purposes of this research the students' ventures are considered to be at a subsistence level, with a capital of R100 or less, with the entrepreneur the only person involved and then not necessarily on a full time basis. The activity is pursued to help pay for schooling or college attendance and may not be sustained longer than is necessary for this purpose.

The informal business operates outside the law, is untaxed and unlicensed. It is normally run from home. For economic planning purposes, an accurate representation of its importance to the national economy is essential

(Preston-Whyte and Rogerson 1991:149) "By the most basic definition, the informal sector operates outside official rules and regulations" (Nattrass 1990:217). Informal earnings elude official records and the activity is classified as a "hidden" or "shadow" economy (Van der Berg 1990).

National accounting systems used to measure economic activity are inadequate (Thomas 1989:1; van der Berg 1990). Understatements of economic participation occur when the gross domestic product, national income figure and labour statistics are produced. There is an unwillingness by bureaucrats to deny the contribution made by the informal participants due to the often elusive and shifting character (Preston-Whyte 1991:150, Rogerson). A variety of techniques have been devised as a result of the shortcomings of the official records, to measure the size of the informal sector. The two broad approaches are the direct and indirect measurement. Each has produced different figures. These have been the basis for much debate (Kantor 1989; Hartzenberg and Leiman 1990; van der Berg 1990).

The direct, or micro, research approach is designed specifically to generate data and involves intensive work with samples of a given population. This method collects

detailed information about the structure and composition of the labour and the experience of those within the sample.

The direct approach is used by the Central Statistical Services (CSS) and represents the most comprehensive survey on the informal activities of black South Africans. The value of black informal economic activity for 1990 amounted to R18.036 billion. As a contribution to national income (not included in the GDP) it represents 7.9% of the GDP (Central Statistical Services 1991:3).

The informal black labour force for 1990, reported in the same CSS survey was 2,78 million out of a total black population of 25,98 million or 10.7%. This means that out of every 1000 persons in the black population, 107 were occupied on either a part-time or full-time basis in the informal sector.

The estimated number of economically active black persons (i.e. excluding Indian and coloured) who are involved in the informal sector in 1990 was 1,520 m or 22.1% of the total number of 6,879 m economically active blacks i.e. 1 out of every 4 economically active black persons is involved in the informal sector (Central Statistical Services 1991:3). The figures for the black population exclude the squatter areas that have come into being during

the three years prior to 1990. The CSS figures also underestimate the true state of affairs as they do not include the four "independent" territories, black informal earning in white areas, and the white population's involvement in the sector.

There are a number of indirect techniques which may be used to estimate the size of the informal economy. Three of the better known examples are: Gutmann's (1977) "currency demand" approach, the transaction approach of Feige (1979) and the third technique is based on the discrepancy between national expenditure and national income statistics. Using Feige's method, Kantor (1989:40) estimates that the country's GDP for 1987 could have been 16-41% higher than official figures indicate.

Since 1975 many country-level studies have been done. Forty five of these were used by Kirsten (1988), in research to determine the contribution of the informal sector to the economy. All the studies were done independently and concern only the black informal sector activity. The information used from the 45 studies was in accord with the definition: "All economic activities that take place without registration or licensing, that are the only source of income for the participants and are not undertaken for subsistence reasons" (Kirsten 1988:251).

Activity in the informal sector can be divided into four categories: trading and hawking, service and service industries, production and construction, and "immoral" activities.

Entry into trading and hawking is relatively easy and does not require specific training. This category includes selling of fruit and vegetables, flowers, hand-made articles, and foodstuffs. Shebeens and spaza shops are included here.

In the service and service industries, technical training and basic skills are needed. Production and construction activities include food production, furniture manufacture, clothes, shoes, baskets and window frames. Fencing, plumbing, painting and self-help housing would be some of the construction work. The service area is represented by panel-beating, hairdressing, photography, child-minding, car-washing, room-letting, pirate taxiing, beer brewing and the activities of witch doctors (sangomas).

The financial services include the stokvel or rotating credit associations, burial societies and mashonisas or loan sharks.

"Immoral" or "illegal" activities include prostitution,

drug-trafficking, pornography, illegal lending and gambling. For these no legal licence can be obtained.

The community-level studies were divided into 4 geographic areas: metropolitan, squatter, urban and rural. Some of the studies analysed were:

Metropolitan: Morris, 1980; Urban Foundation, 1982; De Coning, 1984; De Montille, 1987.

Squatter: Maree and Cornell, 1977; Maasdorp and Pillay, 1978; Dewar and Watson, 1981.

Urban: Nene, 1981; Krige, 1985.

From each of the studies, the percentage of the black labour force involved in informal activities in each area was extracted. This included all persons between 16 and 64 years of age, employed or otherwise. Table 1.9 was produced by Kirsten (1988) giving the participation rate of blacks in each geographic area.

The informal sector's contribution to employment may be calculated from the figures in Table 1.9. 18% of the black labour force in metropolitan areas had no option but carry out informal activities. In 1985 some 250 000 people were estimated to be so involved. For the squatter regions the 20.5% number amounted to 200 000 people.

Table 1.9

INVOLVEMENT OF THE BLACK POPULATION IN THE INFORMAL SECTOR ACCORDING TO GEOGRAPHIC AREA, 1985

AREA	TOTAL BLACK POPULATION*	BLACK LABOUR FORCE	NUMBER	INFORMAL-SECTOR INVOLVEMENT
		(IN 000'S)		
METROPOLITAN				
Estimate 1	2 988	1 522	274	18%
Estimate 2	2 488	1 269	228	18%
SQUATTER				
Estimate 1	1 750	893	183	20,5%
Estimate 2	2 250	1 148	235	20,5%
URBAN	4 178	1 805	704	39%
RURAL	16 705	3 769	678	18%
TOTAL	25 621	7 989	1 840	23%

* The metropolitan and squatter figures are complimentary. The total black population in these areas combined is 4 738 000. So, for example, if it is assumed that 1 750 000 black people are residing in squatter areas (Estimate 1), then 2 988 000 black people are living in metropolitan areas.

(Source: Preston-Whyte, E. and Rogerson, C. 1991:155)

In urban areas informal activities were carried out by 39% of the population or 704 000 persons. In the rural districts a participation rate of 18% or 678 000 people were informally employed.

The black informal activities in South Africa in 1985 were carried out by an average of 23% (i.e.1.84 million) of the commercially active population of approximately 8 million people (Kirsten 1988).

In the metropolitan and squatter areas, the labour force is estimated to be 51% of the total population. A high urbanization trend in the economically active age group is the reason for this. In urban areas the labour force represents 43% and in the rural areas 23% of the population.

The informal sector contribution to the GDP may be assessed directly from the income generated for various activities and by aggregating the figures. Kirsten (1988) did this using the data obtained from the forty five studies referred to above. It was assumed that the data were representative of all informal activities pursued by the black population.

The weighted average monthly income per black person involved in the informal sector in 1985 was R269 (Income was taken to be the value added and not the sales income of what

was produced). If it is assumed from this that each person generates an annual income of R3228 per annum, and 1.84 million people are involved, the contribution of the sector is R5.9 billion. The total personal income of blacks in 1985 was R20.57 billion (Bureau of Market Research 1986). Adding the informal income brings the total to R26.47 billion. This means that 22.3% of the black population's total income was unrecorded. The country's GDP in 1985 was R110 billion. To be added to the R5.9 billion figure for the black sector is the contribution by other population groups, as well as the value of "moonlighting" activities. It has also been estimated that there are some 300 000 white families running mini-businesses from home (The Star, Johannesburg October 20,1989).

The above statistics, even if subject to some error, are sufficient to show that the role of the informal sector is very important in providing income-generating opportunities. For an increasing number of people, and in particular for the young without experience who have difficulty in getting a job in the bigger business sector, there may be no other outlet for their aspirations.

1.7.2. TOWNSHIP FORMAL AND INFORMAL BUSINESSES

Because of the importance of the black business sector in the economic development of the country, its characteristics and problems need to be understood. The legal restrictions and the negative view of the community towards businessmen and women in the townships are inhibiting factors in the future of both formal and informal business development in the townships. If commerce and industry, mining and agriculture cannot provide the millions of new jobs necessary to support the increasing numbers of young people coming on to the market and seeking means of support, only the informal sector is left to provide work opportunities. The majority of the students involved in this research will be forced to explore opportunities in the informal sector, for self-support. The legal status of this sector and its ability to thrive and expand is therefore of vital concern.

1.7.3 BLACK BUSINESS AND LEGAL RESTRICTIONS

Several writers have documented the existence of a thriving black entrepreneurial class in South Africa during the 19th century and the first decades of the 20th century (Rogerson and Da Silva 1989; Louw and Kendall 1986).

The legislation brought into being in the late 1940's by the Government of the day was discriminatory and based upon racial principles aimed at restricting the economic entry and participation of the black business community. Black business activity has been extensively controlled by law (Hesketh 1989:114). These restrictions may be summarized as follows:

> The allocation of trading sites; restrictions on the alteration of buildings; the transfer of businesses from place to place; the type of business; restrictions on what business may be run from a particular site. Traders were expected to submit themselves to medical examination and to have their books of accounts verified by officials. The acquisition of capital by black business people from other races was prohibited. Transgression of any of the restrictive laws (in the majority of cases) was a criminal offence. The costs in time and money to set-up a recognized business were high; the standards imposed by legislation are difficult to meet by the small operator; through lack of education and/or resources most black entrepreneurs did not attempt to comply. If enforcement is not possible corruption increases and disrespect for the law is the result. For the majority the free enterprise system, such as it is, is not open to all (Hesketh 1989:114).

The government's deregulation programme commenced in 1985 when the President's Council "Report on a strategy for small business development and for deregulation" was published (President's Council 1985). This report recognized the far-reaching implications of current legislation on economic entry and participation of the black business community. It was recommended that all laws which differentiated in measures or standards between businessmen on a racial basis be repealed. The report recommended that the informal sector had to be "nurtured" not "prosecuted".

In January 1986 the government accepted the report of the President's Council. Priority in the deregulation process included licensing laws for black owned taxi services in particular. The Council's recommendations are a means of removing the racial provisions in the law and thereby dismantling socio-economic apartheid (Tager 1989:2).

The formal framework for the deregulation process consists of an instruction to government departments to assess the existing and proposed regulation critically and to reconcile them with the goals of the new policy (Competition Board 1987). The Temporary Removal of Restrictions on Economic Activities Act, No 87 of 1986

"gives the State President extraordinary powers to exempt a person from any law if it unduly impedes economic development, competition or the creation of job opportunities" (Hesketh 1989:115).

Some of the most important legal reforms which have taken place in recent years which previously hampered economic activity are: The Abolition of the Influx Control Act No 68 of 1986 restored freedom of movement to millions of black people. The majority of some twelve to fifteen million persons now have freedom of movement, to which they were not entitled before 1986.

The Black Land Act of 1913 and the Development Trust and Land Act of 1936 prevented blacks from being permanently resident on land outside of certain specified areas. All land occupied by blacks was owned by the State. A deed of grant was available for those resident in self-governing or homeland areas, but this gave very restricted title. As far as urban blacks were concerned they were considered to be temporary settlers only, to be returned to their tribal areas of origin in due course. The areas of occupation are known as townships adjacent to, but separate from, white areas. They are administered by officials who enforce the many regulations. Blacks could not acquire any form of title to land in urban areas. No

business districts were laid out in the planning of the townships. Occupational rights which were permitted were by statute, governed by the strictest of regulations. Any contravention constituted a criminal offence.

In 1978 the ninety-nine year leasehold title was introduced. This was the first time that any form of registered title was permitted for blacks in the urban areas. This statutory form of tenure allows leaseholders the right to improve, occupy, mortgage, dispose of, let and bequeath their rights. Leasehold title is registered in the Deeds Registry Office.

The introduction of the leasehold was the first government recognition of the permanence of blacks in "white" South Africa.

The Black Communities Development Act No.4 of 1984 was amended in 1986 to allow a black person the right to own property. Citizens of the four "independent" states and the six self-governing territories may lease or own property in any urban area which is set aside for occupation by blacks.

The end of the 1940's coincided with the introduction of legislation to define areas for the separate use of the

main racial groups. The Group Areas Act put an end to living, working and owning of property by different races in the same areas. This act was amended twelve times in the 18 years between 1950 and 1969, an indication of its complexity (Carr 1990:65). The Johannesburg City Council's Non-European Affairs Department (NEAD) administered the affairs in the Soweto area, and had to implement the Group Areas Act. This was also the case with the other big urban municipalities in the country.

Official attitudes towards the operation of black small-scale producers in "white" areas hardened in the early 1950's. The success of the informal black manufacturers in capturing markets dominated by formal sector enterprise led to complaints of "unfair competition". Representations were made to government by the formal manufacturers demanding the implementation of a factory licensing system. This was done to "formalize" the informal producers. It was feared that cheap informal black producers might undermine white living standards (Preston-Whyte and Rogerson 1991:371). The Group Areas Act was accordingly modified by compelling closure of those black small-scale informal industries functioning in white areas (Rogerson and Da Silva 1988).

An amendment to Section 49A of the Group Areas Act was made in 1988. In terms of this change, premises in any industrial township may be used or occupied by any racial group for industrial or commercial purposes. The premises may not, however, be used as a residence. One of the first "industrial parks" outside a black area was sanctioned in Kew, an existing "white" industrial area which borders on Alexandra, the black township north of Johannesburg. The development has resulted in the establishment of 35 workshops and created approximately 100 new jobs, by the end of 1988.

The establishment of industrial parks in black areas has been of significance to manufacturers in the township areas. It is one of the most important outcomes of the deregulation process. The Small Business Development Corporation (SBDC), a joint state-private sector agency established in 1980, was instrumental in setting-up the infrastructure in the industrial park areas. The Urban Foundation also assisted in the commencement of programmes for existing and potential black small-scale producers (Rogerson 1987; Rogerson and Da Silva 1988).

A further amendment to the Group Areas Act was made in 1988 when the State President opened Free Trade Areas in some 100 "white" central business districts. Anybody,

regardless of race, can own or lease property and carry on business in these areas.

The major law which governed all aspects of socio-economic activity in the urban black community was R1036 of 1968. It is known as "Regulations governing the control and supervision of an urban black residential area and the relevant matters". R1036 was typical apartheid legislation. Besides the discrimatory provision of the various Acts, many existing laws concerning health, licensing and registration procedures were duplicated. Contravention of the many restrictive regulations was a criminal offence. Included in these restrictions were the very restrictive individual's right to trade, six to eight categories only were approved. A site was usually not available; a person could not get a location for his business but had to depend on the goodwill of the township manager for an allocation, and was then subjected to a series of conditions e.g. inspection of books of accounts.

The statutory controlled occupation was replaced by the common law of lease. Existing rights acquired under the repealed law are preserved. Full ownership rights are provided for, as well as the conversion of ownership from the deed of grant rights or leasehold title. From a racial viewpoint this means that business activity has

been deregulated.

The new law also provides for the extended use of residential property for any business purpose. The property is to be used mainly for residential purposes and the business activity may not be noxious and may not disturb the amenities in the neighbourhood.

The repeal of R1036 provides for site permits and certificates of grant to be converted to ninety-nine year leasehold title. In terms of R1036 owners of the houses purchased or built and holders of site permits did not become owners since they did not own the land. The new Act grants registered leasehold title, without any payment for the land to the house "owners". Business persons "owning" a house on state land will also obtain leasehold title.

Up to November 1988 only about 46 000 persons had registered ninety-nine year leasehold title. As a result of the new provisions with the repeal of the R1036 law it was estimated that about 300 000 persons will be able to acquire registered title (Tager 1989:9).

Section 24 (3) of the Development Trust and Land Act was repealed by the Development Aid Laws Amendment Act, 1988.

In addition to obtaining an annual licence, black traders and professionals no longer require regular ministerial approval before they can continue their business activities. In addition, the prohibition of black controlled companies and partnerships of more than six black persons from acquiring or holding land without ministerial approval, has also been done away with by the 1988 Development Aid Laws Amendment Act (Tager 1989).

The legislation changes that have occurred in the ten years between 1978 and 1988 have had far reaching effects on the way of life of black people in all parts of the country, but in particular in the urban areas. The lifting of restrictions on economic development is of considerable importance to future peace and prosperity. For young people leaving school who are enterprising, new opportunities are afforded to them for growth and development which were never previously available.

The above summary has outlined the legal restrictions which hampered the development of black businesses and highlighted the problems arising from them. The young people participating in this research will have grown up with these and be familiar with them. The next section will deal with the communities' reaction to black businesses in the township areas.

One of the most important problems for the bigger businesses in the townships is the negative view of the community towards the owners. They are seen as capitalists and therefore exploiters of "the people".

1.7.4 BLACK BUSINESS AND THE COMMUNITY.

Mokoatle (1979:235) comments on the black trader and the monopolistic position in his neighbourhood. Since the market was a captive one, the attitude of the business owner was arrogant and off-hand. This antagonized the community. In addition, overcharging for their goods was widespread, and was an additional irritation to customers.

The ambivalent attitude towards the black entrepreneur resulted from a conflict between traditional and business values. The majority of black township dwellers interface with the white community through officials of one sort or another. The relationship has never been a very happy one. Black customers see the poor black - white dealer - client interface to which they are subjected in their daily living mirrored by the same attitude in the black trader. This appears to be the traders' preferred business value (Mokoatle 1979:235). Mokoatle states that "Coupled with this attitude may be a lack of business knowledge as far as

customer relations and profit-making are concerned, but it appears odd that, whereas in the background culture good human relations was an esteemed value, it should be completely abandoned in the business context".

Although the legalisation affecting the rights and conduct of business in the townships has changed, the view of the community towards business has not. The general anti-capitalist ideology encouraged by the liberation movements regards small business as a legitimate target and a means of venting anger. This is demonstrated in a visible way by lootings and burning when unrest occurs. Due to the businesses being small and accessible they bear the brunt of political protest.

School children aroused by agitation and organized to demonstrate, apply the force of their numbers and aggression to ensure that boycotts are effective. Businesses, whether formal or informal, suffer badly from youth protest.

There is little benefit derived at any stage for the business owner, since the entrepreneurs' needs come after those of "the people". Their solidarity is that of the oppressed and the struggle takes precedence. Black businesses are fair game since they represent "the haves"

and the people "the have nots" (Mkhize, 1980). When money is needed for a political demonstration such as a funeral, entrepreneurs are forced to make "contributions" and find themselves on the wrong side again but in the opposite direction, since identity as an entrepreneur is secondary to racial considerations. Entrepreneurship should afford protection as the economic benefits are derived by the community itself but no exemption or help is provided. This is illustrated by the attitude of young mobsters towards small businesses.

Godsell, G. (1990:121) comments on the anti-business behaviour of children in the townships. Soweto children, for instance, become disinterested in assisting in the family business as soon as they reach their teens, and their conduct becomes detrimental (e.g. they steal stock). This behaviour is part random thuggery and part politically motivated.

The adolescent's behaviour pattern, researched by Godsell,G. (1990) may be summarised as follows:

> Children ignore parental control completely. The negative view concerning parents has arisen due to their lack of support in the "liberation" struggle. Children perceive their parents as being impotent, cowardly and inadequate. The 1976 riots were largely

touched-off and maintained by township youth without any parental assistance or approval. However, this attitude on the part of young people may have softened in the aftermath of the changes that have taken place since the beginning of 1990.

The 1986 school boycotts exacerbated the problem which had resulted in a whole generation of poorly educated black youth. Reports of teacher intimidation by students appear regularly (The Sowetan, November 10,1989 had an article on the carrying of guns and knives by students in the classroom). The loss of control in the school and home encourages a lawless spirit among youth, resulting in random violence.

The lack of political approval of small business is also unique to this country. Capitalism is seen as the ideology of the privileged few. Businesses and their owners are boycotted on this account, are forced to give "contributions" to the community, but are never the recipients or beneficiaries of political organization or rhetoric (Godsell,G. 1990:124).

The black entrepreneur has been a victim of apartheid because he was located in economically depressed areas and his trading rights legally restricted. Access to

credit has been made more difficult because home ownership has been denied. These factors have been severe impediments to the creation of a black business sector. In contrast to the Indian-owned businesses, black businesses are not legitimised by their community. Religious and social approval of business activity exists in the Indian community, but not in the black. Although the former have these advantages in trading, political difficulties exist in the macro environment. In the micro, the support of friends, family, and the philosophy of low prices, low profits and low overheads and minimal financial reward for the Indian family involved in the business, reduces the huge problem which business in the black community has to face (Godsell,G. 1990:122).

The rise in the prominence of the informal traders owning spaza shops in many urban backyards has not attracted the destructive attention of the young radicals in times of stress. Their owners are perceived to be part of the community and not to be associated with the rapacious formal traders. However, it would appear that a particularly successful spaza store that is visibly bigger than the norm may be subject to destruction by the youth because success is perceived negatively.

From the above resumé the general situation regarding

black business in the townships is not encouraging for the establishment of a formal business venture. The vast majority of those engaged in an economic activity are in the informal sector and are not subject to the same negative attitude of the community towards them. The attention of the radical youth is not focussed on informal businesses.

The lack of good role models is a hinderance to those who wish to build a growth orientated venture in the black residential areas. The township environment and the negative community view of formal businesses also act as deterrents. This is not encouraging for the young disadvantaged person who has entrepreneurial aspirations and does not want to work for others.

Despite the unattractive situation for new ventures in the townships, youth must be assisted to become more enterprising. This will be the focus of the next section.

1.8 SOLUTIONS TO THE PROBLEMS OF YOUTH

The encouragement of enterprise through the education process is one of the most effective way of addressing the problems.

1.8.1 EDUCATION AND ENTERPRISE

The uncertainties brought about by the transitional situation existing in South Africa, and the accompanying poor economic climate, has encouraged individuals to learn to manage risk and uncertainty in a more positive way. The lack of job opportunities, in the black sector in particular, means that individuals will have to take the initiative and not wait for others to "right" the situation to suit the majority. Education has a key role to play in the changing scenario.

Jamieson (1984) maintains that what is needed is a curriculum which encourages in young people skills, knowledge and attitudes to go out and create their own futures, and solve their own problems.

Crompton (1987) compares the traditional education system, which is presently the norm in South Africa, with the more progressive system. The details are given in Table 1.10. A change is needed from the dependency situation which the traditional approach encourages, to the more "risky" one fostered by a progressive educational system. Handy (1984) develops the idea of a "risky society" which has come about as a result of changes discussed earlier in this chapter.

Table 1.10

COMPARISON OF TRADITIONAL AND PROGRESSIVE EDUCATIONAL SYSTEMS

TRADITIONAL (Dependency)	PROGRESSIVE (Risky)
Knowledge-based.	Skill-based "learning to learn".
Organized in subjects.	Integrated approach.
Teachers are the source of knowledge.	Teachers facilitate learning by managing learning resources, creating learning environments and using active student centred methods.
Pupils are passive receivers controlled by external sanctions and rewards, as in:	Pupils are active participants in the whole school life.
Non-referenced exams and tests; school rules.	Intrinsic sanctions and rewards characterized by negotiation or a "contract".
Academic value higher than other knowledge.	Assessment is criterion-led and involves profiling and self-assessment.

(After K Crompton 1987:7)

The progressive educational system ties in with this changed pattern of society.

The views of the above authors state that encouragement must be given to students to guide their own learning. This will be achieved by more interaction between pupil and teacher. The development of a range of basic and vocational skills is needed, and this may be achieved through active rather than passive learning and by an integrated rather than a subject-approach to curricula development. The teacher's role as the sole source of knowledge will no longer be relevant. The new approach by the teacher will be to produce learning experiences and to guide students through them.

A curriculum with the primary objective of imparting knowledge is no longer sufficient. One of the fundamental changes in modern society is that knowledge is not important in itself, since it is impossible for a person to have a comprehensive understanding and be completely knowledgeable on a particular subject. The ability to find and use information is a more valuable skill. A future curriculum must place a greater emphasis on skills and, what is more important, "learning to learn". Knowledge per se is not what is needed; the focus ought to be on learning. The students themselves should be central in the new education system. They will need to develop their own particular

skills and talents. Rote memory and emphasis on the academic above the practical will no longer be the focus. What will be important is the ability to do things and the practical application of the learning. The curriculum will need to encourage more pupil participation, through discovery and learning.

In a project such as the Junior Achievement Programme (Appendix 1) which is the model used in the intervention, students organize themselves to run a "mini enterprise". The skills, attitudes, and values appropriate to starting, owning, or working in a successful business venture are encouraged. Taken in a wider context the objective as far as the participants are concerned, is to become more enterprising. The concern here is that young people should be equipped to create their own futures and solve their own problems. A positive attitude towards, and a better understanding of what business is and does and how it is created, is relevant, but is only a part of a wider and more important set of objectives.

1.8.2. ENTERPRISE AND ENTREPRENEURSHIP

Entrepreneurship is one manifestation of enterprising behaviour. It is a subset of enterprise which includes the acquiring of skills, knowledge and attitudes, and solving problems, so that the individual can create a future life specific to his/her needs.

Jamieson (1984) first introduced the idea of mini-enterprises in schools. Crompton (1987) noted three reasons for the involvement of schools in this activity.

In its narrowest sense a mini-enterprise is run to educate young people to start up their own small businesses.

This Crompton calls "Education for Enterprise" (1987:9). In another view enterprise education is described as an input to students which encourages the development of skills, attitudes and values relevant to starting, owning, managing or working in a successful business enterprise. Crompton calls this "Education about Enterprise" (1987:9).

The third, and possibly the most important reason for introducting the mini-enterprise activity into schools, is the necessity for young people to become more enterprising. In working through the programme the

participants are encouraged to create their own futures, as well to solve their own problems. The vehicle would be business as such, but business is not the only concern. Crompton (1987:9) labels this perspective as "Education through Enterprise".

Education should produce some individuals willing to set up and run new business ventures. If schools can become involved in encouraging enterprise in scholars this objective will be attained. The process of deregulation, the introduction of the simplified business entity known as the Close Corporation (cc), the access to loans with preferential rates for small business development, have all been introduced by the government in recent years to encourage entrepreneurial activity. South African education has not yet followed suit in encouraging enterprise.

1.9 ENTREPRENEURIAL CHARACTERISTICS

Since the students in this research have experienced an intervention based upon the setting up and running of their own businesses, it is necessary to establish the relationship between the Junior Achievement programme and entrepreneurial behavior. Entrepreneurial personality characteristics have been studied for some time and the

most important findings are briefly discussed below.

> Cantillon (1931) was the first to identify the entrepreneur as a person who took risks; for Adam Smith (1937) the entrepreneur was the capitalist employer who provided and accumulated capital. Schumpeter (1939) saw the entrepreneur as an innovator. Cole (1946) labelled the entrepreneur as a manager and innovator but emphasised that conservatism and innovation though diverging aspects, were necessary for entrepreneurship. McClelland (1961) concentrated on the entrepreneur's personality characteristics: need for achievement, and search for self-actualisation. Another group of authors have researched the internal-external locus of control of the entrepreneur. Rotter (1966) and Hersch and Schiebe (1967) among others, maintain that the individual who is internally orientated and hence self-sufficient has one of the most important psychological characteristic for entrepreneurship.

Venkatapathy (1984:99) in a review article concluded:

> "The review, in general, suggests that internal locus of control is one of the important characteristics to the making of entrepreneurs".

The first attempt to determine whether entrepreneurs exhibit a definite psychological set was made by

McClelland (1961). His research was based on the concept of a "need for achievement" (nAch). This author has published widely on many aspects of his theory (McClelland, Atkinson, Clark and Lowell, 1953; McClelland 1955, 1961, 1965, 1985, 1987). Atkinson (1968:181) defines nAch as: "a capacity for taking pride in accomplishment when success at one or another activity is achieved".

McClelland characterized individuals with high nAch as those who prefer to be personally responsible for solving problems and to set goals that are attainable through their own efforts. They take moderate risks, prefer to use their own skills and not to rely on chance. They prefer to engage in energetic and/or novel instrumental activities. These individuals have a strong desire to have feed-back on their accomplishments, and have a long time perspective (Durand 1972:10-14).Van der Merwe (1976) researched achievement motivation with independent Xhosa businessmen and confirmed the above characteristics for his target group. Since entrepreneurs have the same characteristics McClelland concluded that they should have high nAch. His theory will be discussed in more detail in the next chapter.

The generalized expectancy theory based upon social

learning theory was labelled "locus of control" (Rotter 1966). He stated that an individual perceives the outcome of an event being either within or beyond his personal control and understanding. The two categories were defined by Rotter (1966:1) thus:

> "... a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture it is typically perceived as the result of luck, chance, fate, as under the control of others or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labelled this a belief in external control. If the person perceives that the event is contingent upon his own behaviour or his own relatively permanent characteristics, we have termed this a belief in internal control".

It was Rotter's view that need for achievement is related to a belief in internal locus of control.

On the basis of his own, and the work of other researchers (McClelland, Atkinson, Clark and Lowell (1953), Atkinson (1958)) Rotter hypothesised that individuals with internal beliefs would strive harder for achievement than those persons with external beliefs.

The work of a number of researchers (McGhee and Crandall (1968): Gurin, Gurin, Lao & Beattie (1969) and Lao (1970)) verified that individuals with an internal locus of control do have a more pronounced need for achievement. The theory of Rotter et al. will be discussed more fully in later chapters.

Kirton found, as a result of his research work on innovation, that problem solving, decision making and creativity were closely related. He developed a univariate scale to measure the common elements. He called this the KAI inventory. Further background to the instrument will be given in Chapter 2.

Kirton's Adaptive-Innovative Inventory (KAI) is based on theory which states that people differ in the manner in which they define and solve problems because of a stable characteristic preference for an "adaptive" or "innovative" approach to change (Kirton 1985).

