

# **Entrepreneurship Education in Developing Countries: Evaluation of the Start and Improve Your Business Program in Botswana**

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## Abstract

Start and Improve Your Business (SIYB) is a global entrepreneurial training program created, sponsored, and disseminated by the International Labour Organization. SIYB is arguably the world's largest skills enhancement program for entrepreneurs. SIYB has been in operation since the early 1970s and currently operates in almost 80 countries. In the decade to 2002, more than 100,000 entrepreneurs, thousands of trainers and hundreds of small-enterprise development organizations around the world have participated in the program (Samuelsen 2003). Surprisingly for an education program of this magnitude and potential global importance, there has been relatively little program evaluation performed. What evaluation has been conducted has been unsystematic, non-quantitative and unsatisfactory.

Meanwhile, in the nation of Botswana, since the mid seventies, there has been a huge growth in programs devoted to the training of small and medium entrepreneurs. The SIYB program has formed a significant component of this entrepreneurial training effort in Botswana (SIYB 1996). Since its introduction in 1983, the SIYB program has only been evaluated once (Samuelson 1993). The methods used failed to provide a satisfactory evaluation of the program. So, in Botswana, the world's largest entrepreneurial training program continues to run in the absence of any knowledge concerning its efficacy.

Furthermore, the program's curriculum does not include vital components of entrepreneurship, namely: opportunity evaluation, self-efficacy, innovation, and competitiveness. The objective of this study i.e. the study for this dissertation was to fill this gap in our knowledge; and this was achieved by investigating the impact of the Start and Improve Your Business (SIYB) training programme in Botswana.

To meet the objectives of this dissertation, two fundamental questions were addressed:

- 1) What constitutes an appropriate theory of entrepreneurship education relevant to the context of developing (as distinct from developed) countries?
- 2) How efficacious (in both theory and practice) is education provided by the largest and most widespread entrepreneurship education program currently running in developing countries?

Following these, other specific questions were addressed, such as:

- 3) Can I posit an 'ideal curriculum model' (ICM) for entrepreneurship education in the developing context?
- 4) What is the best way of evaluating the efficacy of an entrepreneurship education program?
- 5) Can I fit the core elements of entrepreneurial education (in an ICM) into a broader model of entrepreneurial process suitable for evaluation of a representative entrepreneurial education program current in many developing countries?

An extensive entrepreneurship literature review culminated in the development of an 'ideal curriculum model' (ICM) for positing the generic attributes of a contextually relevant entrepreneurship education. This led to the development of an assessable entrepreneurship process and performance (EPP) model embracing the ICM elements in and other relevant performance variables.

Further, a program evaluation of the (SIYB) was undertaken by conducting a formal empirical quantitative program evaluation study on business people who participated in the SIYB training program in Botswana and those who did not. The study consisted of a total of 197 participants (86 program participants and 111 non-participants) who completed questionnaires related to attitudes, support systems, curriculum goals, key entrepreneurship variables, and business performance. Group comparisons were conducted using MANOVAs. The efficacy of the integrated model was tested by determining patterns of correlation to test some specific hypotheses.

The dominant specific aim of the study was to establish if there was a relationship between participation in SIYB training program and business performance. At the broadest but most critical level of assessment, the study revealed that there were no significant differences on a composite measure of business performance between people who had done the SIYB training and people who had not. Pearson  $r$  correlations indicated that business performance was not correlated with any of the variables in the model. This lack of any significant correlation suggests that none of the variables measured in this study significantly influences or predicts the measure of business performance in Botswana.

A series of independent groups MANOVAs found some overall significant differences between SIYB program participants and other groups. Follow-up tests were conducted to examine the nature of the differences between groups. More specifically, planned contrasts were conducted on these variables (problem-solving and opportunity evaluation) for the SIYB training group and the non-SIYB control group. The results of planned contrasts revealed that, as originally indicated, participants who had not done training reported significantly lower levels of opportunity evaluation skills than those who had done the training. The results also indicated that people who had done the SIYB training exhibited more problem-solving skills than those who did not do training. However, there was no evidence to link these differences to the training itself. SIYB participants may have possessed these skills before joining the program.