According to Kirton's (1976) theory every person can be located on a continuum ranging from highly adaptive to highly innovative according to their score on a questionnaire known as the KAI Inventory. Persons with a high score are innovative in their approach to problem solving, whilst those with a low score work within laid

down procedures and policies when handling difficulties.

Three theories outlined above form the basis of the research work in this thesis. They are:

The achievement motive theory as put forward by McClelland and adapted by others; Rotter's Social Learning Theory regarding a person's internality or externality, and Kirton's theory of adaptive and innovative behaviour. These will be discussed further in later chapters.

The work of researchers on the entrepreneurial personality may be summarized under six headings:

Need for achievement (or nAch)

Need for independence and internality (Rotter I-E test)

Risk taking

Objective setting

Creativity or innovation (KAI inventory)

Motivation, initiative, commitment and energy.

We can conclude from the research outlined above that if entrepreneurship is to be encouraged, the entrepreneurial personality characteristics of individuals should be identified and developed.

Further background to personality characteristics

associated with entrepreneurship and the link to published research will be given in Chapter 2. Sufficient background has now been given to define the research objectives.

1.10 RESEARCH OBJECTIVES

The objectives of the research described in this thesis are:

1 To determine whether a Junior Achievement-type intervention affects the participants' level of achievement motivation (nAch). The instrument used to measure nAch was the Achievement Motive Questionnaire (AMQ).

2 To determine whether a Junior Achievement-type intervention affects the participants' locus of control, as measured by the Rotter instrument.

3 To examine the participating students' increase in knowledge of business as a result of the intervention received.

4 To study the impact of the experimental intervention on subsequent entrepreneurial behaviour.

5 To study the differential effect of the intervention as described, on males as opposed to female participants in the experimental group, as measured by the Rotter Locus of Control instrument.

1.11 RESEARCH PROBLEMS AND HYPOTHESES

The research problem may thus be summarized as an investigation on the outcomes of an experimental intervention given to an urban group of disadvantaged high school students at the end of their schooling, in relation to:

(a) Changes in personality values measured by the Achievement Motivation Questionnaire (AMQ) and Rotter Locus of Control instruments.

(b) An increase in business knowledge.

(c) The setting-up of small scale enterprises by the entrepreneurs in the group (which demonstrates that the elements needed to set-up and run an actual small business have been learnt, appreciated and applied).

(d) An increase in internality, as measured by locus of

control, of the experimental group compared with the control.

(e) A gender differential in internality in the experimental participants in the research.

The above measurements and observations were done with an experimental group in comparison with a matched control group from the same population.

The hypotheses tested are:

1 As a result of the intervention, there is a shift in the respondents' values as measured by the Achievement Motive Questionnaire and the Rotter Locus of Control instrument, on a pre- versus post- administered basis, comparing the Experimental with the Control groups.

2 As a result of the intervention, there is an increase in business knowledge in the Experimental Group relative to the Control Group.

3 As a result of the intervention, those participants in the Experimental Group who set up their own businesses demonstrated that they were aware of the elements involved in forming and running their own independent businesses. The Control Group participants who had their own concerns did not display the same understanding.

4 As a result of the intervention, the male participants in the Experimental Group benefited to a greater extent than the females in the same group, by an increase in their locus-of-control internality and an increase in business knowledge.

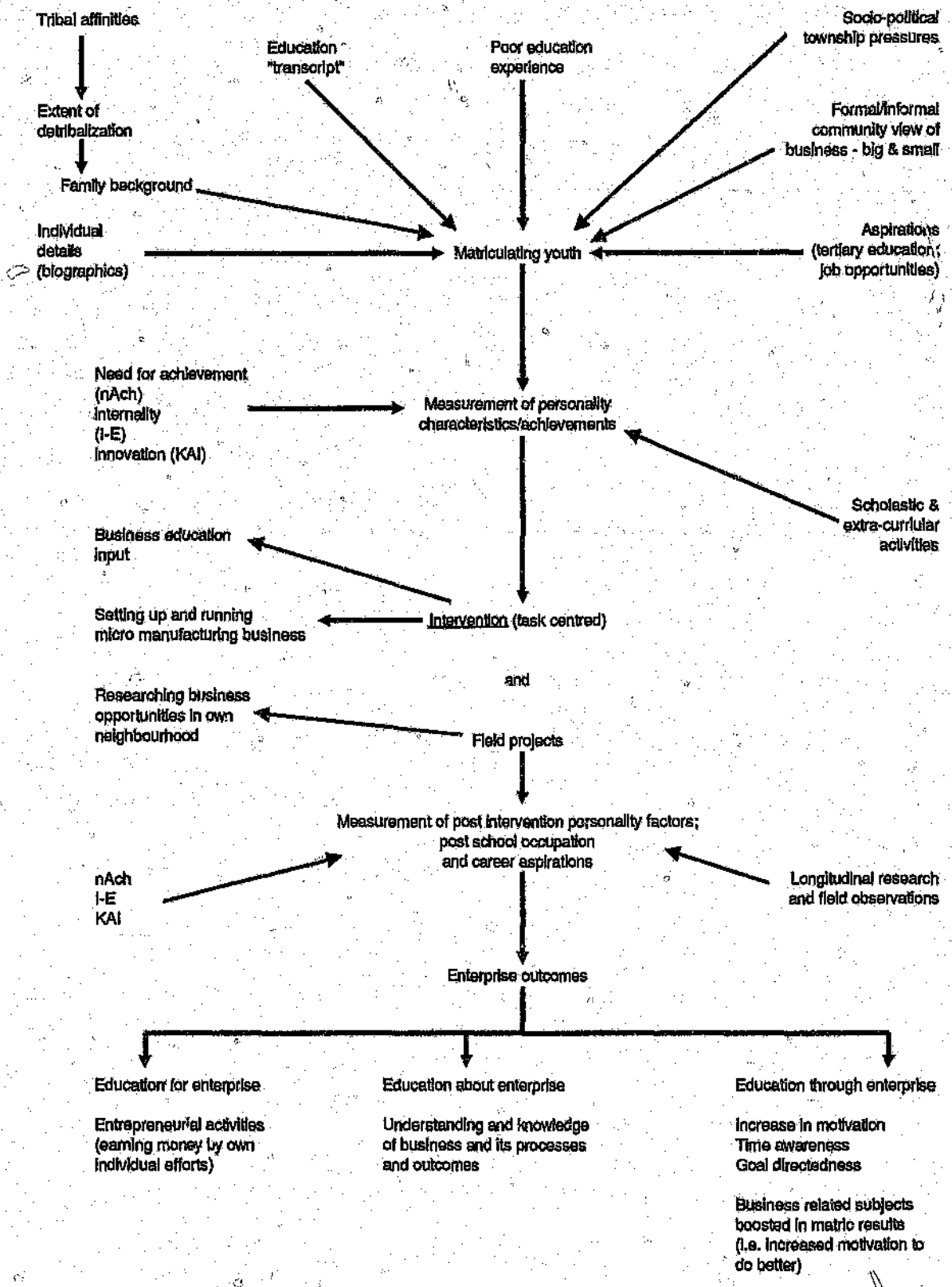
1.12 RESEARCH SUMMARY.

This thesis investigates the changes in the entrepreneurial behaviour of matriculants as a result of an experiential intervention. Personality factor changes in achievement motivation and internality were measured as well as increases in business knowledge. Longitudinal changes in behaviour over an 18 month period were also observed. The study was carried out in township high schools in three areas on the Witwatersrand close to Johannesburg.

As has been shown by discussions in this chapter the topic is complex. Figure 1.1 is a model of the research. The study commenced by examining the background to the urban township life situation, the gathering of biographics, school and other data on the participants of the research, black youth at the pre-matriculation stage.

Figure 1.1

MODEL OF RESEARCH STUDY



The pre-intervention phase included measurement of personality characteristics, scholastic and other activities. The task-centred experiential input was given to a selected group with a matched control group drawn from the same population not participating. On a post-intervention basis the personality measurements were repeated with both groups. The longitudinal portion of the research included data gathered on occupations and career aspirations. Field interviews and business visits were also carried out in the final phase of the research.

CHAPTER 2 : LITERATURE SURVEY

2.1 INTRODUCTION

One of the main problems facing the researcher on the commencement of the literature survey was to identify published work directly applicable to the field of study. Two aspects of the research are considered to be unique: (i) research on the target population consisting of young disadvantaged students about to leave secondary high school and go out into the world, or onto the tertiary educational sector; (ii) the identification of latent entrepreneurial talent, in groups of young students, as a result of an intervention.

The economic importance of the small business sector throughout the world in recent decades has resulted in extensive literature on entrepreneurship. Even a cursory review reveals that research work in the small business field is not well integrated, compared with other fields of business studies. One of the aspects of concern is the lack of systematic research done on ... rant entrepreneurs. Brockhaus (1976:5) states that "Much less is known about the character of the entrepreneur than ab.. t the character of the business manager".

In the same work Brockhaus (1976:27) states "The researcher was unable to find any published research ... at the time when the actual decision to become a business owner was made". Most research in the entrepreneurial field deals with entrepreneurs and their characteristics and experiences in established businesses. The "process of failure has tended to eliminate from the populations studied... the many entrepreneurs who failed shortly after starting their business" (Brockhaus 1976:8). Due to the difficulty in identifying individuals whose businesses have failed, research into this aspect was not found.

The international data bases were scanned on two occasions during this study. The first was done in 1986 at the University of the Witwatersrand's Computer Data Base Centre, and the second at the library of the University of Indiana on the Bloomington Campus in Indiana in August 1991. Literature on small business and youth, (including students, inner city, streetwise and urban youth), in respect of locus of control, motivation and entrepreneurship were some of the searches carried out. Very little that was of direct interest was found on either occasion. Most writings on disadvantaged populations reported on work with mentally and physically handicapped individuals, principally in the United States.

As a result of the above, the background to the research was concentrated on areas in the entrepreneurial and business educational literature which have a direct bearing on young adults at the same, or similar career stages as the urban youth studied.

In the first chapter of this thesis the point was made that individuals have to be enterprising in their behaviour to be able to cope with the constantly changing patterns of life in today's world.

The target population of the present research, matriculating disadvantaged youth from the townships on the Witwatersrand, have great difficulties in making the transition from school to the world beyond the classroom. The linkage between education, enterprise and entrepreneurship is important in this regard. Youth from the target population face particular difficulties in seeking a worthwhile future for themselves. Little is published about this sector and in particular what these individuals do after formal schooling. This study sheds some light on the post-school transitional phase.

As noted previously, enterprising behaviour is evidenced by the individual's ability to be creative and innovative in dealing with unfamiliar situations. The ability to

identify problems, to work out solutions and to take a pro-active attitude towards the future, is shown by the enterprising individual. Entrepreneurship is a sub-set of enterprise as was discussed in Chapter 1.

The literature survey focusses on the following areas as far as young adults are concerned: The process of entrepreneurship; the characteristics related to entrepreneurial success; personality traits and the entrepreneurial individual; research on entrepreneurship and the achievement motive; locus of control and entrepreneurship; the role of education in encouraging enterprise.

2.2 INDIVIDUAL CHARACTERISTICS AND ENTREPRENEURSHIP

Entrepreneurs were identified during the intervention and it was with this in mind that the literature was consulted on the personality traits of the entrepreneur.

The entrepreneur is the individual who scans the environment for a money-making opportunity, identifies one (or more) and brings together the resources required to start a venture and create a business. The characteristics of the individual who is able to start a venture has been

researched by many scholars and a summary of earlier research work in the field was given in Section 1.9. The background to such a person's upbringing and family circumstances especially in the young adult stage is of particular interest in this research.

Over the years there has been an "explosive rebirth in entrepreneurship" (Timmons, Smollen and Dingee 1985: 139). As a result, an increase in research work into entrepreneurship and the individual's characteristics has taken place. Recent efforts to systematize the accumulated knowledge into valuable frameworks has been done by Chell (1985), Chell and Haworth (1987) and Timmons et al.(1985). A classification of the studies of the entrepreneurial personality into three categories has been done (Chell and Haworth 1987). They are the trait, the behavioural and the contingency approaches.

2.2.1 THE TRAIT APPROACH

Brockhaus (1982) in his "Psychology of the Entrepreneur" summarizes the different areas of study in the research work on the individual's characteristics. Chell and Haworth (1987) maintain that earlier research efforts have yielded uncertain results. They claim that the many

different explanations of entrepreneurial behaviour by various researchers is the result of different definitions and interpretation of the term "entrepreneur". Chell's (1985) arguments lead to the recommendation that an assessment of both person and situational variables will enable the psychologist to predict behaviour with greater accuracy.

2.2.2 THE BEHAVIOURAL APPROACH

This is rooted in sociological literature. Researchers working in this area have tried to distinguish between the different entrepreneurial types.

The behavioural approach has taken three different forms:

(i) Developmental influences in childhood.

(ii) Typographical work from empirical research.

(iii) Social development stages.

(i) Childhood developmental experiences that encourage entrepreneurial talent are identified clearly in the work of McClelland (1961) and of Kets de Vries (1977).

In the former researcher's work, the model presented

includes several intervening variables: ideological - family - need for entrepreneurial values - socialization and achievement behaviour.

McClelland believes the inculcation of the achievement motive is best done in child-rearing practices which stress standards of excellence, maternal warmth, self-reliance training and low father dominance.

Levine (1966) provided an alternative viewpoint. He argues that the type of status mobility prevalent in a society will regulate the socialization of the children in that society. If higher status is attained by outstanding performance in the parent's occupational role they will, in turn, try to foster in their children initiative, industriousness and foresight through self-reliance and the encouragement of achievement. On the other hand, children in an hierarchial society will attain upward mobility through loyalty, obedience and sycophancy. These parents will concentrate on obedience training, the use of flattery and the suppression of antagonizing tendencies that could irritate superiors.

Kets de Vries (1977) views the entrepreneur as a deviant or marginal character. Bad early childhood experiences will accent the behaviour, resulting in an inability to

accept the authority of others, and thus fit into an organization. Socialization processes in early childhood were singled out as the prime causal factor. As an adult, the psychological experiences in early life result in problems with self-esteem, insecurity, a lack of self-confidence and an inability to accept authority of others and hence to fit into an organization. Such a person has constant feelings of anxiety, distrust and dissatisfaction. This results in the individual looking for a position in which he can maximise his independence and control over his destiny.

(ii) The typographical approach has to do with growth/ change, independence and craftsman orientation of established entrepreneurs (Dunkelberg and Cooper 1982). This work is of little value to the present study and was not followed-up.

(iii) Gibb and Ritchie's (1981) social developmental model is a study of the different stages in a business' growth. These researchers maintain that learning, experience and stages in the entrepreneur's life cycle have a significant influence on the business start-up process. Gibb and Ritchie argue that entrepreneurs are made, not born. Their proposed model was not found to be applicable to this research.

2.2.3 THE CONTINGENCY APPROACH

The research work of Miller (1983) and Miller and Friesen (1982) typifies the contingencey approach. They assume that the behaviour of the entrepreneur is a function of various identifiable contextual variables. Their work enables small firms to be classified into different types. This typology has no an application to the present study.

2.3 GENERAL PERSONALITY CHARACTERISTICS AND ENTREPRENEURIAL SUCCESS.

The researgh done on personality characteristics was reviewed in order to link personal characteristics with entrepreneurial success.

In Timmons, Smollen and Dingee's 1977 study, the following general personality characteristics are considered important for entrepreneurial success (1977:80-83):

Drive and energy; an entrepreneur has high personal energy and drive.

Self-confidence; successful business founders have a high level of self-confidence.

Long-term involvement; this is needed to create and

build a good business.

Persistance in problem-solving i.e. an intense determination to succeed.

Ability to identify and commit to clear goals.

Moderate risk-taking i.e. calculated and not reckless risks are accepted.

Ability to accept failure and to learn from the experience. Setbacks and disappointments are part of their lot, but do not discourage.

Requirements of feedback on performance so as to measure how well/badly a venture is doing in order to make improvements.

Money as an indicator of success; it is seen as one of the yard-sticks of performance.

Taking the initiative and accepting personal responsibility, this is indicative of a self-reliant innovator.

Making full use of resources, including personal contacts and other sources of expertise, to meet pre-set goals.

The setting and completion of own personal standards; an internalized competitive spirit.

A special tolerance of ambiguity; the ability to make decisions in uncertain circumstances.

Olson and Bosserr (1984:55) developed a model relating

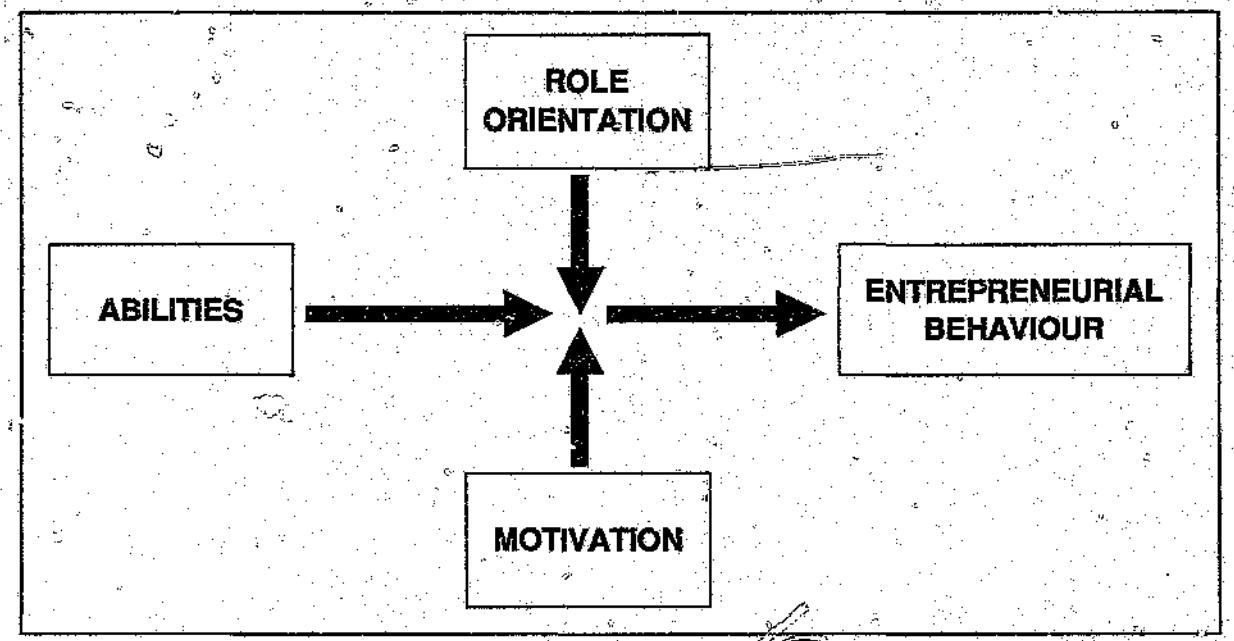
three personal attributes which they believed were needed for entrepreneurial behaviour. These are shown in Figure 2.1.

Olson and Bosserman (1984) believe that an entrepreneur has to have the ability to think rationally and intuitively. An awareness of the environment and its continuous scanning for opportunities is a characteristic, finding new connections between seemingly unrelated subjects is also needed. The rational way of thinking involves a logical, sequential and analytical process. The researchers viewed this ability as being necessary to understand the environment. Its importance is displayed when determining the success potential of a venture and the analysis needed to evaluate ideas, to plan, implement and communicate on its development.

As far as role orientation is concerned, Olson and Bosserman maintain that individuals will only exhibit the required role behaviour when they know and understand what they have to accomplish. Entrepreneurship is not based on a single act but is a process involving many activities. Among the learned attitudes and beliefs, focussing on opportunities instead of problems is perhaps the most important, according to Olson and Bosserman (1984:54).

Figure 2.1

ENTREPRENEURIAL BEHAVIOUR FRAMEWORK



(Source:Olson & Bosserman, 1984:55))

Maslow's hierarchy of needs (Maslow 1943), McClelland's (1961) work on achievement motivation and the expectancy theory of motivation (Nadler and Lawler 1977) are quoted by Olson and Bosserman (1984) as being of importance in any work on the entrepreneurial personality. There is no simple answer to what motivates a person to become an entrepreneur (Olson and Bosserman 1984:56).

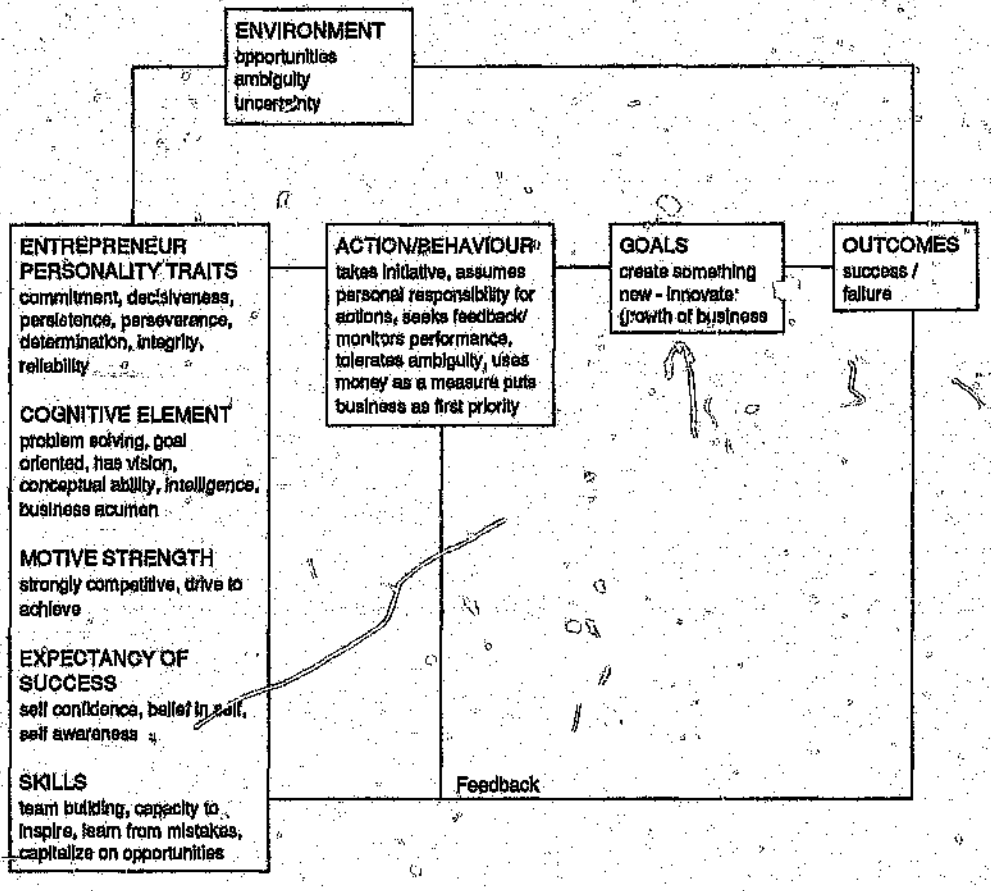
2.4 A MODEL FOR THE STUDY OF THE ENTREPRENEURIAL PROCESS

Numerous models exist in the literature to explain the entrepreneurial process. The relevant models for this study are those incorporating the personality characteristics of the entrepreneur with the situational factors in a contextual format.

One of the best models to explain the entrepreneurship process incorporating the entrepreneurial personality has been developed by Timmons, Smollen and Dingee (1977, 1985) shown in Figure 2.2. Chell and Haworth (1987:21) wrote that this study is "one of the most comprehensive approaches to understanding entrepreneurship to date."

Figure 2.2

THE PROCESS OF ENTREPRENEURSHIP (AFTER TIMMONS ET AL. 1985)



(Source; Chell & Haworth, 1987:32)

Timmons et al. (1977, 1985) have set out a relationship between personality traits, cognitive elements, motivation and skills inventory. The skills inventory includes the ability to capitalize on opportunities, and/or to work through other people. The action and behaviour pattern leading to the prioritization of goals and the relationship to the environment and the outcomes of the process are noted. The researchers updated their original work done in 1977, eight years later.

The Timmons model assumes that the successful entrepreneur is an ideal type, possessing all the characteristics stipulated. Chell and Haworth (1987) were critical of the model on this account. They also thought the model was too complex. Regardless of this criticism, the Timmons model serves as a a very useful theoretical framework for the present study as it puts the elements of the entrepreneurial process into perspective.

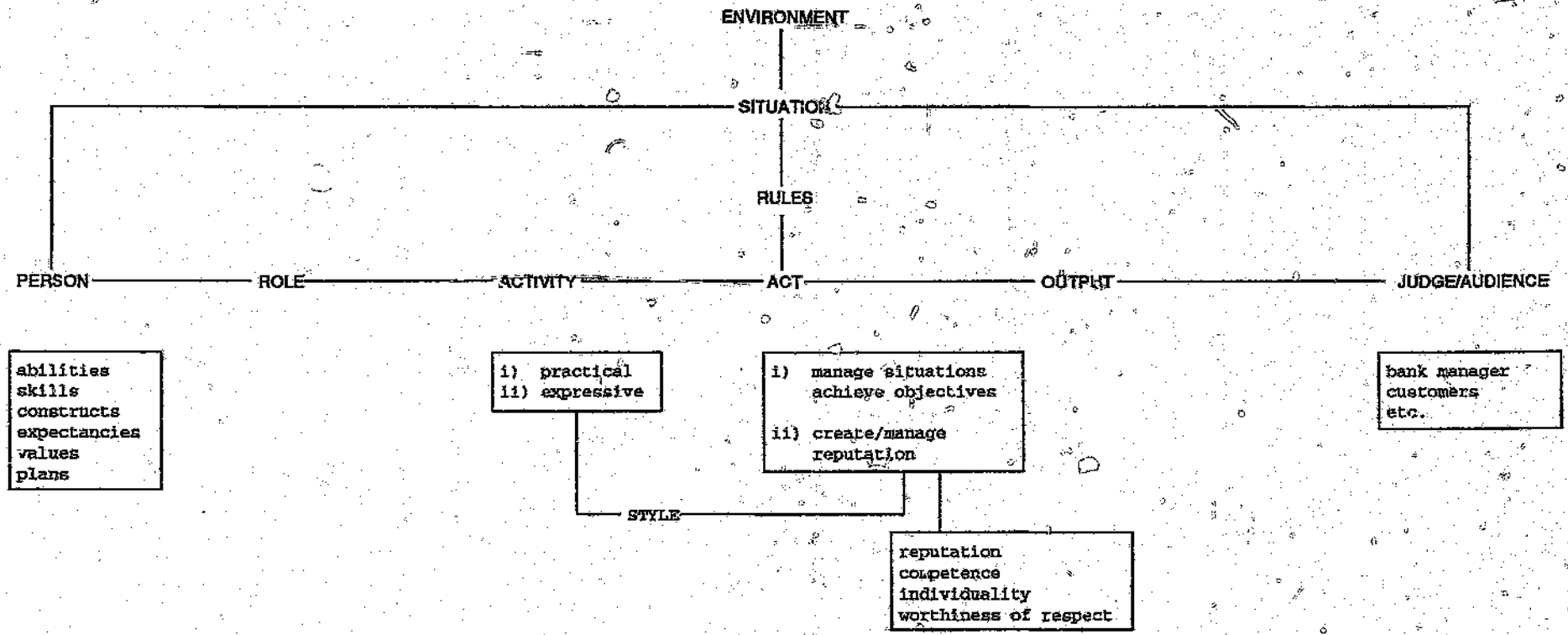
Chell and Haworth (1987:33) have developed an alternative model to that of Timmons et al. but exclude any motivational elements. The Chell and Haworth model itemises the social learning person variables i.e. abilities, skills, constructs, expectencies, values and strategies/plans which may be considered as general features of individuals. These, in combination with

particular situations, result in certain actions being taken that influence the entrepreneur's orientation and role behaviour towards his business. The entrepreneur has to deal with many different situations governed by changing environmental conditions. Harré (1979) maintains that situations are governed by rules that prescribe the acting out of appropriate roles. The entrepreneur may or may not have the right combination of behaviours to cope with the different situations facing him and his business. Chell (1985) has developed the Chell and Haworth model further so that it includes appropriate personality variables and takes into account differences in behaviour in persons and situations. The model combines Mischel's (1973) social learning person variables as well as incorporating a modified version of Harré's (1979) situational model.

The Chell and Haworth model (1987:33) as adapted from Timmons is shown in Figure 2.3.

Figure 2.3

PERSON/SITUATION INFLUENCES ON ENTREPRENEURSHIP



(Source: Chell & Haworth, 1987:39)

2.5 ENTREPRENEURSHIP AND PERSONALITY TRAITS

In this section the results of an examination of the literature concerning the development of the achievement motivation theory and its relationship to entrepreneurship will be considered. The second theoretical base of this study is Rotter's Social Learning Theory. Achievement motivation and the work on internality of Rotter and other researchers contribute greatly to the understanding of the psychological make-up of the entrepreneur. The research leading up to the development of the constructs and their subsequent use is summarised in this chapter. It is important to gain an understanding of previous research work, as the constructs mentioned are used in this study, to evaluate the effect of the intervention on the participants.

2.5.1. THE DEVELOPMENT OF THE ACHIEVEMENT MOTIVATION CONSTRUCT.

Fineman (1977) in his review of the literature on the measurement of the achievement motive, states that the construct was first noted in the writings of James, in 1890. Fineman (1977:1) quotes James: "about man's self-regard as being determined by self-imposed goals,

the achievement of which leads to feelings of well being and elevation, while failure brings about frustrations and humiliations".

It was in the work and theory of Murray (1938) that a more formal approach to the development of the construct took place. Murray developed a taxonomy of personality needs defined as: "hypothetical constructs reflecting physiological 'forces' which direct behaviour" (Fineman 1977:1).

One of these was the achievement need. Quoting from Murray (1938:164) on this need:

> "... the desire or tendency to do things as rapidly and/or as well as possible. It also includes the desire to accomplish something difficult. To master, manipulate and organize physical objects, human beings or ideas. To do this as rapidly and independently as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent."

McClelland (1955), influenced by Murray, focussed on the effect associated with the achievement motive (nAch). He defines this as:

"... the positive or negative effect aroused in situations that involve competition with a standard of excellence, where performance in such situations can be evaluated as successful or unsuccessful" (Finemann 1977:1).

Atkinson (1968) incorporated "to avoid failure" into the definition. Heckhausen (1967) developed a two-motive theory consisting of the "hope of success" and the "fear of failure".

Although Fineman (1977) accepts that the achievement motive concept is very sound, he expresses concern that there are different interpretations of the achievement motive, and there is a great deal of disagreement about its measurement.

2.5.2. THE ACHIEVEMENT MOTIVE AND ENTREPRENEURSHIP

(a) McClelland's studies on motivation

In this section the work of McClelland (1961, 1965) on achievement motivation (nAch) and the link to entrepreneurship will be examined in greater detail.

Through correlation studies McClelland determined that those individuals who had high nAch scores tended to exhibit the following role behaviours (1961:207):

(i) Risk-taking as a function of skill not chance.

(ii) Energetic and/or novel instrumental activity.

(iii) Individual responsibility.

(iv) Knowledge of outcomes of decisions; money as a measure of success.

(v) Anticipation of future potential.

In his later work McClelland reduced the above five behaviours to three main traits (1965:101). Individuals with high nAch scores:

(i) Take personal responsibility for finding solutions to problems.

(ii) Set moderate achievement goals and take calculated risks.

(iii) Require concrete feedback regarding performance.

In McClelland's research work (1961, 1965) he demonstrates that the above behaviours correlate strongly with entrepreneurial success. The belief in achievement motivation as a means to increase the probability of business success and economic development led to McClelland's work on training programmes designed to increase achievement motivation in new and practising

business managers (McClelland 1965, McClelland and Winter 1969, Miron and McClelland 1979).

Among the many studies that McClelland conducted are a series of three that are important for this research. The first researched relationships between nAch scores and entrepreneurial behaviour in young men. His findings were that school-going young men in the United States, Italy and Poland who exhibited high nAch scores, showed a preference for business occupations that represented a moderately high level of aspiration for a boy. The particular occupations specified by the group were in the executive rather than the specialist or the professional fields. McClelland interpreted these results to mean that a high nAch influences a young man to aim for a position requiring entrepreneurial qualities in his personal make-up.

In a longitudinal research project, his second study, McClelland (1965) confirmed his hypothesis that there was a link between entrepreneurship and high nAch in an individual. In this work he found that 83% of men who had occupations classified as entrepreneurial were found to have exhibited high nAch scores when tested 14 years earlier. Only 21% of those in non-entrepreneurial positions displayed high nAch results on the earlier test.

In the same study McClelland confirmed the results. He repeated the previous exercise by using a larger number of college graduates who had qualified seven years earlier. He found that 60% of these entrepreneurs had exhibited high nAch scores when tested on entering college, versus 40% of the non-entrepreneurs. McClelland's conclusion was that a high achievement motivation does influence the decision to enter into entrepreneurial occupations.

In a third study with Indian businessmen, McClelland and Winter (1969) found that 48% of the persons who had participated in a training programme designed to increase the nAch level of the participants, had subsequently been unusually active in entrepreneurial positions.

All McClelland's studies used a general definition of the entrepreneurial occupation. In the 1965 study McClelland considered salesmen, management consultants, fund raisers and officers of a large company to be entrepreneurial, as well as actual owners of a business. Although it is not possible to connect nAch directly with the decision to own and manage a business based upon McClelland's research, his work remains a very important source of information on the psychological aspects of the entrepreneurial decision.

McClelland and Winter (1969) confirmed the earlier work of McClelland (1961) in identifying behaviour patterns as descriptive of those individuals who display a particular need to achieve. These characteristics are also regarded by these researchers as important for success in entrepreneurship. Numerous other research studies have supported the hypothesis that those with a high achievement motive behave like successful, rational business entrepreneurs. The work done in 1961 and 1962 by McClelland identified five and then three different behaviours respectively, whilst the 1969 work reported on four.

The four forms of behaviour shown by persons with a high achievement motive as reported by McClelland and Winter (1969) are:

i) High achievers take moderate risks, prefer to use their skill and not to rely on chance.

ii) They prefer to engage in energetic and/or novel instrumental activities.

iii) High achievers prefer to assume personal responsibility for the outcome of their performance.

iv) They have a strong desire for immediate feedback of results of their performance.

McClelland (1965) and Durand (1972) reported on their

findings of a longitudinal study with trainees who had attended achievement motivation courses. As a result of this input, it was found that these individuals were wealthier, expanded their business faster and exhibited a higher rate of business activities than the control groups not so trained.

(b) Subsequent research work in the field:

Van der Merwe (1976) researched the achievement motive in 50 entrepreneurs, using 50 teachers as a control group. He found that nAch scores were at a statistically significant higher level for the entrepreneurs than the teacher group.

Hornaday and Aboud (1971) found that entrepreneurs have a higher need for achievement than the general population. Forty entrepreneurs whose businesses had been established for at least five years and who employed at least eight employees, and were considered to be successful, were compared in their achievement testings to the general population, and scored significantly higher. A finding of this study is that entrepreneurs need to be independent.

Cromie and Johns (1983) found that entrepreneurs did not

score significantly higher on achievement motivation, nor on achievement values when compared with managers. In a more recent study however, Cromie (1987) found that a group of entrepreneurs scored significantly higher on nAch than a group of naval officers, and also significantly higher than a group of 200 university students.

Ahmed (1985) used a group of 71 Indian entrepreneurs and 62 Indian non-entrepreneurs in England, giving both locus of control, risk-taking propensity and nAch tests.

Significant differences between the two groups on all three scales were found in these studies. These variables were positively related to entrepreneurship, Ahmed maintains, and his results confirmed earlier findings.

Begley and Boyd (1987) distinguish between founders and non-founders of businesses. These researchers maintain that only founders can be called entrepreneurs. In their work Begley and Boyd confirmed that founders (n = 92) scored significantly higher on need for achievement, risk-taking propensity and tolerance of ambiguity, than non-founders. Among this latter group (i.e. non-founders) however, high nAch correlated positively with a high liquidity ratio in their businesses.

McClelland (1987:225) reports on research done by McBer & Co. (1986). The findings are listed in Table 2.1. Nine "competencies" are noted. These were found to be more characteristic of those that were successful than those entrepreneurs who were considered to be "average" in three countries: India, Malawi and Ecuador. The nine competencies are broken down into three groups labled "pro-activity", "achievement orientated" and "commitment to others".

Despite the fact that great changes have occurred in the world during the 1960's and the following two decades, as pointed out in Chapter 1, the above summary of research work confirms the findings of McClelland in 1961 and 1965. These are still true twenty five years later. It can therefore be stated with some confidence that a person with a high achievement motive is likely to behave in an entrepreneurial manner.

The students involved in the study are drawn from both genders and hence it is necessary to study the literature on work done on the achievement motive and male/female differences in achievement behaviour.

Table 2.1

COMPETENCIES WHICH ARE CHARACTERISTIC OF SUCCESSFUL ENTREPRENEURS IN INDIA, MALAWI AND ECUADOR.

Proactivity		
1.	Initiative	Does things before being asked or forced to by events.
2.	Assertiveness	Confronts problems with others directly. Tells others what they have to do.
Achievement Orientation		
3.	Seeks and acts on opportunities	Seizes unusual opportunities to start a new business, obtains financing, land, work space, or assistance.
4.	Efficiency orientation	Looks for or finds ways to do things faster or at less cost.
5.	Concern for high quality of work	States a desire to produce or sell a top or better quality product or service.
6.	Systematic planning	Breaks a large task down into subtasks, or subgoals, anticipates obstacles, evaluates alternatives.
7.	Monitoring	Develops or uses procedures to ensure that work is completed or that (your) meets standards of quality.
Commitment to others		
8.	Commitment to work contract	Makes a personal sacrifice or expends extraordinary effort to complete a job, pitches in with workers or works in their place to get job done.
9.	Recognizing the importance of business relationships.	Acts to build rapport or friendly relationships. Sees interpersonal relationships as a fundamental business resource, places long-term goodwill over short-term gain.

(Source: McClelland, 1997: 225.)

(c) Gender differences and the achievement motive.

The issue of gender differences in achievement motivation has been researched since the early 1970's. Horner (1972) postulated that women may become anxious about achieving success since this could lead to social rejection and/or feelings of being unfeminine, as a result of succeeding. Horner (1972) and Puryear and Mednick (1974) found that black American women's "fear of success" was less than that of white women. Social changes, including the liberation of women, may have made the fear-of-success hypothesis less relevant in recent years. Erwee (1981) researched the level of achievement motivation in black South African male and female students, employing the Achievement Motivation Questionnaire (AMQ) developed by Pottas, Erwee, Boshoff and Lessing (1980). Black males obtained higher scores than females on two of the five AMQ subfactors - Aspiration Level and Personal Causation.

No significant gender differences, using the AMQ, were found by Pottas (1981) in achievement motivation research on black South African male and female students. Pottas found that these students obtained higher scores ($p < 0,001$) than their white counterparts. Erwee (1986) reported on research with 251 black first year students

(119 males) and 132 females) at a local university. No significant sex differences were found on locus of control and achievement motivation scores. This confirmed the results of Pottas (1981) regarding black students' achievement motivation.

(d) Criticisms of the research done in the nAch field

McClelland's work has drawn criticism from a variety of perspectives. It has been claimed (Schatz 1971) that the validity of his findings have been questioned due to biased data selection, analysis and interpretation. Schatz examined the findings from an economic development perspective. McClelland has placed undue emphasis on the importance of achievement motivation, a single psychological variable, and underestimated the impact of social factors in assessing economic growth, maintains Frey (1984). McClelland used the Thematic Appreciation Test (TAT) as his measure and this has been criticised for low predictive validity (Klinger 1966) and low test-retest validity (Entwisle 1972; Miner 1980).

As pointed out previously, McClelland used the term entrepreneur in its widest sense, in his theory testing phase. He included commissioned salesmen, management consultants, executives in large companies, as well as

small business owner/managers (McClelland 1965). In later work he orientated his activities on the prospective or existing owners of a small business venture (Durand 1975; McClelland 1965; McClelland and Winter 1969; Miron and McClelland 1979; and Timmons 1971).

Among the critics of the measurement of achievement motivation and its significance in predicting entrepreneurial behaviour is Biesheuvel (1984) who warns that statistical significance should not be taken for behavioural significance. Biesheuvel maintains that the variances accounted for in correlational studies "are so small as to be virtually of no consequence" (1984:238).

Biesheuvel is critical of McClelland's work when he writes "McClelland's book is full of interesting ideas, but it falls short of establishing an empirically validated theory and model" (1984:238).

In recent years researchers have moved away from the mechanistic approach to behaviour, as propounded by McClelland (1985) and Heckhausen, Schmalt and Schneider (1985), and focussed on more cognitive conceptualisations of human behaviour.

McClelland's definition of a motive, which is central to his theory, has been severely criticised by Mancuso and Mascolo (1987) among others. McClelland defines a motive as: " ... a learned, affectively charged anticipatory goal state aroused by various cues" (1985:132). He further states that motives activate the organism to learn "the instrumated responses necessary to bring about the goal state" (1985:132).

These seemingly contradictory statements prompted Mancuso and Mascolo to ask: "What activated the organism to learn the learned affectively charged anticipatory goal states which are aroused by various cues?" (1987:324)

McClelland's discussion of the achievement motive as based on a 'variety incentive', and later in the book the definition of nAch as "doing something better for its own sake" (1985:350) does not fit together conceptually. Heckhausen's et al.(1985) contribution sets out to build mathematical formulae for predicting behaviour. This goal is still some way off however.

Mancuso and Mascolo's (1987) opinion is that logical positivists have been proved incorrect and the search for explanations of motives as traits can now be abandoned. The latest approach is to look for motivation principles

that fit the current cognitive theories (Mancuso and Mascolo 1987:329).

Despite the above criticisms, the measurement and application of nAch as a predictor of a behaviour pattern is still being applied by the researchers referred to above. The critics show that it cannot be used as a sole instrument, but must be applied in conjunction with other instruments.

2.5.3. THE INTERNAL-EXTERNAL LOCUS OF CONTROL

Rotter's Social Learning Theory (1964) deals with the perception of individuals concerning the connection between their own behaviour and occurences around them. Rotter (1966) developed the Internal-External Control Scale (I-E). This measures the degrees to which individuals perceive the causal relationship between their own behaviour and results in the environment i.e. the reinforcers. The hypothesis behind Rotter's work is that people who are internally orientated believe they are more in control of their destiny than those who feel that their future is controlled by luck, chance or some other powerful force (Rotter and Hochreich 1975).

In order to investigate entrepreneurial behaviour in the subjects studied in this research it is necessary to use both the constructs measuring the nAch and Internal-External (I-E) locus of control. The relationship between the two constructs has been discussed in the literature and is reviewed below.

2.5.4 THE RELATIONSHIP BETWEEN LOCUS OF CONTROL AND ACHIEVEMENT MOTIVATION

Rotter (1966) hypothesized that persons with a high need for achievement will believe in their own ability to determine the outcomes of their actions. He also suggested that the relationship is probably not linear.

Various researchers have found that individuals who have high nAch tend to believe in their own ability to control the outcome of their efforts (McClelland, Atkinson, Clark and Lowell (1953), Atkinson (1958)). McClelland (1961: 226) states that those with a high need to achieve:

> "appear to work harder only when it counts for personal achievement or, more precisely, when there is a chance that personal efforts will make a difference in the outcome."

McGhee and Crandall (1968); Gurin, Gurin, Lao and Beattie (1969) and Lao (1970) all verified that individuals with high nAch do have a more pronounced need for achievement.

Borland (1974) researched a group of business school students, some of whom expected to form their own company and others who had no such aspirations. Of the students who had a low need for achievement, those with a higher internal locus of control had greater aspirations of forming a company than others in the same group. It was found that in the group with a high need for achievement, locus of control had no significant impact upon their expectations of starting a company. Naumes (1978) found that internally orientated individuals were more likely to start their own business than those externally inclined and this researcher maintains that this applies in most Western countries.

Durand (1975) quotes studies in which a negative correlation between nAch and external locus of control was found. His own study was with black entrepreneurs who attended various training programmes. The effect of the exercise on nAch and locus of control was assessed. The two constructs tended to vary together. Motivation training was found to result in a decrease in externality and an increase in achievement motivation. In addition,

those entrepreneurs with an internal orientation engaged in a greater variety of business activities than externals.

Maloney (1978) found a significant correlation between locus of control and nAch.

The abovementioned studies viewed both constructs (i.e. I-E scale and nAch) as being unidimensional.

Haines, McGarth, and Pirot, (1980) viewed achievement motivation as multi-dimensional. Persistence was identified as one of the dimensiones. The researchers found that a higher degree of internality is associated with persistence on achievement or skill-related tasks.

Gilbert (1980) viewed achievement motivation as a unidimensional construct and locus of control as being multi-dimensional. This researcher considered that individuals whose perception of causality concerned dispositionally predictable loci (i.e. internals) were hypothesised to be highly achievement motivated. Those persons who attributed outcomes to situationally (or dispositionally) unpredictable loci were described as unlikely to be achievement orientated.

According to Gilbert (1980), the behaviour of a person whose perception concerns situationally predictable loci may be achievement orientated if variables in their specific environment permit progress. If hostile or restrictive factors are present in their environments, these persons will not be achievement motivated. Hammer and Vardi's (1981) research (regarding the impact of locus of control on the career self-management of employees in facilitative or restrictive settings), support the hypotheses concerning situationally predictable loci.

Having established the relationship between internality and entrepreneurship and so justified the use of locus of control as a measure for this research, the relationship between this and entrepreneurship will now be considered.

2.5.5 LOCUS OF CONTROL AND ENTREPRENEURSHIP

Durand and Shea (1974) conducted the first empirical study to investigate the relationship between locus of control and entrepreneurial behaviour. The business owners were found to be more active, if they possessed an internal locus of control and high achievement motivation, than their counterparts with a low nAch and

low internality (i.e. more externally inclined).

Brockhaus (1975) administered the Rotter I-E test to 20 business school graduates. He found that those who had strong intentions to become entrepreneurs were more internally orientated than those who had no such aspirations.

Borland (1974) administered the I-E scale test and nAch instrument to 302 students. He found that students with high nAch scores and low internality were more orientated towards starting their own businesses than those that were more externally orientated and lower in nAch.

Anderson (1976) conducted a longitudinal study using 90 entrepreneurs over a two-and-a-half year period. Anderson wished to find out if locus of control may influence performance through its effect on intervening variables such as stress and the need to take decisions. Those entrepreneurs who were more internally orientated were found to perceive less stress and employ more task-centered behaviours than externals. Anderson put this down to the possibility that the internals were aware of a stronger relationship between their task behaviour and goal accomplishment.

Brockhaus (1976) compared entrepreneurs with two groups of managers, those who had been promoted, and those who had not. It was found that entrepreneurs and the promoted managers were more internally orientated than managers who had not been promoted. This result was different from an earlier study by Brockhaus (1975) in which he found that managers and entrepreneurs could not be distinguished on the basis of their locus of control scores.

Scanlan (1979) researched two different classes of entrepreneurs. The one type was classified as opportunistic and the second as craft entrepreneurs. In the former case there were 31 in the group and 33 in the craft category. Both groups scored higher on the internal scale than the general mean for the population.

A study was done in a North Indian town by Pandey and Tewary (1979). They found that internality was associated with nAch. They also noted that the psychological characteristics of internals made them more successful as business persons.

Sutton (1954) wrote that entrepreneurs believe in the concept of responsibility for their actions, their behaviours being linked to their actions. Individualism

will not be viewed positively unless it covers both credit for success and blame for failure. The result is that the individual is free to claim or accept the consequences of his actions.

Sutton's writings are consistent with McClelland's and the proposition that entrepreneurs are more internal in their locus of control beliefs than the general population.

Shapero (1975) found that the mean I-E scores of 34 Italian and 101 Texan entrepreneurs were more internal than the mean scores reported by Rotter (1966:80 (1) 1-27) for all the groups he researched. The only exception was a group of US Peace Corps volunteers. It is the author's experience with the type of personality represented by socially orientated individuals who are involved in community work that they are usually more externally than internally orientated.

Meyer, Walker and Litwin (1961) studied managers in posts demanding entrepreneurial characteristics. They found that this group had higher nAch scores than specialists without the need for entrepreneurial skills.

Brockhaus and Nord (1979) compared the Rotter I-E scores

of entrepreneurs and managers in positions requiring resourcefulness and found no significant differences between the scores of the two groups.

Venkatapathy (1983) researched a sample of 60 entrepreneurs in the manufacturing field with a comparison group of 43 in regular jobs. The former were found to be more internally orientated and differed significantly on all the scales of the I-E inventory questionaire than the non-entrepreneurs.

The same researcher reviewed a number of studies relating to locus of control in entrepreneurs. Venkatapathy (1984) concluded from his work that internal locus of control is one of the important personal attributes of an entrepreneur.

Mescon and Montanari (1981) extended Scanlan's (1979) work by comparing two classes of entrepreneurs, those that held a franchise and a second who were truly independent. Using Rotter's (1966) I-E scale questionnaire, these researchers found that the two groups of businessmen exhibited a significantly higher rating regarding internality than a national sample drawn from the general population. However, the independent entrepreneurs scored higher than the franchise holders,

but not at a statistically significant level. Franchisees do not have the same risk exposure as an independent business owner, neither are they exposed to the same degree of uncertainty.

Cromie and Johns (1983) tested 41 senior managers, 42 established owner managers and 23 aspiring entrepreneurs. The results of the internal locus of control test showed that the most internal group was the aspiring business owners, followed by those with established businesses. This group, in turn, was significantly more internal than the senior managers.

Cromie (1987) found no significant difference between 35 men and 34 women entrepreneurs when tested on the Rotter's I-E scale, and on Lynn's Achievement Motivation Scale, suggesting "that these two groups are derived from the same population-entrepreneurs" (1969:258). The sample of entrepreneurs in this study was found to be more internal than a group of 41 managers, but not significantly less than the group of 42 entrepreneurs studied by Cromie and Johns (1983).

Significant differences on nAch, I-E locus of control and risk-taking propensity between 71 entrepreneurs and 62 non-entrepreneurs were found by Ahmed (1985). This result

Table 2.2

REVIEW OF LITERATURE ON ROTTER'S LOCUS OF CONTROL THEORY AND ENTREPRENEURSHIP

AUTHOR	DATE	TARGET GROUP	NATURE OF STUDY	RESULTS OF RESEARCH
Durand and Shea	1974	Business owners	Comparison of active and less active owners	More active owners had greater internality, and high achievement motive (nAch)
Anderson	1976	Business owners	Longitudinal; intervening variables	More internal less stressed more task centred behaviour
Scanlan	1979	Business owners	Opportunistic and craft owners	Both groups more internal than general population
Pandey and Tewary	1979	Business owners	Indian	Internality associated with nAch, and success.
Shapero	1975	Business owners	Italian and Texan	Entrepreneurs more internal than Rotter's mean scores (1966)
Mescon and Montanari	1981	Business owners	Franchisees and independent	Independent owners more internal than franchisees.
Venkatapathy	1983	Entrepreneurs versus other jobs	Owners in manufacturing	Entrepreneurs more internal than those in regular jobs.
Cromie	1987	Male versus Female	Differences - entrepreneurs	No significant gender differences.
Cromie and Johns	1983	Senior managers, established owners, aspiring owners	Comparison of three groups	Aspiring entrepreneurs more internal than established owners. Least internal: senior managers
Begley and Boyd	1987	Founders and non-founders	Comparison of two groups	No significant difference between founders and non-founders of their businesses
Borland	1974	Students	Identification of entrepreneurs	I-E scale and nAch: high internals and nAch scores wanted own business
Brookhaus	1975	Business school graduates	Identification of entrepreneurs	High internals to start own business
Meyer, Walter and Litwin	1961	Managers in posts needing initiative	Difference with other managers	The intrepreneurs (in big companies) had higher nAch scores.
Brockhaus and Nord	1979	Entrepreneurs and managers	Comparison of two groups.	No significant difference between entrepreneurs and managers in positions requiring resourcefulness.
Ahmed	1985	Entrepreneurs and others	Difference between two groups.	Significant differences on nAch, I-E and risk taking - entrepreneurs, more internal, higher nAch and risk taking than non-entrepreneurs.

suggested that the variables studied were positively related to entrepreneurship and confirmed the earlier findings by McClelland (1961), and Lynn (1969).

Begley and Boyd (1987) reported that there was no significant differences between locus of control scores of founders (n=147) and non-founders (n=92) of their own businesses. Both groups exhibited an internal locus of control. Table 2.2 reviews the literature on Rotter's theory of entrepreneurship.

Having established the relationship between locus of control and entrepreneurship, the next question should be whether locus of control and entrepreneurship theories require any modification when applied to young people and black entrepreneurs in particular.

2.5.6. YOUTH, BLACK ENTREPRENEURSHIP AND LOCUS OF CONTROL

The participants in this work are young black adults. The research work done in this area is noted below. A summary of the research work published for 11 studies with students and young people is given in Table 2.3. This was compiled by Pottas (1983), and is part of a more comprehensive resumé of research done on locus of control.

Table 2.3

RESEARCH RESULTS FOR SELECTED LOCUS OF CONTROL STUDIES WITH STUDENTS

RESEARCHER	SAMPLE SIZE	MEAN AGE	INSTRUMENT USED	VARIABLES STUDIED	RESULTS (P<0.05)
Anderson & Schneier (1978)	84 M 41 F	21.7	Rotter	LOC leader behaviour v. leader performance in management students.	Internals exhibited behaviours characteristic of an instrumental task-orientated style.
Batliss (1978)	50 M 57 F	19.5	Rotter	Relationship between LOC and instrumentality theory as predictor of academic performance.	Internals tend to perceive a stronger relationship between individual effort and academic performance. Internals evidenced fewer fluctuations in perceptions of Expectancy over time. LOC moderated the relationship of instrumentality predictor and performance with significant prediction being achieved for internals but not externals.
Bhager & Chassie (1978)	77 M 60 F	21-30	Rotter	Role of self-esteem & LOC in the differential prediction of performance, programme satisfactions and life satisfaction.	Internals had higher levels of academic performance, were more satisfied with their academic programme and personal lives, than externals.
Brown (1980)	33 M	18	Nowicki-Strickland LOC	LOC and its relationship to intelligence & academic achievement.	Intelligence was significantly related to LOC for both sexes. Academic achievement was not significantly related to LOC for either sex.
Faustman & Mathews (1980)	2597		Clifford LOC	LOC and academic achievement (Sri Lanka).	Internal LOC correlated with superior performance on a scale of academic achievement.

(Source: Pottas, 1983)

Table 2.3 (Cont.)

RESEARCH RESULTS FOR SELECTED LOCUS OF CONTROL STUDIES WITH STUDENTS

RESEARCHER	SAMPLE SIZE	MEAN AGE	INSTRUMENT USED	VARIABLES STUDIED	RESULTS (P<0.05)
Frantz (1980)	960 M	21	Rotter	Influence of early labour market experience on changes in LOC.	Increases in hourly earnings, additional labour market experience and large number of years of formal schooling increased feelings of internal control.
Hawkins (1977)	164 F	18	Rotter Levenson LOC & Marlowe	LOC, academic achievement, occupational choice & social desirability.	Social desirability was an important mediating variable in the relationship between LOC and academic achievement & LOC & occupational choice.
Maloney (1978)	104 M and F	Freshmen	Rotter	LOC, achievement motivation & academic achievement.	Significant relationships between LOC, field independence, high need for Achievement. internal LOC was a reliable predictor of academic achievement.
Moodley-Rajab & Ramkissoon (1979)	135 M		Rotter	Cross-cultural study of LOC in whites, Indians & blacks.	No significant difference in LOC between three racial groups. White females obtained higher external scores than males. No sex difference for Indians and blacks.
Munro (1979)	321 M 232 F	21	Rotter	Cross-cultural study of LOC in whites and blacks.	No sex differences in LOC for blacks. White females were more external than males. Rhodesian blacks & whites were more external than Zambian blacks.
Muskat (1978)	289 M	Freshmen	Rotter	LOC, Scholastic aptitude, academic performance and voluntary college interruption.	No significant relationship between LOC & college interruption. Externals achieved significant lower grade point averages than internals.

Note: M = Male
F = Female
LOC = Locus of Control

(Source: Pottas, 1983)

Eight of the studies investigated the relationship between internality and various measures of academic achievement. Five of these indicate a significant correlation between internality (as measured on the I-E scale) and academic achievement.

In the study by Brown (1980) the observation is made that the relationship between locus of control and achievement is more complex. The contention made by Brown is that the locus of control (LOC) is a function of intelligence since both constructs (i.e. LOC and intelligence) are signifi[illegible]ly related whereas no significant correlation was found between locus of control and academic achievement, in Brown's study. It is to be noted that the Rotter test was not used in this work, but an adaption of Rotter by Norwicki-Strickland (1973)(Table 2.3).

The relationship between locus of control and entrepreneurship has not been well researched in South Africa. As far as the rural population is concerned (referred to as the Third World sector, as opposed to the urban or First World) only one study has been done with entrepreneurs in this group (Van Daalen 1989).

In this work, 100 Ciskeian businessmen formed the target group (77 were males, 23 females). Their ages ranged

between 45 and 49 years. Van Daalen found that the entrepreneurs in his research did have a more internal locus of control than a group of university students, used as a comparison. The hypothesis that individual characteristics relate to entrepreneurial success was supported by his research findings (Van Daalen 1989:20).

The black students used in Van Daalen's work were attending a Ciskeian University (n=256). Their average age was 23 years (Standard deviation : 5.55). The results of 149 female and 98 male participants in the study were reported.

2.5.7. THE ENTREPRENEUR AND RISK TAKING PROPENSITY

Any entrepreneurial activities involve risk; a potential entrepreneur must therefore have a risk profile which matches up to the demands of running a business. The relevant research relating entrepreneurship to risk, started in 1974.

Liles (1974) wrote that in becoming an entrepreneur, an individual risks financial well-being, career opportunities and family relationships.

Assuming an enterprise to be unsuccessful, the personal financial obligations which the entrepreneur assumes can result in major losses which could reduce his/her future standard of living. Failure can also have major emotional consequences if the person has devoted him/herself to the venture at a personal level. Whether or not an aspirant entrepreneur proceeds with an idea depends upon the risk perception associated with the new venture.

Brockhaus (1976:22) defined:

> "... the propensity for risk taking as the perceived probability of receiving rewards associated with success of a proposed situation, which is required by an individual before he will subject himself to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequences than the proposed situation".

In the period up to 1980, research demonstrated that one of the fundamental characteristics of the entrepreneur is the propensity for the individual to take risks. (McClelland 1961; Kilby 1971; Palmer 1971; Brockhaus 1980).

According to Timmons, Smollen and Dingee (1985) and Carland, Hoy, Boulton and Carland (1984) risk taking goes

with business ownership and not with entrepreneurship as such. Given that some risk of failure must be attached to any business undertaking, then the successful entrepreneur is the one who takes calculated risks (Timmons et al. 1985).

In the case of the target population of this study, the ability to assess a calculated risk would be limited. It is the author's view that this is so because of the restricted experience of the outside world of the final year student in a high school in the township areas. The exceptions would be in cases where family members are already in business, or the business persons in the extended family serve as role models and tutors for a young person wanting to go into business on his/her own. It is not possible for most of the disadvantaged students in a population such as were chosen for this study, to go through the entrepreneurial process as outlined earlier in this work, due to the general lack of exposure to the world beyond the classroom.