The study has both theoretical and practical implications.

On the theoretical side, the study proposed ‘an ideal curriculum model’ (ICM) for entrepreneurship education and produced a testable model of entrepreneurial performance, placing educational variables in the context of non-educational variables. Since no similar or comparable models were found in the literature, these models contribute significantly to theory. The conceptual model — which was developed and empirically tested — emphasizes the role of key educational variables from the ICM. It appears robust and insightful in identifying the drivers of entrepreneurial and business

performance. This insight provides opportunities for future researchers to replicate, extend, and modify the model to suit their specific research contexts and circumstances.

On the practical side, education policy makers simply cannot ignore my core finding. There is scarcely any support for any efficacy of any part of the SIYB education program. So, overall, given the very small, largely insignificant differences between SIYB participants and other groups, the results demonstrate that SIYB is an ineffective program in Botswana, and thus it is likely that the program is of limited appropriateness or relevance anywhere in the developing world.

The findings from the study reported in this thesis highlight the danger of assuming that training approaches for entrepreneurship in developing countries need merely make minor adjustments to what is currently provided in the developed world. The program as it exists should cease operations and be replaced by a program that embodies many of the findings discovered in this research.

# Dedication

In memory of my beloved late father, Reverend Solomon Kgotlayame Moremong and my beloved late husband, Christopher Nganunu. I draw strength from the belief that they both would be proud of my journey.

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Though there usually turns out to be only one name on the cover of a thesis, every thesis is a collaborative effort, and that is monumentally true for this one. Writing this thesis has been an incredible, sometimes difficult and seemingly never-ending task. It must be noted, however, that the many challenges I have faced would have been virtually insurmountable without the assistance and support of several people.

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## **Declaration**

This thesis does not contain any material that has been accepted to the award of any other degree or diploma in any other university or other institutions. To the best of my knowledge, the thesis contains no previously published material or written by any other person except where due reference is made in the text of the thesis.

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Topoyame Efitlhile Moremong-Nganunu

# Table of Contents

<i>Abstract</i> .....	<i>ii</i>
<i>Dedication</i> .....	<i>vi</i>
<i>Acknowledgements</i> .....	<i>vii</i>
<i>Declaration</i> .....	<i>x</i>
<i>List of Figures</i> .....	<i>xvii</i>
<i>List of Tables</i> .....	<i>xviii</i>
<i>Glossary</i> .....	<i>xix</i>
<b><i>Chapter One: Introduction and overview</i></b> .....	<b><i>1</i></b>
Chapter abstract.....	<b>1</b>
<b>1.2 The importance of entrepreneurship education in developing countries</b> .....	<b>1</b>
<b>1.3 The current study</b> .....	<b>3</b>
<b>1.4 Origins, motives and focal concerns</b> .....	<b>6</b>
<b>1.5 Research design: a question-centred overview</b> .....	<b>8</b>
<b>1.6 Format and arrangement of the chapters</b> .....	<b>11</b>
<b>1.7 Chapter summary</b> .....	<b>12</b>
<b><i>Chapter Two: The Botswana context</i></b> .....	<b><i>14</i></b>
<b>2.1 Chapter abstract</b> .....	<b>14</b>
<b>2.2 Botswana: an excellent environment for evaluating entrepreneurship education in developing nations</b> .....	<b>14</b>
2.2.1 Reasons for choosing Botswana as a study area.....	14
2.2.2 Botswana fundamentals.....	15
2.2.3 Historical context.....	16
2.2.4 Ethnographic factors.....	19
2.2.5 Climate as a factor in production and capital formation.....	21
2.2.6 Settlement patterns.....	23
2.2.7 Political and economic evolution of environment for entrepreneurship.....	25