2.5.8 THE ADAPTIVE-INNOVATIVE APPROACH TO CHANGE

The measurement of the degree of innovation of an individual gives an indication of whether he is

bureaucratically orientated in his work or likes to deal with unstructured situations. It has been suggested and it can be hypothesised that an entrepreneur is more innovatively orientated than adaptive. School discipline, with its rote learning approach to studying as is found in South Africa, would tend to mitigate against innovation.

Kirton's (1976) theory indicates that people differ in their approach to defining and solving problems. Adaptors are those who produce ideas based on existing parameters of the problem situation and probable solutions, within established practices and procedures. The aim of the adaptor is to do things better and more efficiently. Innovators are more likely to break out of the existing paradigm set by theories, policies and practices and arrive at a solution to a problem which is usually unexpected, and usually less acceptable to others.

Descriptions of typical behaviours of adaptors and innovators are given in Table 2.4.

Adaptors and innovators respectively support or threaten existing paradigms in their creative problem solving work. The adaptive person is at home within cognitive systems. He is also likely to fit into bureaucratic procedures (Kirton 1987:12).

Table 2.4

BEHAVIOUR DESCRIPTIONS OF ADAPTORS AND INNOVATORS

ADAPTOR	INNOVATOR
Characterised by precision, reliability, efficiency, methodicalness, prudence, discipline, conformity.	Seen as undisciplined, thinking tangentially, approaching task from unsuspected angles.
Concerned with resolving problems rather than finding them.	Could be said to discover problems and discover avenues of solution.
Seeks solutions to problems in tried and understood ways.	Queries problem's concomitant assumptions; manipulates problems.
Reduces problems by improvement, greater efficiency, with maximum of continuity and stability.	Is catalyst to settle groups, irreverent of their consensual views; seen as abrasive, creating dissonance.
Seen as sound, conforming, safe, dependable.	Seen as unsound, impractical; often shocks his opposite.
Liable to make goals of means.	In pursuit of goals treats accepted means with little regard.
Seems impervious to boredom, able to maintain high accuracy in long spells of detailed work.	Capable of detail routine (system maintenance) work for only short bursts. Quick to delegate routine tasks.
Is an authority within given structures.	Tends to take control in unstructured situations.
Challenges rules rarely, cautiously, when assured of strong support.	Often challenges rules, has little respect for past custom.
Tends to high self-doubt. Reacts to criticism by closer outward conformity. Vulnerable to social pressure and authority; compliant.	Appears to have low self-doubt when generating ideas, not needing consensus to maintain certitude in face of opposition.
Is essential to the functioning of the institution all the time, but occasionally needs to be "dug out" of his system.	In the institution is ideal in unscheduled crises, or better still to help to avoid them if he can be controlled.
When collaborating with innovators, supplies stability, order and continuity to the partnership.	When collaborating with adaptors: supplies the task orientations, the break with the past and accepted theory.
Sensitive to people, maintains group cohesion and cooperation.	Insensitive to people, often threatens group cohesion and cooperation.
Provides a safe base for the innovator's riskier operations.	Provides the dynamics to bring about periodic radical change, without which institutions tend to ossify.

(Source: Kirton 1976: 623)

The descriptions of the needs of bureaucracy in behavioural terms are therefore relevant. Merton (1957:198) wrote "the bureaucratic structure exerts a constant pressure on officials to be methodical, prudent, disciplined ... and to attain an unusual degree of conformity". Weber (1970) and Merton (1957) in their work found that the adaptor is best fitted to work within set structures in impersonalised relationships, reducing conflict, minimising risks, and managing to solve problems by proceeding at a disciplined pace in a predictable direction.

Innovative change by its nature must lead to increased risk, uncertainty and imprecision (Bright 1964). Innovative individuals are less confirming to rules, social norms and accepted work patterns. Innovative change is not only along unexpected lines but is often associated with memorable (and to the adaptor, unpleasant) precipitating events (Kirton 1961). When the innovator threatens upheavels (innovation) in a period of no obvious crisis, he may well be viewed with distaste while he persists with such threatening behaviour (Whyte 1957).

Although both adaptors and innovators each create in their own way, the researchers in this area, Rogers (1959), Taylor (1964) and Shouksmith (1970) agree that the individuals who are "persistently creative" have little

awe of traditional thought or consensus, display a high need for social recognition (they want their novelties to be judged as good), and enjoy the production of ideas for their own sake.

A number of researchers have emphasised the connection between entrepreneurship and innovation. The most important contributions have been made by Schmoller and Sombart (cited in Hébert and Link (1982)), Weber (1930) and Schumpeter (1939).

Schmoller did not believe in the theory, prevelant in Germany in particular in the early twentieth century, which described man's motives and behaviours in realistic psychological terms. He analysed individual economic behaviour patterns and discovered a unique driving force present in all economic activity. This enterprising spirit was possessed by the entrepreneur whom Schmoller viewed as a creative manager and organizer whose role was to innovate and to initiate. The entrepreneur, Schmoller maintained, combined the factors of production, evolving new processes and/or new products.

Sombart builds upon Schmoller's ideas introducing the concept of the entrepreneur as a "new leader" who energises the entire economic system by means of creative

innovation. Sombart and Schmoller were the first researchers to attribute an organizing function to the entrepreneurial personality. Sombart extended this to include the ability of the entrepreneur to manage and motivate subordinates to obtain maximum productivity.

Weber (1930) is known for his description of the driving force of the entrepreneur as being due to a combination of religious beliefs which he identified as the Protestant work ethic. Weber emphasised the role of the entrepreneur as the person who breaks away from the traditional method of production and creates new ways of improving existing methods.

2.6. EDUCATION AND ENTERPRISE

Possible solutions to the problems of youth were discussed in chapter 1. These dealt with Education and Enterprise. It is necessary to examine the literature to establish the connection between possible solutions and their outcomes.

There is a need for a new approach to the school curriculum design. Students, in their passage through school, must develop the skills of "learning to learn".

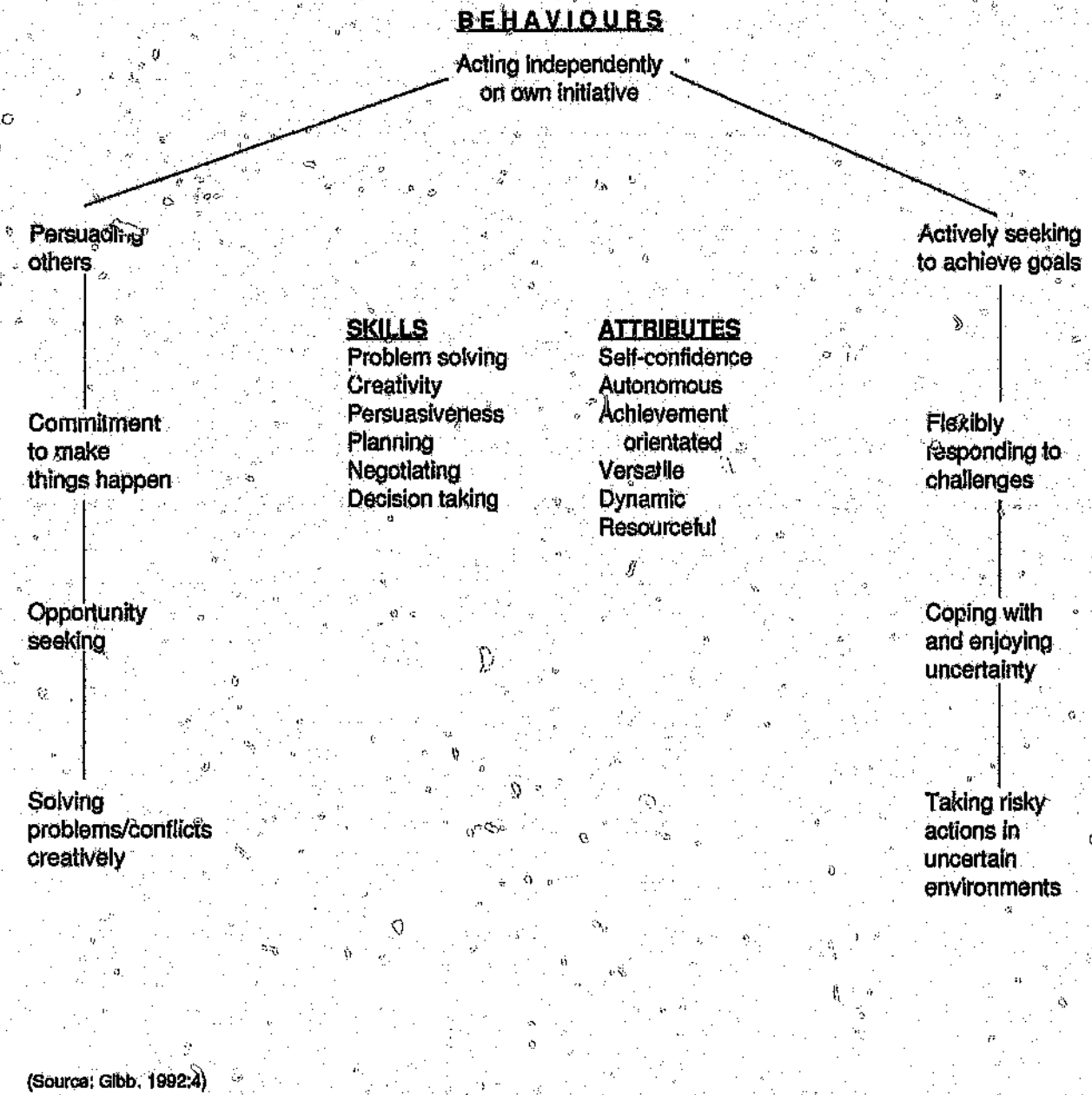
The emphasis on the academic above the practical, which is the current situation in education to-day, will have to give way to the practical application of what is learnt. As Moulder in "Business Day" of 8/5/89 puts it "The bias towards an academic education leads to a shortage of people with technical and professional skills" and a "practical education is an education for self-reliance ... it prepares people for work". More pupil participation, resulting in learning through discovery, will facilitate this. The teacher role will be to guide students through the learning experiences, acting as a facilitator and not as the expert.

The prime objective of enterprise education according to Cotton (1990:147), is to assist in the development of an attitude of self-reliance. Gibb (1992:3) maintains that the enterprising person exhibits a variety of characteristics defined in part by behaviours, personal attributes and associated skills. The key behaviours, attributes and skills are set-out in Figure 2.4.

Cotton (1990:147) listed the attributes and skills of the enterprising person.

Figure 2.4

MODEL OF ENTERPRISING BEHAVIOURS, SKILLS AND ATTRIBUTES



(Source: Gibb, 1992:4)

The attributes are self-awareness, self-confidence, perseverance, persuasiveness, resourcefulness, achievement orientation and commitment to succeed. The skills of an enterprising person will include creativity, problem solving, planning, negotiating and decision making.

A major difficulty in dealing with the concept of enterprise is that it is relative as well as contextual in nature (Gibb 1992:4). Every student has some degree of enterprise which can be developed. Gibb (1987:38) lists the underlying propositions:

> " There will be a variation in evidence of enterprising skills, attributes and behaviours between individuals. The degree of creativity, analytical thinking and independence will differ with each person."

Aldrich and Zimmer (1986) note that the mix will reflect innate abilities and personalities. Personal capability is a reflection of genetic as opposed to environmental influences. An attribute or skill, such as creativity as part of being enterprising, is influenced by inherent potential.

The acquisition of the skills, behaviours and attributes will be in part a function of experience and exposure

i.e. it is a "learned" capbility. It can be said that it is possible to stimulate enterprising behaviour by threat of displacement (e.g. job loss) as well as by organizational and political design (Gibb 1987:38). In a supportive environment in which the opportunity and freedom to practice being "enterprising" is experienced, Mayer (1989:203-211) writes that this is likely to result in personal development of this behaviour pattern.

If the acquisition of enterprise can be achieved by experience and exposure, Gibb (1992:5) maintains that it can be enhanced by education and training.

Shapero and Sokol (1982) make the point that environmental circumstances will govern the stimulation and encouragement of enterprising behaviour in some individuals whilst in others it may constrain and deviate it. Hennessey et al. (1989:212) write that it is possible for individuals to display some enterprising characteristics in some circumstances and not in others, e.g. being creative.

In a small business organization, "learning by doing" and the encouragement of enterprise in the owner-manager takes place. Chrisensen (1989:127) develops this theme. Opportunities have to be identified in the market place

and its customers; products are made and sold which may require innovation and creativity to satisfy the demand; persuasion is needed to convince people to buy, in the selling process. Persuasion in also a factor in acquiring resources; planning of production and the meeting of targets are important aspects of a small business; commitment and motivation to make a success of the venture is essential; independence to act alone and create the business in the first place is paramount. The emphasis in the whole process is always upon learning under pressure, finding out "how" to do things and self-discovery in making the business work. The learning environment in a typical small organization is essentially a "learn by doing" exercise so that the venture may be successful and survive.

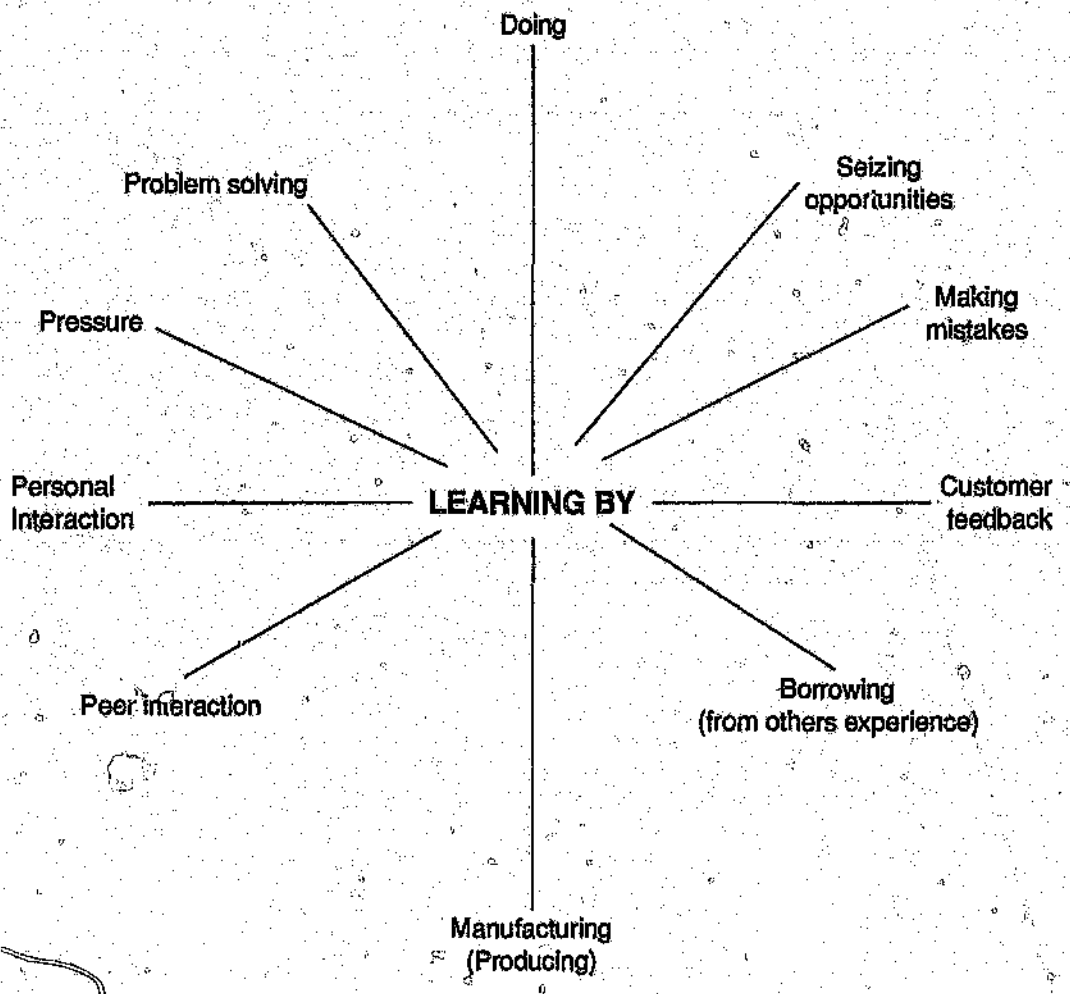
The success of a small venture is largely dictated by the owner's ability to develop or acquire the appropriate knowledge and skills. The business is a vehicle for learning for the owner/manager. Input from outside sources (e.g. advice given) is important but this needs to be "adapted" to the particular business needs. The learning takes place as a result of feedback from customers, suppliers, and the peer group through a process of personal interaction. Small business provides an environment of uncertainty, the essentials of which

reinforce commitment to cope, a task structure which demands enterprising behaviour and where the learning mode is learn by doing, problem solving and seizing of opportunities (Gibb 1992:8). Enterprising behaviour is encouraged and stimulated and learning ensured through "enterprising" means.

The Junior Achievement mini-company activity (described in Appendix 1) is an experiential model for learning. It provides the facilitators and pupils with a real understanding of the "business" processes and enables skills and knowledge to be acquired simultaneously. Pupils understand that they retain ownership of the mini-company and act accordingly. They are encouraged to make decisions and choices of their own, and suffer the consequences of their actions. The student is developed as an individual and as a member of society. As a result, the pupil is sensitized to, and experiences some of the opportunities, responsibilities and experiences of adult life. Appropriate and transferable skills and abilities will be of use in the real world of producers, consumers, citizens, leaders and parents. Figure 2.5 summarizes the learning points that participants experience during the running of their Junior Achievement mini-company.

Figure 2.5

THE MINI-COMPANY LEARNING MODE



(Adapted from Gibb, 1992:8)

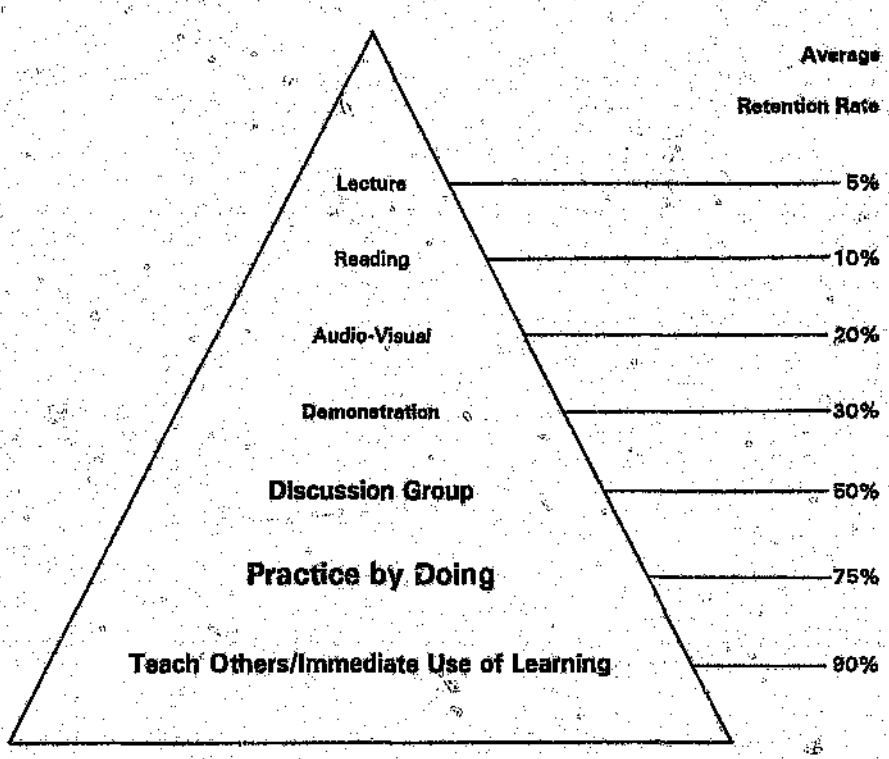
Cotton (1990:6) states that the active learning by discovery is characteristic of enterprise education since it provides an opportunity for pupils to practise skills and abilities which the didactic learning situation does not.

Figure 2.6 depicts the learning pyramid (Cotton 1990). The retention rate of what has been learnt increases with the degree of participation of those who are being taught. Experiential learning, as an educational methodology, helps to develop the skills associated with enterprising people. Particular sets of competencies, skills, attitudes, attributes, behaviours, knowledge and understanding can be outcomes of such a programme (Cotton 1990:6).

Table 2.5 details some of the outcomes of enterprise education. It is a resumé of the competencies and skills, attitudes and characteristics, and knowledge and understanding which can be generated by the enterprise education approach to the development of the individual (Cotton 1990:7).

Figure 2.6

THE LEARNING PYRAMID



(Source: National Training Laboratories, Bethel Maine, U.S.A., In Cotton: 1990)

Table 2.5

SOME OF THE OUTCOMES OF ENTERPRISE EDUCATION

COMPETENCIES/SKILLS

Communication skills.
Pupils are encouraged to communicate verbally and in written form with each other, with teachers and with adults other than teachers.
Decision making skills are enhanced as a result of pupils making decisions in the context of their work and therefore in a meaningful way.
Problem solving skills.
Because Enterprise is a bold or challenging undertaking it provides pupils with opportunities for solving problems and overcoming barriers.
Negotiating skills are developed in dealings with school staff, other pupils or perhaps with industrialists/bankers.
Planning skills.
The essence of enterprise is carrying through ideas in a planned and organised way, thus providing opportunities for these skills to be developed.
Creative skills.
The usual starting point for enterprise activities is an exciting idea originating from the pupils and checked for feasibility. Pupils are therefore encouraged to be creative in a realistic way.
Team work skills.
The Enterprise approach encourages groups of pupils to work together. Co-operation and responsibility are therefore stressed.
Literacy skills.
Enterprise is a mix of content and process, emphasising knowledge which can be gained through the written word.
Numeracy skills.
Enterprise projects often demand calculations. This provides an opportunity for pupils to develop numeracy skills.

ATTITUDES/ CHARACTERISTICS

Motivation.
The ownership of ideas by pupils is stressed and this ensures initial and continued motivation.
Confidence.
Once pupils' projects are under way confidence grows gradually, and opportunities to meet and talk to adults other than teachers increases confidence.
Determination.
Because pupils have some control over their learning they develop determination as the project progresses and do not give up when obstacles are encountered.
Initiative.
Enterprise provides pupils with ample opportunities to show initiative, as the role of the teacher is that of a facilitator rather than an "expert" who directs the learning.
Responsibility.
Ownership of their own ideas encourages responsibility in pupils, as does the emphasis placed on group work.
Perseverance.
Pupils are much more likely to persevere in the face of difficulties if they feel the project is under their control rather than that of the teacher. They are therefore encouraged to persevere.
Coping with uncertainty.
Enterprise can be risky. It is not necessarily a safe or predictable activity. School based activities are encouraged to be as realistic as possible thus giving pupils the opportunity to cope with uncertainty.

KNOWLEDGE/UNDERSTANDING

If related to the National Curriculum knowledge can be subject specific. Enterprise has relevance for all subjects, and promotes an active way of obtaining subject based knowledge.
How to set up and run projects.
The enterprise approach involves setting up and running projects, whether these are environmental, community based, business orientated or subject specific. Pupils experience this in an active way and are likely to gain real understanding of the process.
How to seek and use information.
Whatever the nature of the project pupils need to be able to find and make use of relevant information in order to carry it through. It is after all a learning process.
The way in which skills can be transferred from one situation to another.
Debriefing is an essential part of the enterprise learning process and provides pupils with an opportunity of recognising that the skills they have gained have relevance in other parts of the curriculum and in other areas of their life.
Economic and industrial understanding.
Economic and industrial understanding seeks to develop in young people a critical awareness of their involvement in the economic system. This includes helping them to investigate the variety of resources available to them, to develop a questioning attitude towards what is best and for whom, and to recognise the effects of actions and decisions on the use of resources.
Such a process clearly demonstrates the need to help pupils develop the necessary enterprise skills and attitudes. Their knowledge and understanding of the economic system will not be developed or enhanced in a didactic learning situation.
Enterprise is also of value in that a business orientated F[illegible] enables pupils to learn relevant [illegible]nts such as cash flow forecasts, p[illegible]ss and marketing techniques. Opportunities are also provided for links with the wider industrial and commercial environment, all of which help to extend pupils' knowledge of institutions and businesses, and help to prepare them for the world of work.

Enterprise Education can thus be clearly identified as a vehicle for the development of the whole person; someone who is aware of his or her own strengths and weaknesses and who takes control of, and makes the most of his or her own life. The person is then better able to cope with the outside world.

(Source: Enterprise Education Experience, Cotton, 1990:7)

2.6.1 CONCEPTS OF WORK EXPERIENCE

The exposure of the participants to the "real world" outside the classroom was one of the objectives of doing this research. The use of the JA mini-company as the main learning vehicle in the intervention also assured that the activity linked the students to the environment outside the classroom. The market research that was done before a product choice was made, and subsequently the buying and selling process, are examples of the "bridge" to the world outside.

In the school to work transition literature the word most often used to describe work experience in the school leaving sense, is "bridge" (Watts 1980:44).

> "... education in its full sense involves work... between these different concepts" (Watts 1980:96).

The "bridge" is an institutional metaphor. Winnicott (1980:47) argues that "play" is an intermediate area of experience, a "potential space" between the inner world and external reality. Winnicott (1980) mainains that the "play" role is a maturational one. Pupil needs and programme goals may be adressed in a different way - as play. "It is not quite fundamentally a game, but a performance, and a ritual as well" (Stronach and Weir 1980:97).

Watts (1980:28) explains the connection of work experience and the school thus: "Work experience is a Trojan horse for experiential learning within the structure of compulsary schooling".

There are two models of the school to work transition, a linear and an interactive one. A typical linear model is depicted in Figure 2.7.

Five distinguishing features are common to a linear transition model. They are elements of a common implicit theory:

a) A definite assumption is made about the ignorance of the participants, in terms of facts, social skills or appropriate attitudes and values.

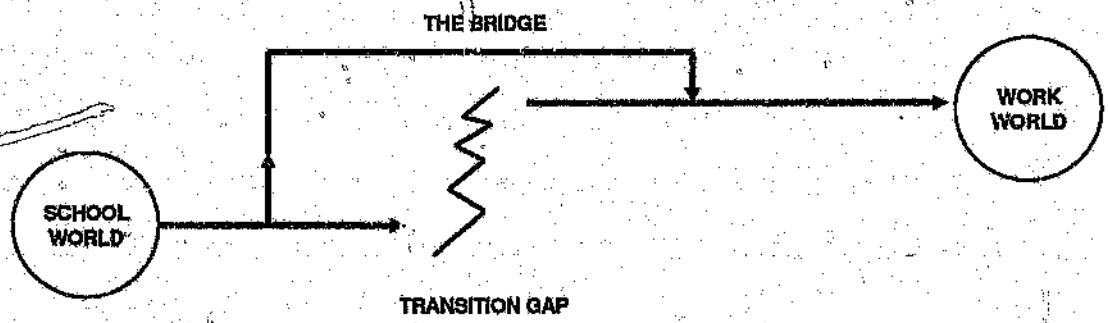
b) Transition programmes have an affinity for imagery such as "gap", "bridge", "exploration", "new world". These terms suggest an anticipatory emigration to a different world.

c) The transition is seen as an institutional migration from school to work, rather than in experiential terms.

d) Transitional type programmes do not take into account the prior experiences of the student, except in terms of the formal curriculum of schooling.

Figure 2.7

A LINEAR TRANSITION MODEL BETWEEN SCHOOL AND WORK



(Source: Stronach & Weir, 1980)

"The pupil is socially decontextualised, stripped of the meanings of his or her history. Cultural backgrounds are ignored, except in so far as they are held responsible for creating attitudinal 'deficiencies'" (Stronach and Weir 1980:59).

e) The transitional approach establishes new knowledge, attitudes and values. It assumes, (according to Stronach and Weir) in topics such as career information, that these are part of the knowledge imparted, while attitudes (e.g. work habits) are open to the same pedagogic approaches. A "banking" idea is usually implied (Freire 1972). True facts and correct values are instilled in the recipients, who are unaware of their importance to them as persons.

Gregory and Rees (1976) represent the gap in linear transition theory as a lack of information, experience and confidence at a "particularly sensitive time (ibid 1976:14); there is a useful bridge between school and work" (ibid 1976:2) and an accent on a deficiency theory; the pupils develop a "despairingly cynical view of job opportunities and working prospects" (ibid 1976:38). This work implies an institutional approach to transition; there is a lack of focus on cultural and social experiences of the young people and there is also a doubt about the

educational worth of the programme.

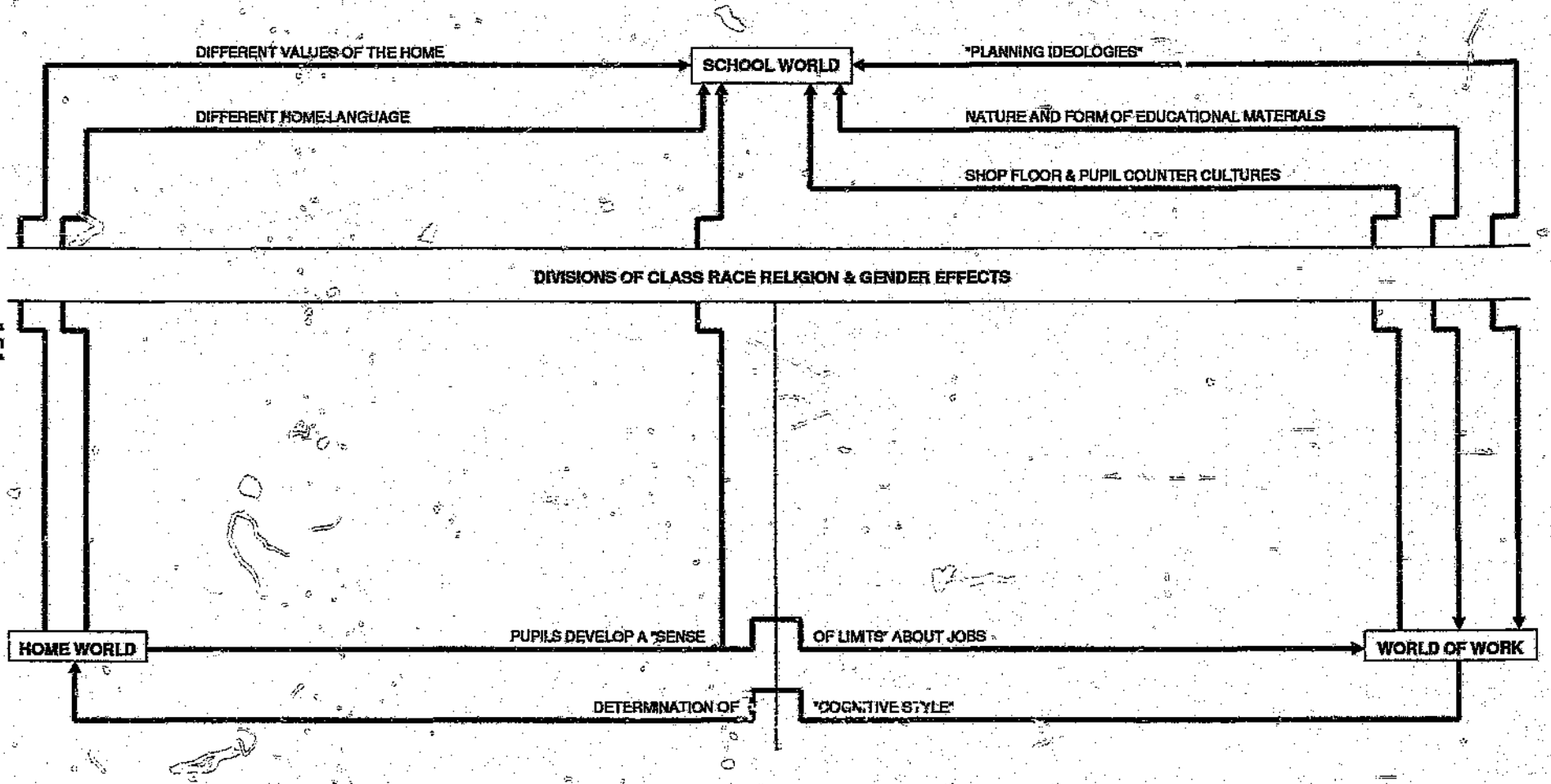
There are many other versions of the linear model e.g. Moore's (1976) "gateway" courses; Reubens' (1977:85) institutional concept "... the transition services constitute a sub-system of the intermediary services, which in turn are a sub-system of the human services"; Black (1976:97) assumes trauma and ignorance of work and states that the "gap" between school and work is unnecessary: "Employers and educationalists are coming to realise that the changing worlds of education and work are part of the same community".

Apart from views stated above, voluntarist assumptions about the bridging role are made. In this concept education is expected to change the world independently of changes in the structure of society (Faure 1972).

The interactive models of school-work relationships are many in number. They are disparate and are based on a range of contradictory social theories. All of the versions are in conflict with the linear models. School, work and home are conceived as being inter-penetrating, influencing each other in a complex interactive way. Figure 2.8 illustrates this, diagrammatically. In theoretical terms it is eclectic in nature.

Figure 2.8

THE INTERACTIVE MODEL OF TRANSITION BETWEEN SCHOOL AND WORK



(After Stronach & Weir, 1980)

What is depicted is a sociological diversity that a linear model cannot represent.

The following authors are to be found amongst others, representing interactive theories applicable to this work: Habermas (1976); Apple (1980); Willis (1977); Bowles and Gintis (1976); Bourdieu and Passerons (1977); Sharp and Green (1975); Berger, Berger and Kellner (1973).

There is no one single theoretical base represented by the above authors, as many diverging views are expressed, representing the social reality of the "transition" process. Linear models distort this, and create false bridges between false identities. The changes that are faced by school leavers are obscured and not explained by the linear representation.

There are many different elements involved in the school to work transition most of which are depicted in the interactive model. This model is important for this study since it incorporates the social and the educational system, the family and the social origins of the individual entering the world of work. The linear model is too simplistic and of little value for the purposes of this study.

One of the more important aspects of the literature survey was the review of work done on entrepreneurship and young persons. The results of this survey are given below.

2.6.2 ENTREPRENEURSHIP AND YOUNG PERSONS

Gasse (1985) has researched entrepreneurship in young people. He maintains that the characteristic is developed early in life. The environment has an important effect on the emergence of entrepreneurship. The effect of the family surroundings in early life are especially important, this author maintains. The entrepreneurial spirit has to be encouraged by the environment so that the attitudes, traits and motivations required by the individual to go out on his own are activated.

The orientation of the socio-economic system will depend on the social system that produces it. Cole (1959) has written that a stable government, acceptance of change, social mobility, money-making tolerance, property owning and rich social classes are the best social conditioning to stimulate entrepreneurship. Moore (1976), on the other hand, gives greater importance to value changes, assurance of social mobility and an employment system based on the individual's capabilities, property, geographic and social

mobility and nationalism. A conservative, overly-centralized administration, is cited by Deeks (1976) as an impediment to entrepreneurship. Ellis (1970) writes that a socialist society with a top-heavy bureaucracy and authoritarian economic decision-making can suppress the entrepreneurial spirit.

The part the family plays particularly the parents in cultivating the desirability and credibility of the entrepreneurial career, is stressed by Shapero and Sokol (1982). Many authors have claimed that an individual can be highly motivated to become an entrepreneur if the father, in particular, is in his own business. Jacobowitz and Vilder's (1982) American study showed that 72% of entrepreneurs were from families where at least one parent was an entrepreneur. Other studies have put this figure at approximately 50% (Litvak and Maule 1976; Scanlan 1980; Kierulff 1979; Petrof 1980 and Shapero 1980).

The development of creativity, essential to the business start-up situation, is assisted by a stable and understanding family. It has also been found that the need for a sense of freedom is also an important factor for the new venture to be initiated (Gasse 1985:547).

Research on the social origins of entrepreneurs has given differing results from author to author. Hagen (1963), Roberts and Wainer (1971) and Shapero (1980) maintain that the entrepreneurial individual comes from minority or refugee groups. Schumpeter (1949) stated that entrepreneurs come from all social classes and cannot be distinguished based on this criterion. Hagen (1963) writes that according to his research, entrepreneurs come from lower status groups seeking to overcome grievances through economic creativity and ventures.

Gasse (1985:544) states however, that many of the studies conducted up to the time fo writing come to different conclusions on the origins of the entrepreneur, and consensus can therefore not be reached. The decision to start a business can be influenced by experiences with friends and classmates or work experience in adolescence or youth (Gasse 1985).

According to Gasse (1985) school can in fact help create and develop entrepreneurs but modification of the curricula will have to take place to create special programmes to encourage entrepreneurship within the school system.

Vesper (1981:10) argues:

> "There is no reason whatever why entrepreneurship cannot be as academically elegant as any other subject in the university. If there is enough complexity in a daisy to challenge a botanist ... surely there should be enough interest in company start ups to support serious study ...".

Regarding what is taught and how it is taught, Kent (1982) maintains that the majority of programmes are more concerned with helping existing entrepreneurs than with preparing new individuals for a business of their own.

Hamilton (1981), Watkins (1982) and Ashmore (1986) all maintain that the schools must start promoting entrepreneurship as a career option. Miller (1983) makes the point from his work that most teachers and guidance counsellors do not possess an entrepreneurial spirit. They usually have experience only in a highly structured system such as the country's national education system.

Walden (1979) criticizes the traditional system that prepares students to be good employees, and suggests that in vocational teaching more time should be invested in the teaching of entrepreneurial principles.

Nelson and Piland (1982) identify nineteen elements that must be taught and understood for the education of successful small business owners. Gasse and Garnier (1984) and Clayton (1981) found in their research that twelve areas of expertise are necessary for success in a small business. A comparison of the requirements as listed by the two groups of researchers are given in Table 2.6.

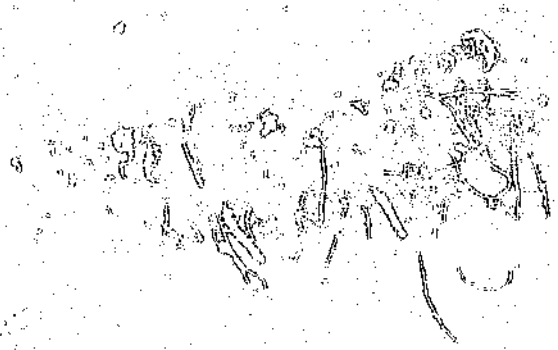
In regard to how the teaching of entrepreneurship be done, there are a number of authors who have researched this area. David and Zelinko (1982) outline the alternatives for this teaching. A distinct programme is needed in secondary school; career options need to be explored and the necessary entrepreneurial skills developed. Vesper (1981) identifies three parameters which permit the teaching of entrepreneurship, whilst Kent (1983) gives details on three levels of entrepreneurship teaching. Nelson and Neck (1982) distinguish four levels, commencing in the middle school.

Gasse (1985:548) states that in order to commumicate an accurate image of the nature of entrepreneurship, schools must co-operate with commerce and industry so that pupils will learn from the experience of business people acting as role models.

Table 2.6

A COMPARISON OF WHAT SMALL BUSINESS OWNER/MANAGERS NEED TO KNOW IN RUNNING A SUCCESSFUL VENTURE

RESEARCHERS	
NELSON AND PILAND (1982)	**GASSE AND GARNIER (1984); CLAYTON (1981)**
Understanding of financial statements	Accounting and finance
Knowledge of general management principles	Management
Marketing	Marketing
Taxation	Taxation
The role of outside consultants	Stress and time management
Capitalization	Preparation for succession
Planning	Leadership
Publicity and Public Relations	Knowledge of English
Insurance	Negotiation skills
Management accounting	Employee evaluation
Internal security and fraud prevention	
Business law	
Inventory control	
Micro-computers	Computer knowledge
Personal motivation	Employee motivation
Client relations	
Bookkeeping	



A number of researchers have written about programmes that are in the school curricula or are extra-curricula activities. Kourilsky (1980) investigated entrepreneurial aspirations of 7-12 year olds; Kaplan and Bortz (1981) introduced entrepreneurship training to 14-19 year old individuals. Gasse (1985:548) describes an experimental learning experience that communicates accurately the "real life" frustrations of the entrepreneur. It was carried out at Babson College by Hornaday and Shuman in 1975. Scanlan (1980) and Ashmore (1986) have developed two entrepreneurial progammes in the USA which can be adapted to the secondary school level. Watkins (1982), Fanslow and Compton (1981) and Clark, Davis and Harnish (1984) have developed entrepreneurship courses on vocational and technical instructional bases. Gasse (1985:549) comments on the Junior Achievement programme stating that "the program has greatly contributed to the development of entrepreneurial skills". All the above work on business education programmes is based upon experience gathered in the American schooling system.

Kent (1983:30) points out that:

> "Entrepreneurship education material for elementary and secondary students tends to be extremely limited in quantity and deficient in quality. Current materials do not allow the student to grasp the

importance of entrepreneurship as a viable career option".

Bray (1983:137) comments upon her observations of mini-companies in schools in the Shannon Project:

" The general results seem highly encouraging. Pupils are very responsible and motivated in their work. They learn a great deal about basic economics, profitability, balance sheets ... which will have wide application to their work as adults ...".

The Clydebank Project, mentioned in a previous section, included the setting up of mini-companies. These are set-up and run following a similar model as the Junior Achievement project. This was done as a result of the experience with mini-companies in Shannon.

The characteristics and outcomes of the mini-company are discussed by Bray (1983). Among the observations made by this researcher are those concerning the structures of society. It was difficult for the young people in her research to perceive the structure of society. In the mini-company process, because the participants are the owners, promoters, directors, managers and workers, they learn about responsibility and the risks they must take. The students come to terms with the human, economic and

industrial forces of the real world. Bray (1983:143) states that:

> "By putting young people in charge of their learning experience, within the scale model of a mini-company, we offer them roles, risks and realism (Ball and Ball 1979) as a preparation for a future which is full of problems, but also opportunities".

2.7 CHAPTER SUMMARY

This chapter outlines the work of researchers in the entrepreneurial field, particularly in regard to individual and personality characteristics. It is important to understand why some of the participants in the study did set up on their own, and others did not. In doing this, the models of venture initiation in the literature were useful in giving insight into the processes of forming a small business.

The motivation and social learning theories form the main theoretical bases for the study. The research leading up to the development of the constructs are summarized in this chapter. Their further development is dealt with in the next. The literature on innovation and risk taking was also consulted, since these are important considerations in

running a successful business venture.

As the main objective of this research project concerns business education for senior high school students, the results of research in this field in the literature on enterprise education and enterprise and young people are valuable. This was also found to be the case in studying the literature on the transition processes from school to the working environment. The young participants in this research also experienced difficulty in making the transition in the post-school period.

The literature also shows that there is a strong relationship between entrepreneurship and the parameters selected for measurement in this study.

CHAPTER 3 : A THEORETICAL MODEL FOR THE STUDY

3.1 INTRODUCTION

The main objective of this research is to establish what changes occur in the knowledge, skills and behaviour patterns of the participating students, as a result of the intervention.

The previous chapter showed that the setting-up and running of a mini-company stimulates the participants to be more achievement orientated and in particular more entrepreneurial. In Chapter 1 it is noted that researchers in entrepreneurship report that the entrepreneurial personalities are characterised by:

A need for achievement.
Creativity (innovation) and initiative .
Self-confidence and an internal locus of control.
A need for independence and autonomy.
Risk-taking and objective setting.
Motivation, energy and commitment.

In the research on the entrepreneur's personality described in the previous chapter, it was shown that two parameters are important: Achievement Motivation (nAch) and Rotter's Social Learning (I-E). McClelland's work on motivation was

discussed in Chapter 2. The desire to achieve for its own sake is one of the main features of this theory.

Rotter's Social Learning Theory is based upon the belief that the individual has control over his/her destiny. A person's locus of control is a measurement of his/her degree of internal or external focus (I-E).

An additional construct was used in this study. Kirton's Adaptive-Innovative Theory (KAI) states that people differ in the manner in which they define and solve problems because of a stable characteristic preference for an "adaptive" or "innovative" approach to change (Kirton 1985).

In order to show the relationship between the inputs that are needed to commence a new business, a model of the entrepreneurial process is derived in this chapter.

3.2 PSYCHOLOGICAL CHARACTERISTICS OF THE ENTREPRENEUR

3.2.1 THE ACHIEVEMENT MOTIVE

In Chapter 2 the work of a number of researchers in the achievement motive field was summarized. Of particular

relevance in studies dealing with the relationship between achievement motivation and entrepreneurship was McClelland's work (1961, 1985, 1987); McClelland, Atkinson, Clark and Lowell, (1953).

McClelland found in his own work, and that of others, that many qualities that characterise a high achiever were also the personality traits of the entrepreneur. Some of these are: A desire to achieve excellence for its own sake; an ability to cope with moderate risks; taking responsibility for one's own actions and wanting feed-back on one's efforts. McClelland carried out a number of studies, the results of which supported his hypothesis. These are dealt with in Chapter 2.

The research discussed in the previous chapters resulted in a clear profile of the characteristics of the high achiever's personality. The need for achievement (nAch) can be described as a desire to perform in terms of a standard of excellence, or to be successful in competitive terms. Atkinson (1968:181) defines nAch as: "... a capacity for taking pride in accomplishment when success at one or another activity is achieved."

The development of the Achievement Motive Construct will now be discussed.

3.2.2 DEVELOPMENT OF THE ACHIEVEMENT MOTIVE QUESTIONNAIRE (AMQ)

McClelland's (1965) description of nAch indicated a uni-dimentional approach. However the research work of Heckhausen (1967) and Atkinson's research (Atkinson and Birch 1970); Atkinson and Raynor (1978) provided evidence for regarding the nAch construct as multi-dimensional.

This view has direct implications for the measurement of achievement motivation. McClelland (1965) measured nAch by using projective tests. Other researchers developed questionnaires and projective techniques to reflect the dimensions of the construct. Fineman (1977) noted that 22 instruments were available, but there was the difficulty of non-correspondence of these instruments. Researchers at the Graduate School of Management of the University of Pretoria (Pottas, Erwee, Boshoff and Lessing, 1980) developed the Achievement Motive Questionnaire (AMQ), based upon Atkinson's extensive research. The AMQ is an 84-item inventory. The main factor "Achievement Motivation" (AM) score is obtained by adding the five sub-factor scores, A, B, C, D, and E. This is equivalent to adding the two main factor values, AA and BB.

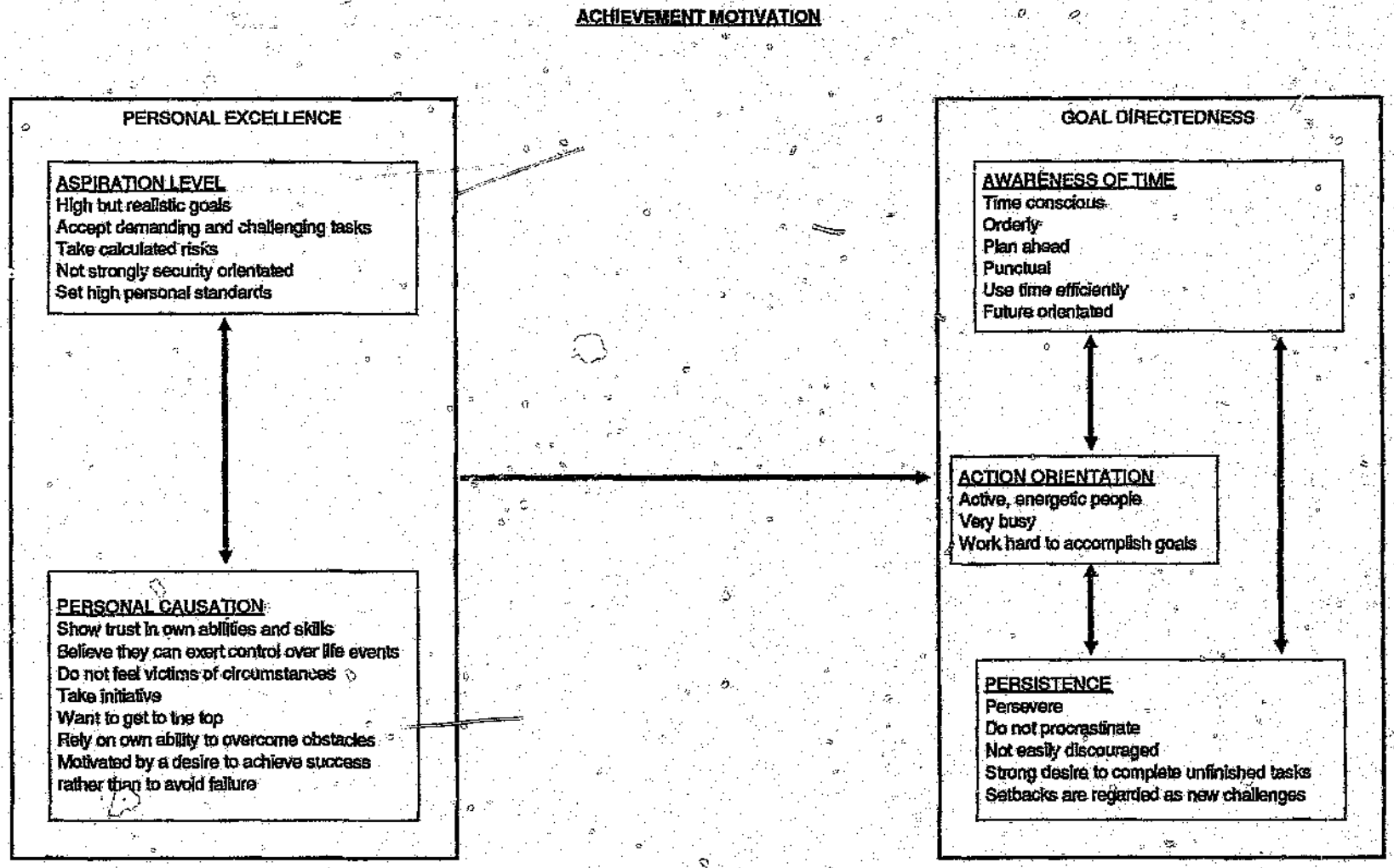
The AA dimension is a measure of "Goal Directedness", and is given by the sum of the A (Persistence Value), B (Awareness of Time) and C (Action Orientation) values.

The BB dimension relates to "Personal Excellence" and is computed by adding the scores of sub-factors D (Aspiration Level) and E (Personal Causation). The instrument details are given in Appendix 17.

Figure 3.1 is a diagram showing the relationships between the five dimensions in the Achievement Motive Questionnaire.

Figure 3.1

ACHIEVEMENT MOTIVATION QUESTIONNAIRE AND DIMENSION RELATIONSHIPS



3.2.3 DIMENSIONS OF THE ACHIEVEMENT MOTIVATION QUESTIONNAIRE.

In the work of the South African researchers (Pottas, Erwee, Boshoff and Lessing, 1980), male and female black and white first year university students were used. Analysis of the data yielded two main factors:

Factor 1: Goal Directedness (AA).

The Goal Directedness Factor focusses on the behavioural processes which enable the individual to direct energy generated by the basic motive to achieve a specific objective. This factor consists of three dimensions: (A) Persistence; (B) Awareness of Time and (C) Action Orientation. Individuals who tend to persevere in seeking solutions to complex problems despite adverse circumstances will have a high score on dimension (A). High scorers on dimension (B) plan ahead for any eventuality and feel guilty if they waste time. The active energetic person will tend to score well in dimension (C). He or she cannot tolerate idleness; time is perceived as dynamic to be used optimally.

Factor 2: Personal Excellence (BB).

This factor includes two dimensions: (D) Aspiration Level and (E) Personal Causation. Those who score well in dimension (D) have an inclination to embark on demanding and challenging tasks. They set high standards for themselves and like to take calculated risks. The high scorers in dimension (E) trust their own abilities and skills. They are convinced that they can exert control over events around them. According to Pottas (1981) the Personal Excellence Factor describes the basic drive which motivates the individual to achieve, i.e. it is the origin of the motive to achieve success.

3.2.4 RELIABILITY AND VALIDITY OF THE AMO CONSTRUCT.

Pottas et al. (1980) published the Manual for the Achievement Motive Questionnaire or Die Prestasiemotiveringsvraelys (PMV).

The construct validity of the instrument is detailed by Pottas et al. (1980:23). A factor analytic approach was used to ensure that the construct achievement motivation is measured accurately. The extraction of two main factors AA and BB and three (A,B,C) and two (D,E) subfactors

enabled the construct to be described in detail.

To determine the inter-relationship between the scores on the AMQ and related tests, 148 MBA students were tested with the AMQ as well as Strumpfer's (1975) Autonomous and Social Achievement Values (ASAV). The inter-correlations between the two constructs showed that a large degree of similarity exists between what is measured by the AMQ and ASAV. This is particularly the case with the Autonomous Achievement Values Score which correlates significantly with factors A ($p<0,001$); B ($p<0,001$); C ($p<0,001$) and E ($p<0,001$). Sub-factor D (Aspiration Level) correlates significantly with Social Achievement Values ($p<0,01$).

The development and standardization of the AMQ was done with the co-operation of 1423 white first-year students, before the start of their academic year. At the same time 756 black students completed the AMQ. Kuder-Richardson 20 reliability coefficients were calculated. Pottas et al. (1980:7) reported that weak items were eliminated so that only a subscale with acceptably high reliability coefficients was retained and included in the instrument. The same students, black and white, were used for calculating the norms for the AMQ.

In another series of tests, the South African researchers

found that reliability coefficients for male and female white students (n=1879), black students (n=745) and white managers (n=253) established that the AMQ construct is highly reliable in terms of internal consistency. For the full scale, the lowest coefficient is 0.885 and the highest 0.922. On the Personal Causation sub-scale the lowest figure for the black students is 0.528 and the highest 0.899.

Since the AMQ instrument was developed by a South African research team (Pottas et al. 1980), using first-year black students for reliability and validity testing, it was not considered necessary to revalidate these procedures prior to administering the AMQ to the students participating in his research.

3.2.5. ROTTER'S SOCIAL LEARNING THEORY

3.2.5.1 DEVELOPMENT OF ROTTER'S CONSTRUCT

The construct of Locus of Control developed by Rotter (1966), describes the degree to which individuals believe that personal reinforcements are contingent upon their own behaviour. People with a high internal locus of control believe that their destiny lies in their own

hands. Such a person is said to be internally orientated, since what happens to them depends on their decisions and abilities. Those with a high external locus of control believe that their destiny is decided by others, i.e. powerful external forces control their fate. These externally orientated persons' future is dependent upon "powerful others", fate, chance or luck.

The above concept was developed directly as a result of Rotter's Social Learning Theory (1964). The theory is based on four assumptions:

i) Prediction of human behaviour is the result of an understanding of the interaction of people with their immediate environments (Rotter 1982:5).

ii) Personality is not determined at any stage of development but can be changed as long as the individual is capable of learning (Rotter 1982:5).

iii) The person cannot be separated from the environment - human personality has a basic unity. The environment has no meaning other than that given to it by the person (Rotter 1982:8).

iv) Motivation is goal directed (Rotter 1982:8). Individuals are motivated by their expectancies

that their efforts are moving them closer to their goals.

Rotter wished to be able to make accurate predictions of human behaviour. He recognized that in order to do this, the four variables noted below and their interaction have to be analyzed:

i) Behaviour potential refers to the possibility that a particular response will occur at a given time and place.

ii) Expectancy is defined as "the probability held by the individual that a particular reinforcement will occur as a function of a specific situation or situations" Rotter and Hochreich (1975:96). There are general and specific expectancies. The former are learnt through previous experience with a particular response or similar responses. They are based on the belief that positive reinforcement will follow certain behaviours. Specific expectancies are associated with a particular situation. Expectancy of success at any given time is made up of a function of the generalized and specific expectancies.

iii) Reinforcement value is defined as "the degree of preference for any reinforcement to occur if

the possibilities of their occuring were all equal" Rotter and Hochreich (1975:97).

iv) The individual psychological situation is defined as "a complex set of interacting cues acting upon an individual for any specific time period" Rotter (1982:318). The individual responds to cues within the perceived environment. The cues from the environment will trigger certain expectancies which will result in a particular behaviour pattern.

The basis of Rotter's Social Learning Theory is that individuals are able to perceive the connection between their own behaviour and the occurrence of the reinforcer. Rotter (1966) developed the Internal- External Control Scale (or I-E) to measure the degree to which individuals perceive the causal relationship between their own behaviour and the results in the environment i.e. the reinforcers.

Individuals (internals) who believe they can control their own destinies will behave differently in most situations from those (externals) who believe that luck or chance or powerful others, control the outcomes of a particular event. This is the basis of Rotter's (1966) hypothesis. Internals differ significantly from externals in behaviours

such as risk taking, quitting smoking, and changes in reinforcement expectancies following success or failures in tasks (Rotter 1966: 18-24).

Rotter (1966) believed that internal-external control of reinforcements represented a continuum of individual differences that cuts across specific need areas. The internal pole of this continuum refers to the individuals' belief that the outcomes of his life are a consequence of his or her own strivings. The external pole reflects the belief that events are shaped by forces beyond his or her control.

In Rotter's theory, the concept of reinforcement is linked to that of expectancy. Expectancy may be defined as the probability held by the individual that a particular reinforcement will occur as a result of a specific behaviour on his or her part (Rotter and Hochreich 1975:96). This is linked to a particular situation or situations. Whether or not a behaviour will, or will not, occur is seen as a function of the nature and importance of the reinforcement for the individual, as well as his expectancy that he will achieve a particular goal if he behaves in a certain way. Expectancies are classified on a continuum and may be specific or general. The former only applies in a very specific situation, and the generalised

in a variety of situations. Rotter concentrated on the generalised expectancies.

Rotter and Hochreich (1975:105) described one of the generalised expectancies as "internal versus external control of reinforcement". Reinforcement may be broadly defined as any action, condition or event which affects the individual's movement towards an objective. Positive reinforcements are those events which accelerate the attainment of the individual's objectives, whilst negative reinforcements impede goal attainment.

Individuals differ in the extent to which they value certain reinforcements. They also vary in their belief as to whether they have control over their reinforcements, or otherwise. In turn this belief is influenced by a person's perception of causality. An individual may or may not perceive that a causal relationship exists between his own behaviour and the reinforcement or outcome. Rotter (1966:1) states that a reinforcement can be perceived by the individual as not being contingent upon his own actions. It is the result of luck, chance, fate, or is under the control of powerful others, or as being unpredictable i.e. the individual possesses an external locus of reinforcement. In contrast to this, the individual may perceive that the event is contingent upon

his own behaviour and attributes, abilities and skills, i.e. the individual possesses an internal locus of control.

The early studies (and many recent ones) all used Rotter's Internal-External Locus of Control Scale (I-E instrument) to test the various hypotheses. The research supported Rotter's (1966:16) contention that the instrument measures a general factor, and regards locus of control as a bipolar uni-dimensional construct. Results of research on the instrument have suggested that it is multi-dimensional (Furhan and Henry 1980; Gilbert 1980; Tobacyk 1978). For purposes of this study, the I-E instrument is considered to be uni-dimensional.