2.2.8 General commercial and industrial development strategy .....	25
2.2.9 Current economic situation .....	31
<b>2.3 Development of entrepreneurship in Botswana.....</b>	<b>31</b>
2.3.1 Botswana Enterprise Development Unit (BEDU) .....	32
2.3.2 The Business Advisory Services/Partnership for Productivity .....	35
2.3.3. Policies, programs, and institutions intended to assist Batswana entrepreneurs.....	37
<b>2.4 A descriptive analysis of the Start and Improve Your Business Program (SIYB) as an entrepreneurial education program: a global perspective .....</b>	<b>39</b>
2.4.1 Approach of the section .....	39
2.4.2 The Start and Improve Your Business Program .....	39
<b>2.5 The data collection area .....</b>	<b>46</b>
<b>2.6 Chapter summary .....</b>	<b>52</b>
<b><i>Chapter Three: Teaching entrepreneurship in developing countries – review and evaluation of relevant literature .....</i></b>	<b>53</b>
<b>3.1 Chapter abstract.....</b>	<b>53</b>
<b>3.2 Purpose, approach, selection and presentation.....</b>	<b>53</b>
<b>3.3 Defining and distinguishing key terms .....</b>	<b>54</b>
3.3.1 Entrepreneurship.....	54
3.3.2 Enterprise.....	58
3.3.3 Education .....	59
3.3.4 Distinguishing enterprise education and entrepreneurship education .....	60
3.3.5 Entrepreneurship education .....	62
3.3.6 Evaluation of entrepreneurship education.....	65
<b>3.4. Theories of learning and education.....</b>	<b>67</b>
3.4.1 Three broad approaches .....	67
3.4.2 The approach adopted: Vygotsky’s sociocultural theory .....	71
3.4.3 Searching for the ideal entrepreneurship curriculum .....	73
<b>3.5 The ‘giants’ revisited: distilling entrepreneurship education curriculum principles from seminal entrepreneurship scholars .....</b>	<b>77</b>
3.5.1 Cantillon's curriculum.....	77
3.5.2 Say’s curriculum .....	78
3.5.3 Weber’s curriculum .....	80

3.5.4 Schumpeter's curriculum.....	80
3.5.5 Knight's curriculum.....	82
3.5.6 McClelland's curriculum.....	83
3.5.7 Gartner's curriculum.....	85
3.5.8 Penrose's curriculum.....	87
3.5.9 Shane and Venkataraman's curriculum.....	88
3.5.10 Emergent key concepts of an ideal entrepreneurship education curriculum.....	90
3.5.11 An Ideal Curriculum Model (ICM) for entrepreneurship education.....	92
<b>3.6 Distinguishing how to teach from what is taught: pedagogical issues in entrepreneurship education.....</b>	<b>94</b>
3.6.1 Experience-based learning.....	95
3.6.2 The instructor as facilitator and entrepreneur.....	97
3.6.3 Flexible instruction.....	98
3.6.4 Bringing prior knowledge, experience and context into the mix.....	98
<b>3.7 A derived theoretical framework: a model for evaluating any entrepreneurship education program.....</b>	<b>99</b>
3.7.1 Education in context: moving from the contents of an ideal curriculum to a model of education's role in the total entrepreneurial process.....	99
3.7.2 Distilling necessary elements for entrepreneurship education.....	101
3.7.3 A derived conceptual framework: an entrepreneurial process and performance model for evaluating any entrepreneurship education program.....	103
3.7.4 Level one.....	105
3.7.5 Level two.....	108
3.7.6 Level three.....	109
3.7.7 Level four: Performance measurements.....	114
<b>3.8 Entrepreneurship Performance Process: A derived theoretical framework for evaluating entrepreneurship education program in developing countries.....</b>	<b>116</b>
3.8.1 Family support.....	119
3.8.2 Institutional support.....	120
3.8.3 Reconciling business and family.....	121
3.8.4 Adaptability to business needs.....	123
<b>3.9 Comparing the SIYB curriculum to the EPP.....</b>	<b>123</b>
<b>3.10 Chapter summary.....</b>	<b>125</b>
<b><i>Chapter Four: Program evaluation technique and application.....</i></b>	<b><i>128</i></b>