Rotter's (1966) I-E instrument is self-administered. The Locus of Control Scale consists of 29 forced choice items, 6 of which are fillers. A respondent has to indicate on each item which one of two descriptions best describes him or her. The scale is keyed in an external direction and hence a high score (maximum = 23) indicates externality. A low score (maximum =0) suggests that a person possesses an internal locus of control.

3.2.5.2 RELIABILITY AND VALIDITY OF ROTTER'S I-E CONSTRUCT

The reliability and validity studies are described in Rotter's (1966) monograph. Reliability and validity were established using a group consisting of 200 male and 200 female elementary psychology students attending Ohio State University. An internal consistency analysis (Kuder-Richardson) yielded r=0.70 for both males and females. For the two sub-groups of this sample, test-retest reliability co-efficients gave after one month r=0.60 (n=60). After two months: males r=0.49 (n=63); females r=0.61 (n=54); combined r=0.55 (n=117). Rotter suggested that part of the decrease after the two-month period was due to differences in administration between the group and individual respondents. Correlations with the Marlowe-Crown Social Desirability Scale (1964) ranged from -0.07 to -0.35. Several factor analyses reported by Rotter support the assumption of uni-dimensionality of the I-E Scale (see discussion in Chapter 2).

Munro (1979) reported Kuder-Richardson reliabilities ranging from 0.601 to 0.711 for black Zambian and Rhodesian students. Pottas et al. (1980) carried out validity and reliability studies on black male and female first year university students. Kuder-Richardson reliabilities ranged from 0.490 to 0.899. Further research work was reported by

Erwee (1986). In Erwee's study the sample consisted of 251 black first-year students comprising 119 males and 132 females newly enrolled at a South African university. The study was done to examine the inter-relationship between the locus of control and achievement motivation constructs. The Rotter I-E instrument details are given in Appendix 18.

Additional testing of the I-E instrument was not done for the school leavers in this study as it is considered that the reliability and validity has been established by the South African researchers, as noted above.

3.2.6 KIRTON'S ADAPTIVE-INNOVATIVE THEORY.

Kirton's Adaptive-Innovative Theory (Kirton 1976) is one of cognitive style that includes problem-solving, decision-making and creativity as very closely interrelated concepts. Style in the sense of "what manner" is to be specifically separated from what is assumed to be an orthogonally related concept of cognitve capacity or level ("how much"). Adaption-innovation as a style is also distinct from the learned techniques ("how can") of creativity and problem solving (Kirton 1987:8).

According to Kirton's theory, every person can be located on

a continuum ranging from highly adaptive to highly innovative according to their score on the Kirton Adaptive-Innovative Inventory (the measure of the theory).

The range of responses is relatively fixed and stable, and in the general population approaches the normal distribution curve.

The following descriptions clarify the characteristics of those at the extreme ends of the continuum on the Kirton Adaptive-Innovative Inventory Scale (KAI):

> Adaptors characteristically produce a sufficiency of ideas based closely on existing parameters of the problem area and the likely solutions. These persons look at these in detail and proceed with the established paradigm (theories, policies, and practices). Much of the effort consists of changing and improving and in "doing things better" (Kirton 1984:137).
>
> Innovators, by contrast, are more likely to break out of the boundaries set by theories, policies and practices and reconstruct the problem or break out of the existing paradigm, as defined by Kuhn (1970). The resulting solution to a problem is usually unexpected, and probably less acceptable to others. The innovator is less concerned with "doing things better" than with

"doing things differently" (Kirton 1984:137).

Descriptions of typical behaviour of adaptors and innovators are given in Chapter 2 (Table 2.4). Innovation and entrepreneurship can be viewed as synonymous, but the literature relating to work on Kirton's A-I construct in this field cites only two studies (Dewan 1982, and Khaneja 1982). It has been suggested and it can be hypothesised that the successful entrepreneurs should be more innovative, and should therefore have a higher KAI score than a person who is more comfortable in a bureaucratic environment.

The KAI instrument consists of 32 items and uses a 5 point Likert scale. This gives a theoretical range of 32 to 160 and a theoretical mean of 96. The observed range is more restricted, 46-146, based on over 1000 subjects; the observed mean is near to 95 and the distribution conforms almost exactly to a normal curve. Many studies have shown that variations by identifiable subsets are predictable, their means shifting from the population mean, in accordance with the theory (Kirton 1984:139).

Factor analysis of the KAI instrument has resulted in the identification of three underlying dimensions. They are: "Sufficiency of Originality " (SO); "Efficiency of

Operation" (E); and "Role/Group Conformity" (R).

The first factor contains items that generally describe creative people as found in the relevant literature (Rogers 1959 and Myers 1962).

The second factor (E) indicates a preference for efficiency (or intra-paradigm thoroughness) and has a parallel with Weber's (1970) analysis of the aims of bureaucratic structure; this factor is a measure of the adaptor pole. A high (E) score would indicate disinclination to master detail except when highly motivated.

The third factor (R) indicates a preferance for operating within rules, structures and concensus. It is labelled "Role/Group Conformity" (formal or informal) and has a marked similarity to Merton's (1957) analysis of bureaucratic structure.

The consistency of replicated factor analyses supports the three underlyling factors as representing stable personality traits (Goldsmith 1985; Kirton 1987).

3.2.6.1 RELIABILITY AND VALIDITY OF THE KAI INSTRUMENT.

The inventory's internal reliability, using the Kuder-Richardson Formula 20 co-efficient (n=532) was 0.88, accounting for 78% of the internal variance. Calculated for an independent replication sample of 276 subjects (with respect to age, sex, occupational status and educational levels), done one year later, the K-R 20 was again 0.88. At a later date the Cronbach Alpha co-efficient was calculated (again 0.88) for a sample n=562 of a general population sample in the United Kingdom (Kirton 1987:44). In a South African sample of black university students, (n=143) score means of 91.18 and 91.10 on a test-retest after 5 months were found.

The reliability and validity of the KAI instrument for local conditions was reported by van Daalen (1989). The details on the instrument are given as Appendix 19.

Reliability and validity work on the KAI instrument has been carried out by South African researchers. This work involved black students, recent arrivals at universit and just commencing their bachelor degree studies. It was not considered necessary to repeat the reliability and validity work on the KAI construct as this had already been established with a very similar group of

black students right at the end of their secondary school careers.

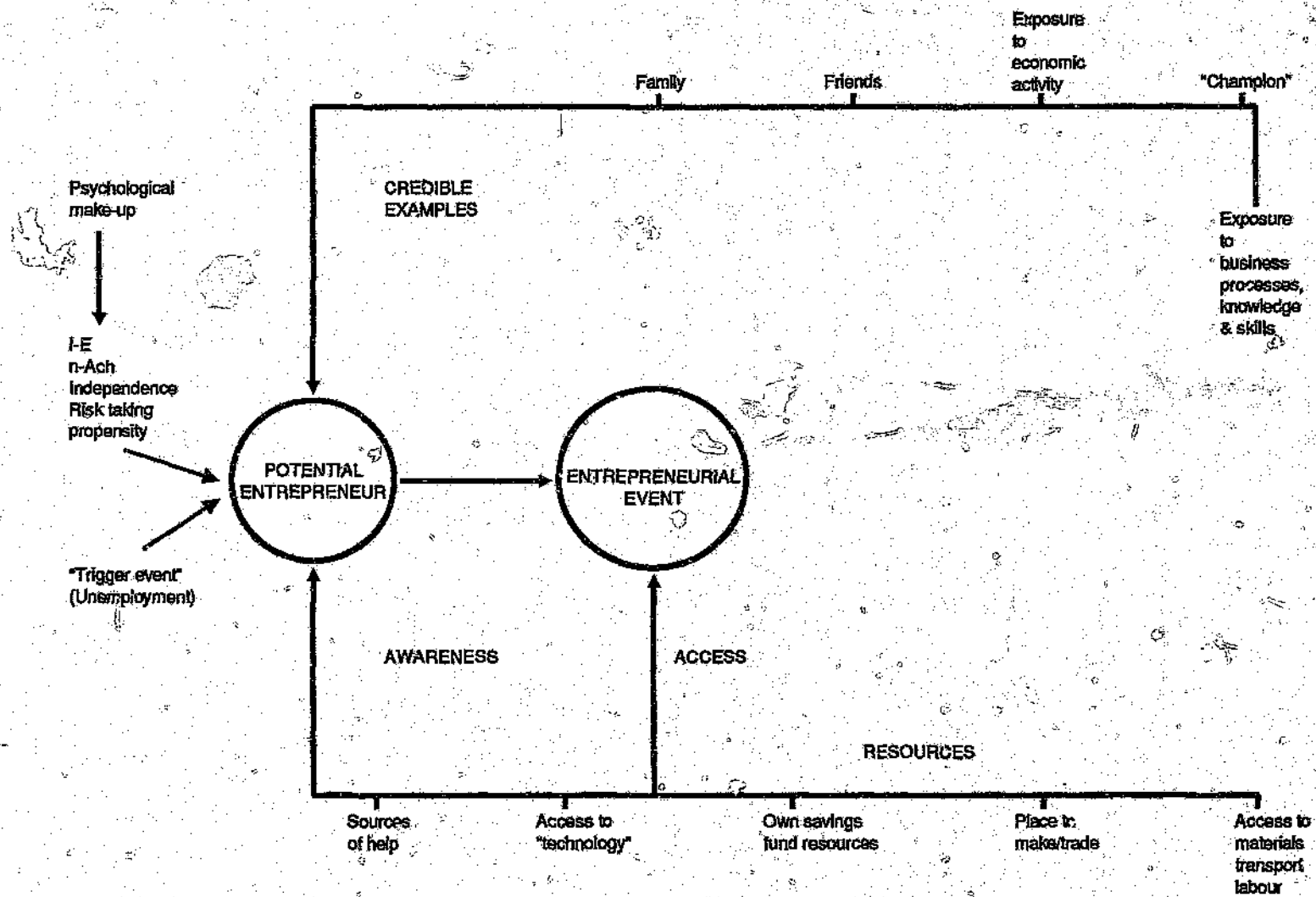
3.3. THE RESEARCH MODEL FOR A NEW VENTURE INITIATION.

3.3.1 THE CREDIBLE EXAMPLE

Shapero (1975) published an entrepreneurial initiation model, based upon his own research. He found that the most important variable associated with the entrepreneurial act was the example of other business formations, what Shapero termed "credible models". The potential entrepreneur must see himself or herself in the role of starting a business, and these examples make this possible. Although Shapero's work has been superceded by many others, noteworthy being Timmons et al., (1977, 1985) and more recently Chell and Haworth (1987), the model used by Shapero has a direct application to this work. The author has adapted the model for purposes of this research (Figure 3.2). Shapero (1975) established the relationship between the credible examples, the resources needed and the psychological make-up of the entrepreneur. In addition "the triggering event" that motivates the entrepreneur to start his or her new venture is included in Shapero's model.

Figure 3.2

MODEL OF NEW VENTURE INITIATION



(Adapted from A. Shapero, 1975)

The family, friends, the entrepreneur's "champion" or mentor, together with the experience of an economic activity and the business processes, including the knowledge and skills involved, are also important examples for the aspirant entrepreneur.

The importance of the family example cannot be over emphasised. Parents who are independent provide an example for their off-spring, although it has been reported in the literature (Susbauer 1969) that parents do not actively encourage their children to go out on their own, in fact many discourage it. What applies to parents applies equally to friends, and in the latter case the experience will be more valid because the age gap and parental authoritarianism will be absent, or greatly reduced.

In the intervention (based on the Junior Achievement model, Appendix 1), the students in the Experimental Group set up and run a mini-company. The credible example of the formation and the operation of an actual business is demonstrated. During the course, input on the business formation processes and the knowledge and skills associated with it is given.

The experience of the market research, pricing, marketing and selling is done in the participant's own area. This exposure results in the gaining of knowledge and experience of the economic activities where the student lives.

The "champion" or mentor is usually an important figure to whom the would-be entrepreneur can relate. This person need not necessarily be a business owner or founder, but a role model who stimulates the individual to take action to ensure his or her success. The "champion" motivates the individual to improve his or her personal position.

At the end of the course the participants survey the businesses in their own area and (hopefully) encounter successful business men and women whom they can emulate. One of the problems in the black community is the lack of credible, high profile business persons with either big or small organizations to whom the students can relate. Also, the relationship between formal business persons and their community is not a happy one. This is discussed in Chapter 1.

3.3.2. BUSINESS RESOURCES.

The resource area of the model identifies the inputs necessary to start up and run a business. In the mini-company run by the participants, these inputs are identified and their inter-relationship experienced. The financial resources are the shares which each member of the mini-company buys at R2 each to raise R100 in capital. In addition a loan of R100 is made available. This has to be repaid within six weeks of the start-up of the business. Interest is charged. Further loans are available if necessary, but none of these were taken out by the research groups. The capital has to be repaid together with a dividend, if a profit is made, to the shareholders when the mini-company is wound-up (Appendix 1).

During the running of the business, raw materials have to be bought and equipment purchased or hired. The labour for the making of the product for sale is provided by the members themselves. The payment of salaries to the "officials", and wages to the production members, serves to differentiate the responsibilities and the roles of the members of the mini-company. The need to have employees in various positions in an organization, (except in the very small one person venture) is an important learning point.

The necessity to have a place in which to work is self-evident, but the ideal position to market or sell the goods produced has to be established by the students from their own experience. They have to interface with their customers - their target market.

The access to the production technology depends upon the product produced. This was provided to the mini-company in the intervention based upon experience gained in the Junior Achievement programme. The knowledge required to run and manage an organization, and the business technology is learnt by the participants by managing their own affairs and learning from the experience, after the necessary input has been received.

Not shown on the model, but of great importance, is the flow of information between the market, the environment in general, and the various resources used by the entrepreneur, as well as that from family and friends. Prudent use of information could mean the difference between success and failure in a business. This was pointed out during the programme when problems were experienced e.g. lack of sales, resulting in reduced cash flow.

3.3.3 NEW VENTURE INITIATION AND THE " TRIGGERING EVENT"

Shapero's "triggering event" in the case of the matriculating students would be the inability to proceed to the tertiary educational level, due to poor examination results, or lack of funds, coupled with the unavailability of a job opening. The properly motivated individual would turn to working for himself, provided the necessary resources can be assembled, and the exposure to credible examples has been a positive motivation. The degree of success achieved may depend to a greater or lesser extent by factors in the environment in which the entrepreneur works.

3.3.4 NEW VENTURE INITIATION AND PSYCHOLOGICAL CHARACTERISTICS

The relevant psychological characteristics of the individual should be present to ensure that the entrepreneurial event takes place, and a degree of success obtained. This has been discussed in Chapter 2.

The risk-taking propensity refers to the ability of the individual to commit his own personal resources (e.g, savings and use of own time) which will be required to run a new business venture.

In the case of the mini-companies in this study, this does not apply. For some of the participants, however, the psychological as well as the situational factors are important inputs in the initiation of a new venture in the post-intervention period. A degree of risk will be assumed in this event.

CHAPTER 4 : RESEARCH METHODOLOGY

4.1 POPULATION STUDIED.

4.1.1 TOWNSHIP AREAS SELECTED

Four townships adjacent to Springs, Benoni, Boksburg, and Johannesburg were chosen as being representative of the urban residential areas of disadvantaged students living on the Witwatersrand, the economic heartland of the Republic of South Africa. The areas selected are known as Kwa Thema (Springs), Vosloorus (Boksburg), Wattville (Benoni) and two areas in Soweto, near Johannesburg.

Group 1 in the research was made up of pupils selected from the five high schools in the Kwa Thema township; Group 2 came from the two schools in Vosloorus and the one in Watville; Group 3 was selected from three high schools and Group 4 from six schools in Soweto. Details on the pupils present in Standard 10 and the number selected for the research are given in Table 4.1. All the pupils were from government run schools, as opposed to private schools which receive little or no funding from the State.

Table 4.1

NUMBER OF MATRICULANTS IN KWA THEMA, VOSLOORUS AND SOWETO IN 1988

KWA THEMA (SPRINGS)		
SCHOOLS IN STUDY	**PUPIL NUMBERS** (Standard 10)	**PUPILS IN STUDY**
Kenneth Masekela Secondary	198	9
Laban Motlhabi Comprehensive	230	7
Nkumbulo Secondary	149	6
Phulong Secondary	197	20
Tlakula Secondary	125	14
TOTAL	899	56

VOSLOORUS (BOKSBURG)		
SCHOOLS IN STUDY	**PUPIL NUMBERS** (Standard 10)	**PUPILS IN STUDY**
Illinge Secondary	323	27
Vosloorus Secondary	308	10
WATTVILLE (BENONI)		
Etwatwa Secondary	200	12
TOTAL	831	49

SOWETO (JOHANNESBURG)		
SCHOOLS IN STUDY	**PUPIL NUMBERS** (Standard 10)	**PUPILS IN STUDY**
Emadwaleni Secondary	135	15
Ibhongo Secondary	205	1
Lobono Secondary	84	8
Mafori Mphahlele Comprehensive	32	10
Mapetla Tswana Secondary	109	2
Seana Marena Secondary	109	16
Sekano-Ntoane Secondary	176	4
Thulare Secondary	131	26
Vuwani Secondary	118	14
TOTAL	1099	96

Table 4.1 (Cont.)

Proportion of pupils in research study to total matriculants:	
Kwa Thema (Group 1)	**1 in 16 (6.2%)**
Vosloorus (Group 2)	**1 in 17 (5.9%)**
Soweto (Group 3 & 4)	**1 in 11 (9.1%)**
Total standard 10 pupils in townships researched:	**2829**
Total standard 10 pupils in research study:	**201**
Proportion of matriculants in research:	**1 in 14 (7.1%) of research students to total matriculants.**

(Source: Director-General:Education and Training, Pretoria.)

4.1.2 PROPORTION OF POPULATION REPRESENTED BY STUDENTS SELECTED FOR THE RESEARCH

In order to determine what particular sector of the population was being studied, the age profile of the participants in each group was recorded. This information was compared with the census figures for each township area for the ages representing the student population. These are given in Table 4.2. The 1985 census figures were used on the recommendation of the Central Statistical Services in Pretoria as being more reliable than those of the 1990 census. The proportion of pupils selected in the Standard 10 high school population and the proportion of the research sample selected from the residents in each area in the age groups 15-19 and 20-24 are given in Table 4.3.

Table 4.2

ANALYSIS OF POPULATION DATA FOR THE FOUR RESEARCH TOWNSHIP AREAS

1. AGE SPREAD OF STUDENTS

AREA	MINIMUM	MAXIMUM	MEDIAN	SAMPLE SIZE
Kwa Thema	17	24	20	56
Vosloorus - Watville	16	25	19	49
Soweto (3)	17	23	20	36
Soweto (4)	18	24	20	60
			TOTAL	201

Upper quartile = 17
Lower quartile = 24
Median quartile = 20

Census figures for the 15 - 19 and 20 - 24 year groups were taken to calculate the corresponding population in research areas.

2. POPULATION FIGURES FOR RESEARCH AREAS

AREA	15 - 19 YEARS	20 - 24 YEARS	TOTAL
Kwa Thema	7 949	9 238	17 187
Vosloorus	5 160	6 188	11 348
Watville	1 967	2 195	4 162
Soweto	53 735	59 060	112 795
		GRAND TOTAL	145 592

(Source: Central Statistical Services, Pretoria. 1985 Population Census.)

Table 4.3

PROPORTION OF MATRICULANTS IN RESEARCH AREAS TO TOTAL POPULATION: 1988

AREA	MATRICULANT POPULATION	TOTAL POPULATION	PROPORTION
Kwa Thema	899	17 187	1:19.1 (5.2%)
Vosloorus - Watville	831	15 510	1:18.7 (5.3%)
Soweto	1 099	112 795	1:102.6 (0.97%)
TOTAL:	2 829	145 492	1:51.4 (1.9%)

Proportion of research students to total number of matriculants in research areas 1:14 (7.1%).
Proportion of all matriculants in research areas to total designated population 1:51.

In the age group 15 - 24, the research group represents 0.138% of the corresponding population or 1 in 724 young adults from the areas covered took part in the research.

(Sources: Central Statistical Services Pretoria, 1985 Population Census and Director-General: Education and Training, Pretoria.)

4.2. SELECTION OF RESEARCH GROUPS

4.2.1 PRELIMINARY STUDENT SELECTION PROCEDURES

The schools were visited by black counsellors on the staff of the Centre for Developing Business. The regular Junior Achievement (JA) programme is run by the Centre and the counsellors work with the senior high school students who participate on the extra-curricula programme. School recruitment is part of their duties. They are familiar with the township areas. All stay in the townships.

For purposes of the intervention it was considered desirable to attract students who live close to the schools they attended. This was not difficult in the smaller townships, but was a problem in Soweto. Students did not necessarily live in the schools' natural catchment area, but travelled from other parts of the larger Soweto area. A greater choice of schools is available, compared with the smaller townships on the East Rand.

The counsellors made a presentation to the pupils in the matriculating classes, in order to interest as many as possible of those present to apply to come onto the

research programme. The three counsellors used to assist in the research were given a detailed briefing on the nature and the objectives of the study by the author.

Several briefing sessions were held before the school recruiting commenced. Particular attention was paid to the way the school presentations were to be done to avoid a biased sample of the pupil body applying to join the research groups. A specially designed application form was drawn up for the purpose. An example of the form is attached as Appendix 9. On this the students noted their biographics, school and subjects to be taken for matriculation, extra curricula activities and parents' occupations. For purposes of identification, the intervention was known as Youth Enterprise to the young Standard 10 students applying to become participants.

The presenters did not dwell unduly on the setting-up and running of an actual business and the possibilty of earning money. Some of the pupils were studying business economics and accountancy. No attempt was made to attract these students in preference to those taking other subjects. As unbiased a selection of applicants as possible was made to ensure that the Experimental

and the Control Groups were truly representative of matriculating pupils.

A further complication in the recruiting process was the possibility that some of the pupils might have attended a regular Junior Achievement (JA) programme, earlier on in their school careers. (JA is run with Standard 9 as well as with final-year matriculants). The Junior Achievement programme commenced on the Witwatersrand in 1980 and is well known in the schools. Care had to be exercised to exclude former achievers from the sample. Past records of those attending the JA programme were used to identify ex-achievers. The teachers' co-operation was also obtained to help in this work. Two such students were recognized as having attended the Junior Achievement programme previously. They were rejected from the applicants.

4.2.2 SAMPLE SELECTION PROCEDURE

A stratified random sampling design was adopted (Leedy 1980:119). The application of this technique may be illustrated by the selection process used for the students for the Vosloorus group. These students constituted Group 2 of the study. They were selected from

schools in the Vosloorus-Wattville townships.

A total of 252 applications were received from the three schools in the two areas. The recruiters carefully explained and illustrated what was required in filling out the research application forms. This was done in English as well as in the vernacular. All application forms were checked off carefully, and errors corrected with the student, before leaving the school premises.

The total number of students needed for each research group was 60. This covered the need for two groups, a control and an experimental. The 60 students were selected proportionally to the number of applications received from each school. In the case of the Vosloorus-Wattville schools, the ratio was 12:13:35 of the applications received from the three schools.

Using a table of random numbers, the sample of 60 was selected from the 252 applicants. To find the entry number in the table, the first two digits on a ten rand note were taken and a coin flipped to determine which digit to take first, to select the horizontal line in the table of numbers. The second digit determined the vertical line. The intersection of the two lines gave the first random number in the table. The application

forms were numbered sequentialy. The group of 60 students needed was selected by using the random table of numbers given in Leedy (1980:115)

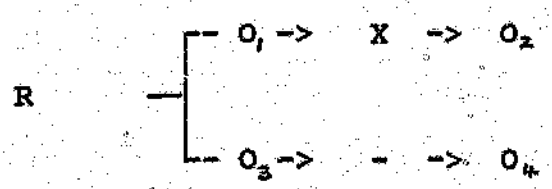
When the 60 forms had been selected, they were then arranged into two groups and labelled "E" for the Experimental group and "C" for the Control, so that 30 pairs were obtained. Matching was done employing the precision control technique (Simon 1986:84). The attributes used in the matching process were (in order of priority) gender, age, school attended, subjects studied, parents in business and extra-mural activities. It was not possible to have exact matching on all these attributes, as the sample size was too small. The attributes were applied in the order as given, since this was considered to be the order of importance for matching purposes.

4.3. NATURE AND FORMAT OF THE RESEARCH

The research was action orientated. The experiential intervention consisted of the setting-up, running and winding-up of a real production-based mini-company, using the final year high school students. As noted before, the experiential exercise was known as Youth Enterprise to

distinguish it from the Junior Achievement programme (JA) on which it is based. The reason for selecting participants at the end of their school career was to maximise the carry-over effect after the intervention. The students would be free at that stage to determine what to do having left school. It was also essential that the participants could be accessed easily and traced both during and after the research was completed. The majority of young people who are still at school live at home, and hence accessibility is good. Pupils tend to stay on at home unless they enter the tertiary education level away from where they live. It was learnt from the research that after the first attempt at the matriculation examination has been made, the majority of the pupils remain at home to rewrite failed subjects, or to improve their symbols in order to ensure that they can enter university or college. A schedule of the matriculation results for the years 1987-1990 is given in Appendix 6.

The paradigm used for the research design (R) may be represented as follows:-



Where X = the experimental variable.

O_1 = the pre-evaluation of the Experimental Group.

O_2 = the post-evaluation of the Experimental Group.

O_3 = the pre-evaluation of the Control Group.

O_4 = the post-evaluation of the Control Group

(Leedy 1980:166 and 171)

Three psychological test instruments were used to measure the effects experienced by the Experimental compared to the Control Group as a result of the intervention. The instruments were employed on a pre- and post-intervention basis (Chapter 3 details the instruments

used). At the end of the formal input of the research the students were left alone to get on with their studies and write their examinations. After these were over, it was expected that a proportion of those who had attended the intervention would commence some form of economic activity in or near their homes. A maturation period of several months was allowed before any further contact was made with the Experimental or the Control Groups.

Students were seen on several occasions in the year after they had completed their schooling (Table 4.4 is a schedule of research activities). In the first of these sessions the students were asked to note their matriculation results. These were obtained for both the Experimental and Control Groups. Also recorded was what the individuals were doing, as it was assumed that they would not normally have been attending school after completing their matriculation studies.

In some cases the pupils had returned to their old school, or if they failed to gain admittance, to another school to resume studying. The return to school had been occasioned by poor matriculation results. Some of the pupils were attempting to study by themselves, and some were attending tuition in study centres or "colleges".

Table 4.4

SCHEDULE OF RESEARCH ACTIVITIES: GROUP 1 (KWA THEMA)

	ACTIVITY	DATE	INSTRUMENT ADMINISTERED	GROUP INVOLVED
1.	School recruiting and sample selection done.	May - June 1987		Applicants interested in attending course.
2.	Pre-intervention testing.	July 1987	Rotter test; Achievement Motivation Questionnaire.	Experimental and Control.
3.	Intervention carried out.	July - October 1987	-	Experimental only.
4.	Post-intervention testing.	October 1987	Rotter test; Achievement Motivation Questionnaire; Kirton's Questionnaire; Review exercise on business knowledge.	Experimental and Control.
5.	First contact after intervention. Meeting held.	March 1988	General discussion only.	Experimental and Control.
6.	Second contact after intervention. Meeting held.	August 1988	General discussion only.	Experimental and Control.
7.	Third contact after intervention. Meeting held.	March 1989	Questionnaire.	Experimental and Control.
8.	Fourth contact after intervention. Meeting held.	August 1989	Questionnaire.	Experimental and Control.
9.	Individual interviews.	October 1989	Open-ended questionnaire.	Selected participants from experimental and control groups.
10.	On site informal business assessment:	October 1989	Check list of critical elements associated with small business activity.	Selected participants from experimental and control groups.

Table 4.4 (Cont.)

SCHEDULE OF RESEARCH ACTIVITIES (FOR GROUPS 2, 3, AND 4)

	ACTIVITY	DATE	INSTRUMENT ADMINISTERED	GROUP INVOLVED
1.	School recruiting and sample selection done.	April/May 1988	-	Applicants interested in attending course.
2.	Pre-intervention testing.	May/June 1988	Rotter test; Achievement Motivation Questionnaire; Kirton's Questionnaire.	Experimental and Control.
3.	Intervention carried out.	June - September 1988	-	Experimental only.
4.	Post-intervention testing.	September 1988	Rotter test; Achievement Motivation Questionnaire; Kirton's Questionnaire; Review exercise on business knowledge.	Experimental and Control.
5.	First contact after intervention. Meeting held.	March 1989	Questionnaire.	Experimental and Control.
6.	Second contact after intervention. Meeting held.	August 1989	Questionnaire.	Experimental and Control.
7.	Individual interviews.	October 1989	Open-ended questionnaire.	Selected participants from experimental and control groups.
8.	On site assessment of informal businesses.	October 1989	Check list of critical elements associated with small business activity.	Selected participants from experimental and control groups.

Repeated attempts were made to procure the academic transcripts of the matriculation results from the schools which the pupils had attended. Some of the schools were not co-operative or insufficiently organised or interested to find the results readily. Repeated visits were paid with eventual success. A comparison was made with the official results given by some of the schools and those noted by the scholars. The majority of the results corresponded with those of the school's records. Those that were not, were corrected. Also investigated was what other activities were being pursued by the pupils to make money to help with their expenses.

The pupils were also asked to answer questions concerning the key concepts in the setting-up and running of an informal business, in order to establish whether this knowledge had been understood and retained. Note was also made of those who were continuing their studies.

In the final phase of the research some of the students were interviewed individually to establish what they and their families were doing. This was done to obtain greater insight into the lives of the research population, after matriculation.