<b>4.1 Chapter abstract.....</b>	<b>128</b>
<b>4.2 ‘Evaluation’ and ‘program evaluation’: definition and approaches .....</b>	<b>129</b>
<b>4.3 Program evaluation process.....</b>	<b>131</b>
4.3.1 Needs assessment.....	131
4.3.2 Assessing program theory.....	132
4.3.3 Monitoring program process and performance.....	133
<b>4.4 Indices of program performance.....</b>	<b>134</b>
4.4.1 The Kirkpatrick model.....	135
4.4.2 The "Integrated evaluation model" .....	141
4.4.3 Other approaches to evaluation of training .....	143
<b>4.5 Evaluation of entrepreneurial training programs.....</b>	<b>146</b>
4.5.1 Problems of evaluating entrepreneurial programs .....	147
<b>4.6 Specific assessment of the SIYB program .....</b>	<b>149</b>
4.6.1 Extant evaluation of the SIYB program globally.....	149
4.6.2 Impact evaluation of SIYB in Vietnam .....	151
4.6.3 Impact evaluation of SIYB program in Southern Africa .....	153
4.6.4 Critique of the SIYB evaluation .....	155
<b>4.7 Extant evaluation of the SIYB program in Botswana .....</b>	<b>156</b>
<b>4.8 Going forward: theoretical underpinnings for appropriate evaluation of SIYB in Botswana .....</b>	<b>158</b>
<b>4.9 Chapter summary.....</b>	<b>160</b>
<b><i>Chapter Five: Research design and methodology of the empirical study.....</i></b>	<b><i>161</i></b>
<b>5.1 Chapter abstract.....</b>	<b>161</b>
<b>5.2 Overall research design.....</b>	<b>161</b>
<b>5.3 Implementing the theoretical model .....</b>	<b>165</b>
5.3.1 From concept to measurement: the model to be tested.....	165
5.3.2 Measurement scales .....	167
5.3.3 Measurement issues, unit(s) of analysis and the survey instrument.....	170
5.3.4. Synthesis: the four tasks of the empirical study.....	175
5.3.5 Specific hypotheses .....	175
<b>5.4 Data collection.....</b>	<b>176</b>

5.4.1 Population, sampling and participant selection.....	176
<b>5.5 Data analysis .....</b>	<b>178</b>
5.5.1 Establishing reliability and validity of constructs.....	178
5.5.2 Comparison of outcome variables by groups.....	183
5.5.3 Structural relationships among outcome variables .....	184
<b>5.6 Chapter summary .....</b>	<b>191</b>
<b><i>Chapter Six: Results.....</i></b>	<b><i>192</i></b>
<b>6.1 Chapter abstract.....</b>	<b>192</b>
<b>6. 2 Hypotheses testing .....</b>	<b>193</b>
<b>6. 3 Data screening.....</b>	<b>195</b>
<b>6.4 Variable and construct tests .....</b>	<b>198</b>
6.4.1 Testing demographic variables using descriptive analysis and chi square tests .....	198
6.4.3 Construct compatibility: testing measurement item independence and relationships.....	201
<b>6.5 Group comparisons: MANOVA evaluation.....</b>	<b>205</b>
6.5.1 MANOVA procedure .....	205
6.5.2 MANOVA results .....	209
<b>6.6 Efficacy of the integrated model.....</b>	<b>213</b>
6.6.1 Correlation test results .....	213
6.6.1 Patterns of correlation.....	215
6.6.2 The integrated picture: Entrepreneurship performance process (EPP) model estimation.....	219
<b>6.7 Chapter summary.....</b>	<b>221</b>
<b><i>Chapter Seven: Summary and implications of the study.....</i></b>	<b><i>222</i></b>
<b>7.1 Chapter abstract.....</b>	<b>222</b>
<b>7.2 Broad answers to the study’s major questions.....</b>	<b>222</b>
7.2.1 An appropriate theory? .....	223
7.2.2 The efficacy of SIYB.....	223
7.2.3 The four specific research questions.....	225
<b>7.3 Detailed discussion of the testing of the entrepreneurial process and performance (EPP).....</b>	<b>228</b>
7.3.1 Motivation .....	229

7.3.2 Self-efficacy.....	231
7.3.3 Family support.....	234
7.3.4 Institutional support.....	235
7.3.5 Reconciling business and family .....	237
7.3.6 Problem-solving skills .....	237
7.3.7 Product innovation.....	238
7.3.8 Negotiation skills.....	239
7.3.9 Adaptability to business needs.....	239
7.3.10 Competitiveness.....	240
7.3.11 Opportunity evaluation .....	240
<b>7.4 The ‘punch line’ of the empirical study: aggregate program effects .....</b>	<b>241</b>
<b>7.5 Limitations of the study and suggestions for future research .....</b>	<b>242</b>
<b>7.6 High-level, generic implications .....</b>	<b>244</b>
7.6.1 Implications for theory and further research.....	245
7.6.2 Implications for SIYB and the future practice of entrepreneurship education in the developing world.....	246
7.6.3 Implications for entrepreneurs .....	249
7.6.4 Implications for government.....	249
<b>7.7 Conclusion and reflection .....</b>	<b>252</b>
<b><i>References</i>.....</b>	<b>254</b>
<b><i>Appendix A</i> .....</b>	<b>294</b>



# List of Figures

<b>Figure 1.1 Research design map .....</b>	<b>9</b>
<b>Figure 2.1 Map of Botswana .....</b>	<b>50</b>
<b>Figure 3.1 A highly abstract Ideal Curriculum Model for teaching entrepreneurship.....</b>	<b>92</b>
<b>Figure 3.2 A generic entrepreneurial process and performance model (EPP) .....</b>	<b>104</b>
<b>Figure 3.3 An enhanced Entrepreneurship Process and Performance model (EPP).....</b>	<b>118</b>
<b>Figure 5.1: Steps in the research process.....</b>	<b>162</b>
<b>Figure 5.3 Hypothesis for empirical study.....</b>	<b>169</b>
<b>Figure 6.1 Standardised parameter estimates of entrepreneurship performance process model of evaluation: * p&lt;0.05,* p&lt;0.01 .....</b>	<b>220</b>

# List of Tables

Table 2.1: Population of IFS clients by regions .....	48
Table 2.2: Population size of the major villages in Botswana in 2001.....	49
Table 2.3: IFS assisted entrepreneurs in the southern regions by location.....	51
Table 3.1 Two main perspectives of entrepreneurship research.....	56
Table: 3.2 Core entrepreneurship education concepts from selected scholars .....	91
Table 3.3: Identification of entrepreneurial behaviors, attributes, and skills drawn from the literature...	101
Table 3.4 A comparative analysis of the SIYB curriculum and the EPP for developing countries.....	124
Table 5.1 Exploratory and confirmatory factor analysis .....	182
Table 5.2: Summary of fit indices .....	190
Table 6.1: Descriptive statistics of respondents .....	200
Table 6.2 Final Fit Indices for the Entrepreneurship Education Model in developing countries .....	203
Table 6.3 Descriptive Statistics of Training Groups .....	208
Table 6.4.1 Means and standard deviations for internal resource measures.....	209
Table 6.4.2 Means and standard deviations for enabling environment measures .....	210
Table 6.4.4 Means and standard deviation for IYB skills achievement measures .....	212
Table 6.5: Inter-correlations, means, standard deviation, skewness and kurtosis and discriminant validity of main constructs .....	214
Table 6.6: Fixed Path and error coefficients for use in structural model.....	218