Counsellors also visited students who stated that they

were pursuing an informal activity. This was done to determine whether a real business had been established, or money was being made in a haphazard fashion.

4.4. NATURE OF THE INTERVENTION

The intervention was done over a period of sixteen weeks. The administration of the test instruments was done one week before the intervention commenced and one week after the completion of the intervention. The Control group was present when the test instruments were administered, on both the pre- and post-testing sessions.

On one afternoon a week, after school activities were finished, the students gathered together in a sponsor's training facility in the nearby town, or at the Centre for Developing Business in Parktown, to receive the instructional inputs required and to operate their mini-companies. The procedure was replicated four times in the four urban locations.

The intervention was done in five phases as set out below:

Phase I. Introduction of instructors and counsellors,

and students to each other; explanation of the course, its aims and objectives. Introduction to the business processes, including the raising of finance. Presentation on suitable products that could be made and sold.

Discussion of feasible products, for the township market, given the resource constraints. Input on marketing and market research. Discussion on application in student's own neighbourhood. Field work to investigate local market opportunities completed. (3 sessions of three hours each.)

Phase II. Evaluation of market research field work completed. Pricing and costing input given. Product selection done. Election of office bearers completed. Input on production given. Equipment, its use and arrangement to make the selected product studied. Opening of accounting records. Materials for production ordered. (2 sessions of three hours each.)

Phase III. The product was made. Input on selling skills given. Sales made. Planning and control input given. Conduct of meetings explained. Records

set up. Control of finances actioned. Sales monies banked; accounts paid. Problem-solving techniques discussed; difficulties examined and solutions applied. Company meetings held; progress reviewed, planning done. Wages paid.
(6 sessions of three hours each.)

Phase IV. Production completed, goods on hand sold off. Preparation for winding-up company activities done, and explained. Accounts closed off; company closed down and outstanding accounts paid; financial position calculated. Bonuses distributed, dividends paid, capital returned. Review of results done; difficulties and achievements examined and discussed. Learning points emphasised and related to theoretical inputs given.
(3 sessions of three hours each.)

Phase V. Planning for student neighbourhood survey of business activities done. Field survey carried out. Review of businesses identified in surveys completed. Discussion on possible market opportunities from survey work held. Input on resources needed given. Review of help and assistance available to start and run an informal business done.

As an example of the assistance available, the Experimental Group students were introduced to one of the Business Consultants from the Centre for Developing Business at the University of the Witwatersrand. This Centre conducts a series of a small business activities and specialises in assisting would-be entrepreneurs as well as existing business persons. The Consultant outlined the help which could be given by the Centre to those interested in their own ventures.

Phase V was done with the Experimental Group in order to facilitate the application of the knowledge and experience gained from the running of their mini-companies in the intervention. Groups of three or four participants, staying in the same neighbourhood, were given the task of assessing the formal and informal economic activities going on around where they lived. This was done so that a discussion could be held on the reasons for the establishment and the nature of the existing businesses in the students' home area. The process of identifying new business opportunities in each area was done with each Experimental Group. From this exercise an awareness of unfulfilled needs was brought to the students' attention. It was hoped that this would motivate some of those attending to try and meet the identified needs, with a new business initiative.

The exercise was a stimulatory one designed to get the students to think of market opportunities available in their own environment.

Each of the sixteen course sessions and the administration of the test instruments was carried out at the same time and place each week. All activities concerning the operation of the mini-companies, with the the exception of the selling of the products, was done during each three hour session and under the supervision of the course tutors. The instructional input was given during each afternoon session. The agenda for all four groups was the same, the time allocation for each activity was identical, as was the activity itself. The theoretical and practical input given was also the same for each group, and was based on that given in the Junior Achievement programme. The course instuctors were all familiar with the JA materials and methodology. The adaptations made were done to make the input more relevant to the Experimental Groups involved in the research, by linking the activity to their own environment and informal business situation. The course tutors were given detailed training on the modifications with which they were not familiar.

It was hoped that the demonstration effect of the experiential exercise of running an actual informal

mini-company, together with practical examples from the students' own immediate environment, would encourage a proportion of those involved to run an informal business. The money made would help off-set some of the school, college or university expenses being borne by their families, for those continuing their education.

The Experimental Group participants on the intervention were observed to gain increased confidence and become more resourceful as they progressed through the exercise. This is in line with the experience gained over the years in observing the behavioural changes that take place in the students participating in the regular JA mini-company programme.

4.4.1 POST-INTERVENTION BUSINESS KNOWLEDGE TEST

At the testing sessions held at the end of the intervention, the Experimental Group sat a written test. Questions were asked to determine if the participants understood some of the key concepts concerning the running of a business. These learning points were part of the course inputs. In case some of the Control Group were familiar with these key business concepts, they also sat the same test with the Experimental Group (Appendix 21).

4.4.2 POST-INTERVENTION RESEARCH

The main concern of the students in the post-intervention period was the completion of their preparations for the writing of their matriculation examination, the sitting of the examination itself and the receipt of their academic results. The decision as to the the next step in their careers had then to be taken.

For the first research group (from Kwa Thema) the career decision was based on the 1987 matriculation year. For the 1988 year-end matriculants, this decision was made early in 1989 and involved the rest of the research groups.

Since the matriculation results were poor, the majority of the students elected to rewrite their examinations, or repeat subjects to improve their symbols, so that they could apply to go to college or university. Only 5 out of the 201 students in the groups (both the Experimental and the Control) were in the fortunate position to proceed directly to a tertiary educational institution, after writing their matriculation examination for the first time.

The first encounter with the participating groups after the intervention was made in March of the year following

the writing of the matriculation examination. A get-together was held with each group in turn; the control and the experimental participants were present simultaneously (Table 4.4).

The main objective of the meeting was to obtain information from each student on their academic performance of the previous year, and to determine what they were going to do for the rest of the year. Information was also obtained on the use of the knowledge gained from the intervention, particularly if this had resulted in some form of economic activity. This was obtained by the administration of a questionnaire (Appendix 10). The results of this survey were kept confidential and were not made available to the rest of the participants.

Appendix 8 gives the matriculation results and the indexing of the school subjects, grades and symbols for one of the participating groups.

During August 1989 Groups II-IV were contacted again, this time to ascertain what they were doing, and in particular to learn about any economic activity that had been undertaken individually. (Contact was made for the fourth time with the Kwa Thema Group 1 also in August 1989).

Each time a meeting was held, the Control Group was asked to attend. It was necessary to determine if any of this group were engaged in an informal business. At each contact with the participants they were asked whether they were making money for their own account and to give details, on the questionnaire provided (Appendix 11).

On examining the data obtained from both the Experimental and the Control Groups, there did not appear to be a clear pattern as to the students' career goals. In some cases an informal economic activity noted at one of the report back sessions was found to have been discontinued at the next.

An individual participant interview was held and the field work of the research project was completed when the on-site business investigations were finalised. These activities are described below.

4.4.3 INDIVIDUAL PARTICIPANT INTERVIEWS

It was decided to select a representative sample from each group for an individual interview. Participants who were articulate, could explain their current situation

and were representative of the group they belonged to were chosen to be interviewed. This was done to obtain a greater insight into their home circumstances and their difficulties in studying, making money or finding a job. The material gathered as a result of the interview served to enrich the research and add additional interest and insight into the interviewees lives.

Cohen and Manion state that:

> "the research interview has been defined as a two person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information, and focussed by him on content specified by research objectives of systematic description, prediction or explanation" (Cohen and Manion, 1980:241).

The method of interviewing used was an unstructured open one, with flexibility and freedom, compared with the structured interview (Cohen and Manion 1980:243). The content, sequence and wording are entirely the responsibility of the interviewer (Kerlinger 1973). However, the preparation for the unstructured interview was done carefully so that the information required was obtained. Probing questions were also asked, so that the author was able to understand the interviewee's personal

situation as adequately as was possible, given the time constraint. Each interview was of 20 minutes duration.

Several weeks before the interviews were conducted in October 1989, questionnaires were sent under cover of a letter to all those taking part in the research (Appendix 11 and 12). The reason for this was to obtain up to date details on what the students were doing. In the case of the Kwa Thema Group, this work was carried out 24 months, and with the other students 12-13 months after the intervention period.

A small proportion of the research population studied (19 out of the 201) had managed to qualify and were studying at the tertiary level, at this stage. A selection of the participants who had returned their October 1989 questionnaires (n=148 74% of the total) was made, identifying those who were the most articulate and who represented one of the occupational categories noted by the respondents in their questionnaires. The five groupings used were:

1 Repeating matriculation studies.

2 Attending university or college.

3 Doing nothing in particular.

4 Working as a part or full-time employee.

5 Participating in a business, of their own or with their families or friends.

Forty five students representing the four research groups were identified as interviewees. These were sought out and invited to come to a convenient centre for the interviews. Seventeen of those selected were actually seen. A summary of the data gathered is given in Appendix 23.

A one-on-one discussion was held with the selected interviewees. Some students had difficulty in expressing themselves in English, but this was not a great problem. Questions were re-p rased and repeated to ensure that an understanding was reached and that consistent answers were obtained.

The interviews centred around what the participants were doing with their time and why. Short and long term career aspirations were also probed. The informal business activities in the family, or of their own were established. The monetary contribution being made towards the running of the home, and the family circumstances were also noted. Individual parental responsibilities, if any, were also discovered. How the interviewee had spent his/her time since the intervention was held was also discussed. The author found the young people to be very co-operative and very open regarding their personal circumstances.

4.4.4 IDENTIFICATION OF INFORMAL BUSINESSES ESTABLISHED BY THE PARTICIPANTS IN THE STUDY

The last field exercise of the research consisted of an on-site investigation of the businesses which the young people had noted in their questionnaires, submitted in August 1989 (Appendix 11). This was done in order to verify that the businesses reported were truly their own and not an off-shoot of the family's endeavour, or that of a friend.

The entrepreneur is an individual who makes use of resources to initiate, maintain and build-up an independent profit orientated business for the production or distribution of economic goods and services (Cole 1959). A check list of criteria was written-up by the author to guide the investigation and to rate the activity as an independent informal business. An important objective of this research was to determine what had resulted from the intervention to stimulate latent entrepreneurial talent among the participants in the Experimental, compared with the Control Group.

Methodology used. Time did not allow for the systematic investigation and establishment of criteria following the Behaviourially Anchored Rate Scale (BARS) technique (Smith and Kendall 1963).

Using the basic idea of the BARS method, five independent experts in the field of informal black business consultation and teaching were approached. They were asked to give their views on what critical elements have to be in place before it could be said that an independent small business existed. These check lists, which were made-up completely independently by the individuals consulted, were then used to produce a final list of criteria. This consisted of 15 items.(Appendix 15.)

One of the Co-ordinators on the Junior Achievement programme based at the Centre for Developing Business who collaborated with the author in the research project, and who lives in Soweto, was trained to do the field investigation. Each item on the list of criteria was explained to him, giving the rational for each item. By means of examples taken from the author's knowledge of the field of informal business in the township areas, guidelines were established to give the Co-ordinator or Field Researcher confidence in what to look for and how to rate each item on the check list.

Each participant in the research programme who claimed to be running his or her own business was sought out in his own area without prior warning. The individual was asked

to demonstrate on site to the Field Researcher that a real business was being run for his or her own account. The Researcher carried out the work using a structured interview technique, with a pre-determined number of questions based upon the list of criteria discussed above and posed to the individual. An Investigation Data Sheet was completed as the demonstration proceeded (Appendix 16).

On completion of a field visit, the Researcher was debriefed at his home base. The items set out on each completed Data Sheet were examined. The final verdict reached by the Field Researcher as a result of the on-sight assessment of the informal business was challenged by the author to make sure that the investigation had been carried out properly. If there were doubts regarding the conclusion reached, the investigation was redone. Of the 17 businesses set-up by the students of the Control Group and the 14 established by the Experimental, a second visit was necessary in 2 of these where a border line case exirted. The author accompanied the Field Researcher on both of the occasions.

In visiting the site where each business activity was carried out, the Field Researcher did not know whether

the individual conducting the economic activity was from the Control or Experimental Group. This prevented bias entering the outcome of his field visit.

Results. Of the 51 informal businesses assessed, it was found that only 20 were actual independent informal businesses set-up and owned by the entrepreneur himself.

In some cases when assessing the business situation, not all the criteria were met. (31/51 were in this category). By careful questioning of the Field Researcher, together with the data submitted, the author was able to judge whether an independent business existed or not.

4.5 DATA COLLECTION AND PREPARATION

The psychological instruments used in the research were: The Achievement Motive Questionnaire (AMQ) (Appendix 17) The Rotter Internal-External Locus of Control (Appendix 18) and Kirton's Adaptive Innovative Instrument (KAI) (Appendix 19).

A Numeracy Test was done at the pre-intervention stage. The questions asked are set out in Appendix 20. For scoring purposes each question was given equal marks (10%).

This test was done to establish whether there was a correlation between high numeracy marks and entrepreneurial activities.

At the first post-intervention session, and some three months later, a Business Knowledge Test was administered. The details are given in Appendix 21. At the same session the participants were asked to note what they hoped to do in the following year.

In order to keep track of what the participants were doing in the post-intervention period, meetings were held and questionnaires were filled in by the attendees (Appendix 10 and 11). The details on the dates when these gatherings were held are given in Table 4.4. Each questionnaire was scrutinised by an assistant to make sure the details were understood and entered correctly during each meeting with the respondents.

The instruments were scored and each participant's details and results were entered on a form. An example of a Participant Data Summary Sheet is given in Appendix 13. A categorisation system was adapted to handle the details on occupation and careers by grouping together similar jobs and careers to simplify the statistical procedures. An independent cross-check on the accuracy of the data transfer

from the original entries and the scoring procedures was carried out to eliminate inaccuracies.

The data set was compiled from the individual student detail sheets, in the ASCII format, using an IBM-compatible personal computer. The matrix consisted of 51 variables on 201 respondents (n=105 for the Experimental and n=96 for the Control Group). Verification for accuracy of the data entered was done before the statistical analyses were commenced.

CHAPTER 5 : ANALYSIS OF VARIABLES: RESEARCH RESULTS

5.1 DATA ANALYSIS

The data were analysed with the assistance of the Bureau of Statistical and Survey Methodology of the University of Pretoria. A programme called "Black SAS" was written in the Statistical Analysis System (SAS) and run on the IBM type 3090 main frame computer of the University. As input, the programme used the file name "Black Data" and as output the file labelled "Black Listing".

The details on the 51 research variables are given in Appendix 14.

The statistical work centred on the comparison of the average group means of a set of variables compared with a second set of variables, to determine whether a significant difference existed between the two data sets. The comparison was done using a multivariate analysis of variance (MANOVA).

In applying a MANOVA statistical inference, the following assumptions are made:

a) The data set comes from a multivariate normal distribution with equal subgroup covariance matrices.

b) The subgroups form a set of mutually independent data sets.

The basis of the research was an investigation of what impact the intervention had made on the participants, comparing the pre-intervention with the post set of values of the variables concerned. The results of the statistical analyses enabled the research questions to be answered and the hypotheses to be supported.

5.1.1 STRATEGY ADOPTED FOR THE ANALYSES

It was necessary to determine first whether the Experimental and Control Groups were matched. Table 5.1 gives the result for the differences between the means for the two groups, analysing the pre-intervention values for thirteen different variables. No significant differences between the groups were found. The p-value of the test for equality between the means is also noted. If a p-value is less than 0.050% or 0.100%, a significant difference between the means is indicated at the 5% and 10% level of significance respectively.

The results in Table 5.1 were obtained from individual analysis of variance (ANOVA) to compare the group means.

Table 5.1

DIFFERENCE BETWEEN PRE-INTERVENTION VALUES FOR EXPERIMENTAL AND CONTROL GROUPS FOR THE AMO, ROTTER AND KAI TESTS

VARIABLE*	MEANS FOR: EXPERIMENTAL GROUP (n=54)	MEANS FOR: CONTROL GROUP (n=36)	P-VALUE
V12	16.70	17.06	0.62
V13	16.15	16.56	0.52
V14	5.85	6.42	0.19
V15	11.04	11.89	0.26
V16	8.41	8.92	0.35
V17	38.70	40.03	0.37
V18	19.44	20.81	0.15
V19	58.15	60.83	0.21
V28	10.13	10.06	0.90
V30	38.17	37.47	0.57
V31	20.06	19.31	0.35
V32	35.20	35.58	0.72
V33	93.43	92.36	0.55

* See Appendix 14 for key to variable codes.

In addition the two groups were combined by comparing the vectors of the means of the Experimental with the Control Group. A high p-value resulted from this analysis. A multivariate analysis of variance was used to test for differences between the groups (Morrison 1976 : 170). No difference between the groups was found (p=0.87).

A further comparison of the two group means was done with two additional pre-intervention variables and the results shown in Section 5.2.2. No significant difference was found.

Since the two groups of respondents were matched, the rest of the statistical work could be done.

5.2.1 TESTING OF HYPOTHESIS No.1

Thir hypothesis is:

> As a result of the intervention, there is a shift in the participants' values as measured by the Achievement Motive Questionnaire and the Rotter Locus of Control instrument, on a pre- versus post- administered basis, comparing the Experimental with the Control Groups.

The differences in values between the two group means for the Experimental and Control Groups were calculated for the variable concerned, to quantify the effect of the intervention. As an example, for the "persistence" variable, V12 the (pre-intervention) and V20 (the post-intervention) scores were compared. The difference between the mean scores of these two variables was calculated. If the difference between the values given is significant, comparing the Experimental and Control groups, it can be said that the intervention caused the difference.

In Table 5.2. the mean differences of each variable are given, together with the p-value for the test.

Of the five dimensions (or factors which make up the Achievement Motive Questionnaire, ADIF to EDIF - "Persistance to Personal Causation"), the only mean difference which is higher in the Control Group is the EDIF value. The other four factors have values which are higher in the Experimental Group. A significantly different increase is given in "Persistence" (ADIF : $p<0.05$). On the 10% level "Action Orientation" (CDIF $p=0.10$) is also of significance as is "Goal Directedness" (AADIF). This is explained by the differences in ADIF and CDIF since "Goal Directedness" is the sum of "Persistence" "Time Awareness" and "Action Orientation".

Table 5.2

DIFFERENCES BETWEEN PRE- AND POST- INTERVENTION VALUES FOR THE AMQ, ROTTER AND KAI TESTS: COMPARISON OF EXPERIMENTAL AND CONTROL GROUPS

VARIABLE		GROUP MEANS FOR: EXPERIMENTAL (n=99)	CONTROL (n=87)	P-VALUE
ADIF	(V20-V12)	0.697	-0.195	0.039#
BDIF	(V21-V13)	0.333	-0.012	0.410
CDIF	(V22-V14)	0.114	-0.058	0.100##
DDIF	(V23-V15)	0.647	0.149	0.298
EDIF	(V24-V16)	0.212	0.437	0.525
AADIF	(V25-V17)	1.444	-0.264	0.049#
BBDIF	(V26-V18)	0.859	0.632	0.716
AMDIF	(V27-V19)	2.202	0.345	0.124
ROTDIF	(V29-V28)	-0.182	-0.161	0.960
SODIF*	(V34-V30)	-0.462	1.762	0.22
EFODIF*	(V35-V31)	0.231	-0.286	0.71
RDIF*	(V36-V32)	-0.103	0.095	0.99
KAIDIF*	(V37-V33)	-0.333	1.381	0.51

* For the analysis using the KAI results n=39 (Experimental) and n=21 (Control).
\# Significant at the 5% level.
Significant at the 10% level.

In Personal Excellence (and its dimensions "Aspiration Level" and "Personal Causation") the difference between the Experimental and Control Group values is not significant. The relatively low p-value of 0.124 for the Achievement Motive Score indicates that there might be a small difference.

There is no significant difference between the two groups on the Rotter Locus of Control Scale. This is also the case for the KAI score and its three factors.

As far as the values for the Achievement Motive Questionnaire are concerned, a shift in the participants' values has taken place as a result of the intervention, some of these value shifts being of significance as indicated. The hypothesis is accepted, as far as the Achievement Motive Questionnaire value shifts are concerned.

The Rotter test did not show any shift of values on a pre- and post-intervention basis. The null hypothesis is accepted and the hypothesis rejected, when comparing the Experimental with the Control Group, on a shift in the locus of control of participants in the intervention compared with those who did not participate. (However see Section 5.3.9)

5.2.2 TESTING OF HYPOTHESIS No.2

This hypothesis is:

As a result of the intervention, there is an increase in business knowledge in the Experimental Group relative to the Control Group.

A business knowledge test was not administered at the pre-intervention stage. Measures that were available and could be used to illustrate a possible equality with regards to pre-orientation business knowledge are matriculation results (V41) and percentage score in a numeracy test (V40).

For these two variables, means were calculated and compared for the two groups by way of a multi-variate analysis of variance. For the individual variables, the means and p-values calculated are:

		Group means		
Variable	Description	Experimental (n=80)	Control (n=66)	P-value
V40	Numeracy Test	55.875	51.818	0.24
V41	Matriculation Results.	22.513	22.030	0.45

With respect to these two variables, the groups were equal prior to the intervention (This confirms the finding in Section 5.1.1).

If V40 and V41 can be taken as a good indication of the equality of the groups before the intervention, it is reasonable to assume that equality also existed with respect to business knowledge for both the Experimental and Control participants.

A comparison of the means of the two research groups with respect to business knowledge, post-intervention, was carried out. A one-way analysis of variance (ANOVA) was done. The following means were calculated:

		Group means		
Variable	Description	Experimental	Control	P-Value
V38	Business	(n=102)	(n=68)	
	Knowledge (post-intervention)	29.63	1.32	0.0001

There is a highly significant difference between the business knowledge of the two groups. Hypothesis No.2 may be accepted. That is:

As a result of the intervention, there is an increase

in business knowledge in the Experimental Group compared with the Control.

5.2.3 TESTING OF HYPOTHESIS No.3

This hypothesis is:
As a result of the intervention, the participants in the Experimental Group who set up their own businesses demonstrated that they were aware of the elements involved in forming and running their own independent businesses. The Control Group participants who had their own concerns did not display the same understanding.

Field investigations were carried out on the respondents who claimed they had their own businesses (page 218). Twenty real businesses were discovered in a post-intervention investigation which included on-site field visits. Table 5.3 gives the ownership distribution details.

The two-sample hypothesis test for the comparison of independent ratios was carried out for both groups. They differ significantly at the 5% level ($p=0.013$). Hypothesis No.3 may be accepted.

Table 5.3

DISTRIBUTION OF BUSINESS OWNERSHIP

GROUP	NUMBER OF BUSINESSES REPORTED	NUMBER OF BUSINESSES FOUND	RATIO
	(1)	(2)	(2/1)
Experimental	14	12	0.86
Control	17	8	0.47

5.3 STUDY OF THE RELATIONSHIP BETWEEN INDEPENDENT AND OTHER KEY DEPENDENT VARIABLES

5.3.1. CORRELATION OF THE ENTREPRENEUR BUSINESS OWNER WITH KEY VARIABLES

An exploratory analysis was done to determine which variables could be related to the variable representing members of the group of 20 owners of their own businesses, 9-11 months post-intervention.

The independent variable used was V51 where:

V51 = 1 : has own business (n=20)

= 0 : does not have own business (n=181).

The first step in the work was to analyse V51 with the 50 other variables to determine possible relationships. The results of the correlation analysis are given in Table 5.4. P-values with respect to the correlations are noted, for 11 variables. No other variable in the data set gave correlations with V51 with p-values lower than 0.10.

The results show that there is a correlation between V51 and V3 (the geographic areas of the schools) and V7 (the schools participating). This relationship is significant

Table 5.4

CORRELATION ANALYSIS: BUSINESS OWNERSHIP (V51) WITH KEY VARIABLES

Variable	Description	Correlation Coeff (r)	P-value
V3	Group 1-4	-0.126	0.076
V7	School	-0.121	0.088
V13	Time awareness (pre)	0.194	0.007
V14	Action orientation (pre)	0.127	0.080
V17	Goal directedness (pre)	0.141	0.051
V21	Time awareness (post)	0.128	0.075
V22	Action orientation (post)	0.135	0.059
V25	Goal directedness (post)	0.138	0.055
V29	Rotter - post	-0.137	0.058
V40	Numeracy test	0.150	0.040
V42	Business ownership	0.377	0.0001

The high correlation between V42 (business ownership as stated in respondent questionnaires post-intervention) and V51 (business ownership confirmed or otherwise with field visits) is due to the two variables measuring similar concepts.

Table 5.5

CROSS-TABULATION OF V42 (BUSINESS FOR OWN ACCOUNT) WITH V51 (BUSINESS OWNERSHIP)

V42	VARIABLE:	VARIABLE: V51		
		(=0)	(=1)	TOTAL
0	Had no business past or present	155	3	158
1	Had business before intervention	13	16	29
2	Had business after intervention	11	1	12
	TOTAL	179	20	199

at the 8% and 9% level respectively.

The high correlation between V42 (business on own account as stated in participant questionnaires post-intervention) and V51 (business ownership confirmed or otherwise with field visits) is due to the two variables measuring similar concepts. This is illustrated in the cross-tabulation given in Table 5.5.

The results for the remaining eight variables are given in Table 5.4. and show significant correlations with V51,(the 20 business owners V51=1) on Time Awareness, Action Orientation and Goal Directedness, on a pre and post-intervention test. Significance at the 8% level is given. Similar significance is shown by the post-intervention Rotter and Numeracy tests with V51=1 correlations.

5.3.2 COMPARISON OF BUSINESS ENTREPRENEURS WITH THE OTHER PARTICIPANTS.

A correlation analysis was done with the eight variables noted above, comparing the means for the 20 participants who had their own businesses, with the 172 who did not and who completed the questionnaires. A multi-variate analysis of variance was carried out on the differences between the means. Table 5.6. gives the results. Table 5.7 shows the results of the post-intervention achievement motivation (V27) and business knowledge (V38) comparisons of the V51 means. No significant difference was shown.

Earlier on in this Chapter the differences on a pre and post intervention basis in the achievement motivation values, the Rotter I-E results and the KAI scales were determined. To evaluate the contribution made by the entrepreneurs in the study, it was decided to carry out a set of analyses using V51=1 and V51=0 variables. The results are noted in Table 5.8.

For the E Factor (Personal Causation) and the Rotter values there are significant differences of the means, at the 7% level.

Table 5.6

ANALYSIS OF THE ENTREPRENEURS IN THE TWO RESEARCH GROUPS COMPARED WITH OTHER RESPONDENTS WHO DO NOT HAVE THEIR OWN BUSINESSES

VARIABLE	DESCRIPTION	MEANS FOR n=20 ENTREPRENEURS	n=172 OTHERS	P-VALUE
V13	Time Awareness (pre)	18.10	16.31	0.007
V14	Action Orientated (pre)	6.95	6.17	0.080
V17	Goal Directedness (pre)	42.40	39.42	0.051
V21	Time Awareness (post)	17.79	16.53	0.075
V22	Action Orientated (post)	7.32	6.41	0.059
V25	Goal Directedness (post)	43.16	40.05	0.055
V29	Rotter Test (post)	8.42	9.82	0.058
V40	Numeracy Test	62.11	51.95	0.040

Table 5.7

BUSINESS OWNERSHIP (V51), ACHIEVEMENT MOTIVATION (V27) & BUSINESS KNOWLEDGE (V38)

VARIABLE	DESCRIPTION	MEANS OF RESPONDENTS V51=1 (n=18)	V51=0 (n=152)	P-VALUE
V27	Post-intervention AMQ	62.68	60.99	0.50
V38	Business Knowledge	15.56	18.63	0.5

Table 5.8

DIFFERENCES BETWEEN PRE- AND POST- INTERVENTION VALUES FOR THE AMQ, ROTTER AND KAI TESTS: COMPARISON OF BUSINESS OWNERS AND THE REMAINDER OF THE PARTICIPANTS.

VARIABLE		MEANS DIFFERENCES FOR: ENTREPRENEUR OWNERS (n=20)	REST OF THE PARTICIPANTS (n=172)	P-VALUE
ADIF	(V20-V12)	0.737	0.228	0.476
BDIF	(V21-V13)	-0.316	0.228	0.431
CDIF	(V22-V14)	0.421	0.168	0.593
DDIF	(V23-V15)	0.474	0.407	0.933
EDIF	(V24-V16)	0.632	0.425	0.068#
AADIF	(V25-V17)	0.842	0.623	0.878
BBDIF	(V25-V18)	-0.158	0.856	0.322
AMDIF	(V27-V19)	0.684	1.407	0.717
ROTDIF	(V29-V28)	-1.26	-0.05	0.066#
SODIF*	(V34-V30)	0.444	0.3	0.970
EFODIF*	(V35-V31)	1.667	0.288	0.290
RDIF*	(V36-V32)	2.222	-0.577	0.237
KAIDIF*	(V37-V33)	1.000	0.068	0.786

* For the analysis using the KAI results n=16 (Owners) and n=114 (Remainder).
\# Significant at the 7% level.

To determine if the Kirton KAI full scale values for the 20 business owners are higher than those for the non-business participants, a comparison of the post-intervention KAI full scale values for the V51=1 and V5=0 groups was carried out. A T-test for the comparison of the means of two independent samples with equal variances is T=0.5242 (p=0.6010). There is no significant difference between V51=1 and V51=0 KAI values. Table 5.9 itemizes the details of the analysis.

A series of cross tabulations were also carried out to determine the distribution of V51=1 (participants with own business) in each geographic area, in schools; with gender, age and extra-curricula activities. The details on this work are given in Appendix 27.

A study of these cross tabulations shows that in the four areas where the participants live, the incidence of own business activities was highest in Vosloorus (Area 2)(18.4%) and Kwa Thema (Area 1)(10.7%) (Appendix 27.1). The two Soweto groups were 8.3% (Area 3) and 3.4% (Area 4) respectively.

Table 5.9

COMPARISON OF BUSINESS OWNERS WITH THE REMAINDER OF PARTICIPANTS: KAI SCORE, POST INTERVENTION (V37)

VARIABLE	SAMPLE SIZE	KAI SCORES			
	(n)	MINIMUM	MAXIMUM	MEAN	STD DEVIATION
V51 = 1 (business owners)	16	80.00	108.00	94.63	7.544
V51 = 0 (remainder of participants)	114	72.00	118.00	93.51	8.031

DIFFERENCE BETWEEN THE MEANS		
		P-VALUE
V51 = 1 (n = 16)	V51 = 0 (n = 114)	
94.625	93.509	0.601

No significant difference between means.

Vosloorus Secondary School (No. 6) produced six entrepreneurs out of the 27 attending the intervention from this school. Seven schools out of seventeen represented in the research did not have a single entrepreneur who had set up a business for themselves, 9-11 months after the intervention (Appendix 27.5). This could be explained by the poor motivation of the students in these schools (low teaching standards, frequent distuptions in schooling).

In the analysis of the gender distribution (Appendix 27.2) males were more involved in setting up their own business than females (11.3% versus 8.4%). In the Experimental and Control Group as a whole 10.0% or 20 entrepreneurs were found. Of the 181 remaining respondents, the male:female representation was comparable (94 or 51.9% to 87 or 48.1%).

The age group distribution of entrepreneurs (Appendix 27.3) favoured the youngest and the oldest (<18 yrs. 12.9% : > 21 yrs.12.7%, compared with 5.4% and 9.8% for the 19 and 20 year old groups).

A higher proportion of individuals who were involved in extra-curricula activities, were classified as not having started their own businesses, (Appendix 27.4) contrary to

expectation. The proportion of entrepreneurs in the "No" group was 14.8% whilst 8.2% was found in the larger "Yes" group, which represented 73% of the 201 respondents in this research study.

5.3.3 RELATIONSHIP BETWEEN ACHIEVEMENT MOTIVATION (AM) VALUES (PRE AND POST-INTERVENTION) AND KEY VARIABLES.

The post-intervention less the pre-intervention AM values AMDIF, has no significant relationship with gender (V5), achievement (V9) or business knowledge (V38). The p-values are given in Table 5.10.

Note: The continuous variable Business Knowledge (V38) was put into an ordinal format to compare this independent variable with AMDIF (Appendix 22).

The correlation between AMDIF (V27-V19 post less pre AM values) and Business Knowledge is r=0.0044 which is not significant (p=0.96)

There is a significant difference in the relationship between age (V6) and AMDIF as shown in Table 5.11.

Table 5.10

ACHIEVEMENT MOTIVATION (AMDIF V27-V19) AND KEY VARIABLES

VARIABLES	P-VALUE
Gender (V5)	0.82
Achievement (V9)	0.29
Business Knowledge (V38)	0.96

Table 5.11

ACHIEVEMENT MOTIVATION AND AGE

AGE GROUP	n	MEAN (AMDIF) (V27-V19)	DUNCAN GROUPING	
18 and less	23	5.130	A	
19 years old	46	1.50	A	B
21 years and older	51	1.00	A	B
20 years old	38	0.526		B

A significant difference exists between the 18 year and younger and the 20 year old groups.

In the Duncan grouping technique, the means with the same letter do not differ significantly (Duncan 1957).

5.3.4 RELATIONSHIP BETWEEN POST-INTERVENTION ROTTER SCORE (V29) AND KEY VARIABLES

In this analysis, the post-intervention Rotter score (V29) was used. Relationships between this variable and Gender (V5), Age (V6), Achievement (V9) and Business Knowledge (V38), were investigated (Table 5.12).

There is a highly significant relationship, between the Rotter score and Gender (V5). Examining this further we have (Table 5.13)

Although there was a decrease in the ROTDIF scores of the males, and an increase for the females, the difference between these differences is not significant (p=0.255).

Table 5.12

RELATIONSHIPS BETWEEN ROTTER (POST V29) AND KEY VARIABLES

VARIABLES	P-VALUE
Gender (V5)	0.0001
Age (V6)	0.874
Achievement (V9)	0.145
Business Knowledge (V38)	0.324

Table 5.13

ROTTER AND GENDER DIFFERENCES: PRE AND POST VALUES

n	GENDER (V6)	MEAN DIFFERENCES	CHANGE IN ROTTER SCORE (ROTDIF) (V29-V28) P-VALUE
86	Male:	8.73	-0.33
72	Female:	10.61	0.07

5.3.5 RELATIONSHIP BETWEEN THE EXPERIMENTAL GROUP AND KEY VARIABLES.

The aggregate analyses done in section 5.3.2 and 5.3.3. were repeated. The Experimental Group was taken first for analysis (Table 5.14)

There is a significant relationship between gender and business knowledge with pre-intervention Rotter values. There is also a highly significant relationship with post-intervention Rotter values and gender (at less than the 1% level) and achievement at the 5% level. These relationships are investigated further (Section 5.3.9).

5.3.6 RELATIONSHIP BETWEEN THE CONTROL GROUP AND KEY VARIABLES

These are noted in Table 5.15.

The difference between post and pre-intervention Achievement Motivation values (AMDIF) as a function of age is significant (5% level); pre-intervention Rotter and post-intervention Rotter values as a function of gender are significant at the 5% level. These relationships are investigated further (Section 5.3.9).

Table 5.14

RELATIONSHIP BETWEEN EXPERIMENTAL GROUP AND KEY VARIABLES

VARIABLE:	MEAN DIFFERENCES:	P-VALUE	SIGNIFICANCE
AMDIF (V27-V19)	Gender (V5)	0.60	-
	Age (V6)	0.42	-
	Achievement (V9)	0.23	-
	Business Knowledge (V38)	0.74	-

The relationships are not significant.

PRE-INTERVENTION

VARIABLE:	MEAN DIFFERENCES:	P-VALUE	SIGNIFICANCE
Rotter test (V28)	Gender (V5)	0.01	at 5% level
	Age (V6)	0.50	-
	Achievement (V9)	0.21	-
	Business Knowledge (V38)	0.02	at 5% level

POST-INTERVENTION

VARIABLE:	MEAN DIFFERENCES:	P-VALUE	SIGNIFICANCE
Rotter test (V28)	Gender (V5)	0.0008	very high at 1% level
	Age (V6)	0.176	-
	Achievement (V9)	0.030	at 5% level
	Business Knowledge (V38)	0.074	at 10% level

Table 5.15

RELATIONSHIP BETWEEN CONTROL GROUP AND KEY VARIABLES

VARIABLE	MEAN DIFFERENCES	P-VALUE	SIGNIFICANCE
AMDIF	Gender (V5)	0.41	-
(V27-V19)	Age (V6)	0.03	at 5% level
	Achievement (V9)	0.80	-
	Business Knowledge (V38)	0.79	-

PRE-INTERVENTION

VARIABLE	MEAN DIFFERENCES	P-VALUE	SIGNIFICANCE
Rotter test (V28)	Gender (V5)	0.01	at 5% level
	Age (V6)	0.22	-
	Achievement (V9)	0.42	-
	Business Knowledge (V38)	0.60	-

POST-INTERVENTION

VARIABLE	MEAN DIFFERENCES	P-VALUE	SIGNIFICANCE
Rotter test (V29)	Gender (V5)	0.02	at 5% level
	Age (V6)	0.32	-
	Achievement (V9)	0.86	-
	Business Knowledge (V38)	0.61	-

5.3.7 RELATIONSHIP BETWEEN CAREER INTENTIONS AND KEY VARIABLES

Career aspirations were noted by the respondents during meetings held three to four months after the interventions with the various research groups, including those in the Control.

The various careers specified were grouped together into seven clusters. They are noted in Table 5.16

Noteworthy in the distribution figures is the uncertainty element (20% of the total) and low interest in own and family business (5%), but high interest in a business related career (23.5%).

Appendix 28 gives the details on cross tabulations of career intentions with gender and with age.

A series of multivariate analyses was also carried out.

Table 5.16

CAREER ASPIRATION AND INTEREST DISTRIBUTION

GROUP	CAREER ASPIRATIONS	STATED INTEREST n=200
1	Business related career.	47 (23.5%)
2	Medically related e.g. doctor, nurse, pharmacist, health worker.	29 (14.5%)
3	Education e.g. teacher, trainer.	25 (12.5%)
4	Uncertain.	40 (20%)
5	Own or family business.	10 (5%)
6	Professional e.g. lawyer, accountant.	30 (15%)
7	Community work e.g. social, police, security (not health).	19 (9.5%)

Analytical findings:

The gender cross tabulation (Appendix 28.1) indicates that for medically related careers and community work, the female interest in these options is approximately three times that of their male counterparts. The reverse is true for male aspirations in the case of own or family business involvement and professional careers. There is more uncertainty regarding the future occupational choices in the case of males versus females (ratio 1.9 to 1.0).

In the case of the age groupings the cross tabulation shows that the overall preference is for a career in business (23.5%)(Appendix 28.2). 20% of the respondents are uncertain about what they want to do. This constitutes the second largest answer group in aggregate. The 19 and 20 year olds prefer business as a career over other choices. The majority of those over 20 are uncertain as to what they want to do. Education and business are the next most popular choices. The least prefered of all the options is to own a business or be in the family's business.

The mean age of participants having different career intentions differs significantly (p=0.004) on a

multivariate analysis. The results are represented in Appendix 28.3. The Duncan grouping technique was used. The mean age of the 20.88 years group (with career preference for education) is significantly different from groupings with medical, professional, own business and community work as their choices. The mean of the 20.4 year group is significantly different from that of the own business and community work career preferences.

The cross tabulation between career intentions and pre-intervention extra curricular achievements (V9) shown in Appendix 28.4 indicates that no clear differentiation exists. The total of the "yes" group compared to the "no" group is in the ratio of 2.7:1, the ratio of the business related career "yes" to "no" is approximately 4:1, own or family business ratio is 1:1, whilst community work preference ratio is 8:1, the "yes" group selecting this option, although the total respondents involved in this career intention is only 8.5% of the total.

The relationships between career aspirations and business knowledge (V38) and numeracy (V40) were investigated next. There were no significant differences between the career intention groups and the means for V38 ($p=0.748$) and V40 means ($p=0.417$). The results for these analyses

are given in Appendix 28.5 and 28.6.

In the investigation of career intentions and the post-intervention measurement on the Achievement Motivation scale (V27) the p-value was low ($p<0.194$) with significance at the 20% level. Using the Duncan grouping technique, (Appendix 28.7) the only significant differences are between the Group 1 (Business related career) and 7 (Community work).

There are definite differences between the career groups with respect to the Rotter test on the post-intervention basis (V29). The differences between the means are significant at the 5% level ($p=0.044$). Using the Duncan grouping method it is found that the professional career choice group differs significantly from the medically related career group and own or family business choice. (Appendix 28.8).

There were no significant differences when the means of the differences on the Achievement Motivation (AMDIF) (Pre and post basis (V27-V19)) were analysed, with career intentions ($p=0.86$) for study participants.

5.3.8 RELATIONSHIP BETWEEN OCCUPATIONS AND KEY VARIABLES

The occupations that the participants were engaged in were noted during meetings held three to four months after the interventions were completed.

The various occupations specified were grouped together in five clusters. They are indicated in Table 5.17.

Cross tabulations and multi-variate analyses were performed and these are given in Appendix 25.

Analytical findings

Table 1 in Appendix 25 gives the gender distribution between the various occupations. The males are better represented than the females in the categories "continuing to study" (ratio 1.35:1) "attending tertiary institutions" (1.11:1) and "has a job" (2.17:1). For the "selling to make money" category the ratio was 1:1. In the "doing nothing" occupation the females are more strongly represented than the males (2,57:1). Overall the genders represented in the sample were nearly equal (male:female, 1.11:1).

Table 5.17

OCCUPATION DISTRIBUTION (POST-INTERVENTION)

GROUP	DETAILS	DISTRIBUTION (n)	
1	Continuing to study.	73	(49%)
2	Attending a tertiary level institution.	19	(12%)
3	Doing nothing in particular.	25	(17%)
4	Has job (full or part-time).	19	(13%)
5	Selling goods to make money.	14	(9%)
	Total:	150	

Extra-curricula achievements (V9) and occupations are cross-tabulated in Appendix 25.2. Participants with extra-curricula achievements to their credit are in the majority in each occupational group. The ratios "yes" to "no" in each of the categories are:

1 (2.65:1);

2 (1.11:1);

3 (5.25:1);

4 (2.17:1); and

7 (1.8:1).

It is of interest that participants with achievements to their credit are very well represented in group 3 "doing nothing" category. The total overall ratio of the "yes" group to the "no" is 2.41:1. Achievers are in the majority in groups 2,4 and 7, and over represented in the group 3 occupation.

Appendix 25.3 shows the cross tabulation of Experimental and Control Groups with occupation. In this analysis, the Experimental Group is in the majority in three occupational groups; "continuing to study" (1.21:1); "attending tertiary institutions" (1.71:1) and "has a job" (1.11:1). In selling the ratio is 1:1.

In the third category, "doing nothing" the Experimental and Control are nearly equally represented (0.92:1).

The former is under represented however if the overall representation of the Experimental and Control Groups are considered (ratio 1.17:1).

A series of multi-variate analyses were done. It was found that occupation is not related to differences between the post and pre-intervention scores in the achievement motivation questionnaire (AMDIF:p=0.795) or business knowledge (V38; p=0.419). There is no relationship with the post-intervention AM-score (V27; p=0.212) as well as age (V6;p=0.197). At the 5% level occupation is related to the post-intervention Rotter score (p=0.031).

Appendix 25.4 gives the details on the post-intervention Achievement Motivation scores. There are no significant differences. In Appendix 25.5 the means of the Rotter post-intervention scores are noted. Here Groups 1 and 3 i.e. "continuing to study" and "doing nothing" differ from group 2 "attending tertiary institution"; group 4 "has a job" and group 7 "selling".

In the analysis of the Business Knowledge means as set out in Appendix 25.6, no significant differences between the various groups are found.

When an analysis was done of the mean age of the occupational categories, (Appendix 25.7) no significant differences were found between the groups. Group 1 "continuing to study" is on average younger than the other groups whilst occupation 4, "community work" is an older and hence more mature category.

The means of the differences between the Achievement Motivation on a pre- and post-intervention basis, noted in Appendix 25.8, indicate no significant differences. The largest positive difference measured by the instrument is shown by the nineteen respondents in the "has a job" category, whilst the "attending tertiary institution" showed a negative measurement.

5.3.9 RELATIONSHIP BETWEEN GENDER AND KEY VARIABLES

A cross tabulation was done to determine the distribution of the sexes between the Experimental and Control Groups (Table 5.18).

Using the Experimental Group's results for the Achievement Motivation Questionnaire, an analysis was done to determine whether males and females reacted differently to the intervention.

Table 5.18

GENDER DISTRIBUTION

	EXPERIMENTAL	CONTROL	TOTAL
Male	54	52	106
Female	51	44	95
Totals	105	96	201

Table 5.19

ANALYSES OF VARIANCE: MEAN DIFFERENCES MALE & FEMALE (EXPERIMENTAL GROUP): ACHIEVEMENT MOTIVE VALUES

VARIABLE	DESCRIPTION	GROUP MEANS MALE	FEMALE	P-VALUE
ADIF	Persistence	0.634	0.700	0.992
BDIF	Time Awareness	0.327	0.340	0.981
CDIF	Action Orientation	0.735	0.100	0.111
DDIF	Aspiration Level	0.592	0.700	0.856
EDIF	Personal Causation	0.286	1.140	0.786
AADIF	Goal Directedness	1.755	0.140	0.603
BBDIF	Personal Excellence	0.878	0.840	0.965
AMDIF	Achievement Motivation	2.633	1.780	0.595

The means for each factor were calculated and the differences between the post-intervention scores were compared for each of the sexes. The results of the multi-variate analyses are given in Table 5.19.

No significant differences were found at the 10% level or less between the sexes on all the factors analysed. In the "Action Orientation" (CDIF) the p-value was 0.111. Therefore at the 12% level there was a significant difference between the males and females, on factor CDIF, on the AMQ scores.

On the "Goal Directedness" (factor AADIF), the males had a slightly higher increase caused by the factor EDIF "Personal Causation" a component of AADIF, as well as on "Personal Excellence". There was also a small increase in factor BBDIF, which accounts for the slightly higher score for the males over the females in the "Achievement Motivation" AMDIF, of which BBDIF is one of the components. These increases are not significant, however.

An examination was done next on the male and female relationships with respect to the variances of the means for the Rotter tests (V28 and V29) as well as Business Knowledge (V38) and Achievement (V9).

These investigations were done for the Experimental and Control Groups. The results for the multi-variate analyses are given in Table 5.20.

In sections 5.3.4., 5.3.5. and 5.3.7., above, significant gender differences were found on a number of variables. This section of the analyses was done to explore further the relationships found in the previous sections. It must be stressed, however, that the analyses carried out in this section are not the same as those done previously. A slightly different number of respondents could be included in an individual comparison, resulting in slightly changed p-values. These are however of the same order as before.

From the results of the analyses, it was found that the female respondents scored significantly higher on the pre- and post-intervention Rotter tests, in both the Experimental and Control Groups. This is in line with the findings in Section 5.2.4. The male is more internally orientated, compared with the female, in locus-of-control terms.

In the Experimental Group, the males score significantly higher on the Business Knowledge test than the females. There is no such difference in the Control Group.

Table 5.20

GENDER DIFFERENCES IN EXPERIMENTAL AND CONTROL GROUPS: RELATIONSHIP WITH KEY VARIABLES

A: EXPERIMENTAL GROUP MEANS

VARIABLE	MALE	FEMALE	P-VALUE	SIGNIFICANT DIFFERENCE
Pre-intervention Rotter (V28)	9.25	10.38	0.0334	Yes, at 5% level
Post-intervention Rotter (V29)	8.62	10.49	0.0010	Yes, at 1% level
Business knowledge (V38)	33.63	25.53	0.0056	Yes, at 5% level
Achievement (V9)	1.704	1.784		No
ROTDIF - Rotter difference (V29-V28)	-0.592	0.220		Yes, at 15% level

B: CONTROL GROUP MEANS

VARIABLE	MALE	FEMALE	P-VALUE	SIGNIFICANT DIFFERENCE
Pre-intervention Rotter (V28)	8.58	11.10	0.0004	Yes, at 0.05% level
Post-intervention Rotter (V29)	8.92	10.90	0.0026	Yes, at 1% level
Business knowledge (V38)	1.282	1.379	0.8836	No
Achievement (V9)	1.731	1.705	0.7787	No
ROTDIF - Rotter difference (V29-V28)	-0.104	-0.231	0.8296	No

With respect to Achievement (V9) there are no differences of note in either group.

At the 15% level (p=0.146) there is a significant difference in the gain on the Rotter test between male and female, but in the Experimental Group only. The effect of the intervention on the male group was to increase their internality (ROTDIF) in locus-of-control terms. This did not occur with the female participants, the intervention decreasing their internality, contrary to expectations of the outcomes of the intervention. As a result of the above analyses a further hypothesis can be formulated.

Hypothesis No. 4 is:

As a result of the intervention, the male participants in the Experimental Group benefited to a greater extent than the females in the same group, by an increase in their locus-of-control internality and an increase in business knowledge. The hypothesis is accepted.

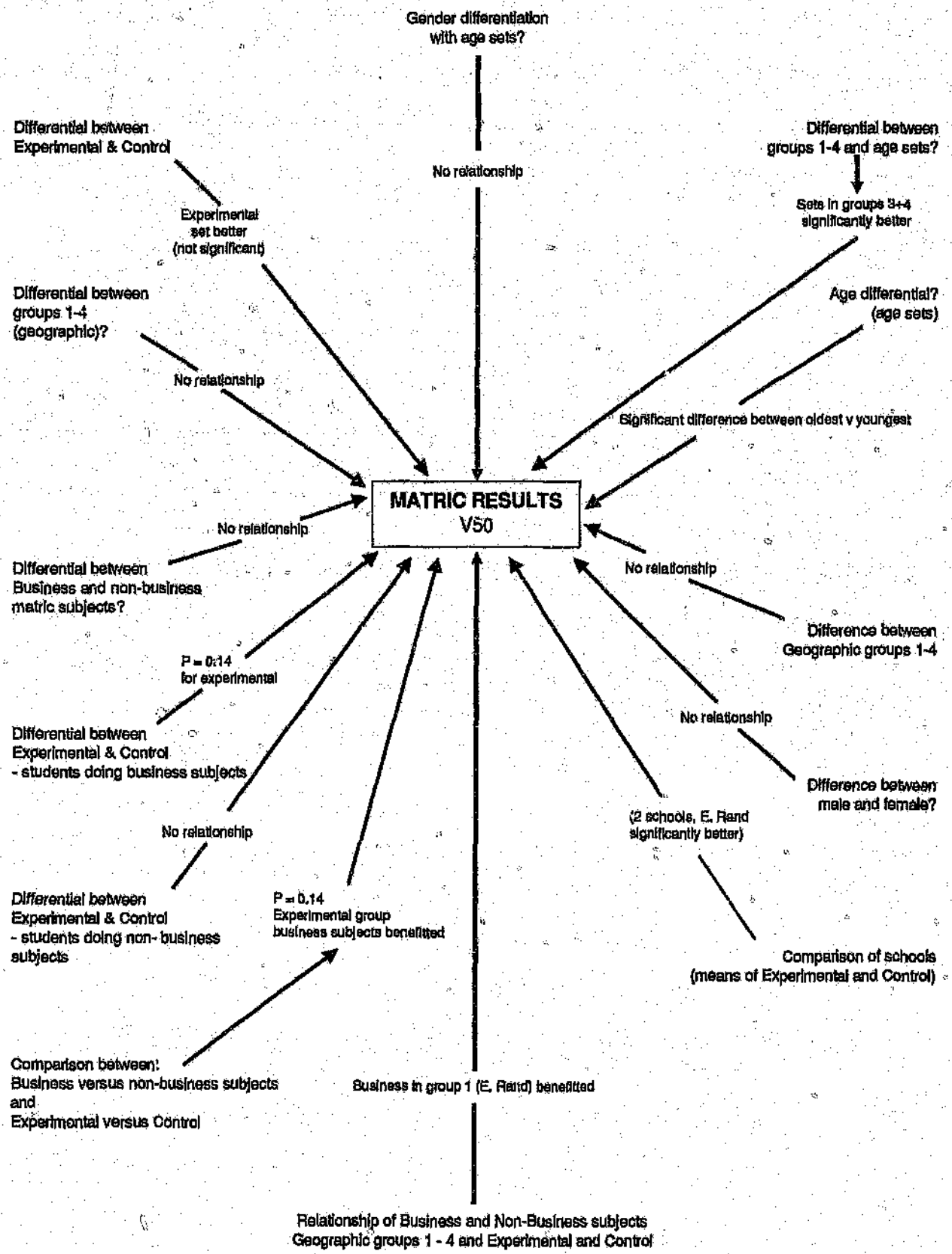
5.4 STUDY OF THE MATRICULATION RESULTS AND THE IMPACT OF THE INTERVENTION

From the author's experience of the Junior Achievement programme over 12 years, and from reports received from teachers and parents of students who have been participants, an increase in self-confidence, goal directedness and general motivation occurs in the achievers (students) attending the JA programme. During a post-intervention gathering of teachers from Kwa-Thema several of those teaching students from the Experimental Group (No.1) mentioned that their pupils had grown in confidence and motivation. These students could be picked out from other class members as a result of their increased participation and dedication to their studies compared with the rest of the class, their teachers' volunteered.

It was decided to investigate if there were relationships between the variables which might positively effect the Experimental Groups' attitudes towards the matriculation examination and which could have led to enhanced performance. A comparison to the Control Group candidates who had not been exposed to the running of their own micro business, and the educational inputs received during the intervertion, may indicate the benefits of the intervention.

Figure 5.1

RESULTS OF MATRICULATION EXAMINATIONS AND WITH KEY VARIABLES



In the initial work, a multivariate analysis of variance (MANOVA) was done to determine if different levels of the stated variables contribute to differences in the matriculation results.

The Key variables analysed in this section, with matriculation results (V50) as the dependent variable were:

(V1) Experimental and Control Groups
(V2) The four geographic areas in the study
(V5) Gender
(V6) Ages
(V7) Schools in the study
(V8) Business and non-business subjects studied

The results were also correlated with the continuous variables numeracy (V40), and the difference in the psychological tests, AMDIF and ROTDIF. No significant correlations were found. The details are given in Appendix 26.14.

An analysis to determine the difference between the experimental and control groups' matriculation examination results (V50) was carried out.

The results of this multi-variate analysis of variance

show that the average matriculation results obtained by the Experimental Group was slightly higher than that of the Control Group. No significant difference was found, however. The intervention did not influence the matriculation results to any marked degree, as the comparison of the groups indicated.

A series of analyses was carried out to determine if there was a difference between the four groups from the different geographic areas participating in the research. Since some of the respondents were assigned to an Experimental or a Control Group, eight sets of individuals could be distinguished. Means and standard deviations were calculated and a multi-variate analysis of variance done to test for significant differences. The results of these analyses are shown in Appendix 26.1 and 26.2.

There were no significant differences between the results of the students in the different sets ($p=0.49$). There was no interactive effect between the Experimental or the Control classifications, and the different area groupings ($p=0.88$).

A comparison of the Experimental and Control Groups and an analysis of variance was done for each geographic

area. The means from Appendix 26.1 were compared, and the p-values calculated. Appendix 26.2 gives the results. These do not indicate any significant differences between the Experimental and Control Groups in each area. The p-value for the Kwa Thema (Group 1) was lower than the other research areas (P-value 0.25 versus 0.66-0.81).

Of more specific interest to the research is whether the results of students doing business-related subjects for their matriculation examination fared better than those studying non-business subjects.

Appendix 26.3 shows the average mean and standard deviations of the students' analysis. No difference was found between the two groups (p=0.63).

For the students writing business subjects a comparison was made between the Experimental and Control sets. These results are given in Appendix 26.4. A relatively low p-value was given in this analysis (p=0.14). It can be said that at the 15% level, the differences between the Experimental and Control results are significant, the former group obtaining slightly better results in their examinations. Unfortunately the sample size in this analysis was small (Experimental n=26 and Control n=30).

No significant difference was found with the repeat of this analysis with "non business subjects" students (p=0.73). Appendix 26.5 gives the details. Sample sizes were larger for this calculation (Experimental n=54 and Control n=42). A further analysis was done and the results are shown in Appendix 26.6. A comparison of the differences in the means of the Experimental and the Control Groups, comparing the matriculation results for the students doing business subjects and those doing non-business subjects. A low p-value was obtained for the difference between the two study groups and the business subject matriculants (p=0.14). A 15% significance is an indication of the benefit of the intervention on the Experimental Group's results, conpared with the Control.

The effect of the matriculation subjects sat for the final examinations by the participating students on a geographic area basis, and a comparison of the Experimental and Control Groups was carried out. The results are given in Appendix 26.7. This multi-variate analysis showed that the students in the Experimental Group in Area 1 (Kwa Thema) stu business subjects performed significantly better than the Control Group at the 5% level. No other differences were significant. However, from the results there is an indication that the

students who attended the intervention did perform better than the Control Groups, in five out of the seven sets analysed, regardless of whether business or non-business subjects were sat.

An analysis of variance was done to test for differences between the average results of students from different schools. The average results for the 16 schools are given in Appendix 26.8. From this it may be deduced that the schools differ with respect to the mean results of their students included in the sample. School 14 differed significantly from schools 1,6,15 and 16, and school 1 from schools 3,12 and 14.

It was decided that a series of analyses should be done to determine what relationships existed between the male and female student groups, with respect to their matriculation results (Appendix 26.9). Of the 152 respondents for which data is available, no significant difference was found between the genders.

The analysis was repeated for each geographic area, comparing the gender once again. Appendix 26.10 gives the details. There are no significant differences on an area by area basis.

The final set of analyses was done to determine if age had an effect on the year-end examination results.

A study was done with the four age groups used in the rest of the research analyses i.e. 18 years or less (1); 19 years (2); 20 years (3) and 21 or more (4). The means of the different age groups, using the Duncan analysis technique is shown in Appendix 26.11. There is a significant difference between the results of group (2) and groups (1) and (4).

The results of the four age groups were taken on an area by area basis and analysed. Appendix 26.12 gives the results of these investigations.

For areas 1 and 2 (Kwa Thema and Vosloorus) the means are not significantly different (p=0.46 in each case). For the area 3 (Soweto 1) results, there are significant differences between age groups 2 and 4. For area 4 (Soweto 2), significant differences were also found between age groups 1 and 2.

In a study of the gender differentiation in the matriculation results, as shown in Appendix 26.13, there is no significance between the means of the age groups, and males or females.

CHAPTER 6 : DISCUSSIONS OF RESULTS

6.1 SUMMARY OF RESEARCH FINDINGS

The four research questions were answered, the hypotheses were supported. Shifts in the values of the personality factors as measured by the Achievement Motive Questionnaire (AMQ) did occur, although those values given by the Rotter Locus of Control (I-E) instrument did not. These shifts were experienced by the Experimental Group, as a result of the intervention.

A very significant increase in business knowledge occurred between the Experimental and Control Group as a result of the intervention. It was also found that those participants who had set-up their own business in the Experimental Group appreciated the elements making up a small business. Those entrepreneurs in the Control Group differed significantly from those in the Experimental Group in this regard.

The findings on the differences between males and females in the Experimental Group, on a pre- and post-intervention measurement using the Rotter Locus of Control measurement, were significant. Males in the intervention are more internally orientated than females.