# Glossary

<b>Foreign words and acronyms</b>	<b>Definitions</b>
Botswana	A country in southern Africa
Setswana	The main language in Botswana
Motswana	A Botswana national (singular)
Batswana	People of Botswana (Plural)
Bechuana	People of Bechuanaland
Bechuanaland	Botswana before independence
BAS	Business Advisory Services
BEDU	Botswana Enterprise Development Unit
CSO	Central Statistics Office
EPP	EntrepreneurshE EP Entrepreneurship Process and Performance
ICM	Ideal Curriculum Model
IFS	Integrated Field Services
ILO	International Labour Organisation
IYB	Improve Your Business
MANOVA	Multivariate Analysis of the Variance
NGO	Non Government Organisation
NDP	National Development Plan
PCV	Peace Corp Volunteers
PFP	Partnership For Productivity
SIYB	Start and Improve Your Business
SME	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
SYB	Start Your Business
TOMT	Training of Master Trainers
TOT	Training of Trainers
UNESCO	United Nations Educational, Scientific and Cultural Organization

# Chapter One: Introduction and overview

## ***Chapter abstract***

The aim of this chapter is to provide an overview of the following: the objectives and importance of the current study; an introduction to the current study; the origins, motives and focal concerns for the study; the research design map of the study, and the structure of the thesis. The chapter is organized as follows: section 1.2 concerns importance of entrepreneurship education in developing countries, section 1.3 introduces the overall study, and section 1.4 spells out the origins, motives and focal concerns leading to this study. Section 1.5 provides a question-centred overview of the research design. Section 1.6 provides arrangement of the thesis's chapters while section 1.7 provides the chapter summary.

## ***1.2 The importance of entrepreneurship education in developing countries***

Poor economic conditions throughout many African and Developing nations have led to widespread poverty. The contribution of African nations to global production is less than one percent of the world trade (Kotler 2001), and their share in exports of manufactured goods is nearly zero percent (0.0percent) (Kotler 2001). In order to prevent this situation from becoming worse, it is estimated that Africa must achieve economic growth rates in excess of 5 percent per annum (Naude 2000). In its 2004 Human Development Report, the United Nations Commission on the Private Sector and Development asserted that poverty alleviation requires a strong private sector. The private sector is seen as the source of growth, jobs, and opportunities for the poor. Accordingly, there is a clear need for an economic climate that encourages private-sector investment and thus economic growth.

Entrepreneurship is essential to promote and achieve economic growth, development, and the creation of wealth and employment (Nieman 2001). Entrepreneurship is defined as the process by which “opportunities to create future goods and services are

discovered, evaluated and exploited” (Shane & Venkataraman 2000: 218). A focus on developing entrepreneurship in African nations is important for several reasons.

First, entrepreneurship drives innovation and technical change, and therefore generates economic growth (Schumpeter 1934). Second, entrepreneurial action is the process through which supply and demand are equilibrated (Kirzner 1997). Third, entrepreneurship is an important process by which new knowledge is converted into products and services (Shane & Venkataraman 2000). Fourth, entrepreneurship has become an important vocation and we need to understand its role in the development of human and intellectual capital (Zahra & Dess 2001).

The need for entrepreneurship development is particularly important in Botswana, because Botswana faces several additional challenges other than those faced by other developing countries (to its sustained economic growth, including: regular droughts, low rainfall, cattle diseases,; high unemployment,; and an economic over-dependence on diamond mining . Developing entrepreneurship promises to promote increased economic efficiencies, market innovation, jobs creation, and sustainable employments (Shane & Venkataraman 2000).

According to Fayolle (2000: 2) countries with a high level of entrepreneurial activity are those which have the most developed and complete entrepreneurial teaching and training programs. Therefore, teaching entrepreneurial skills represents one powerful means of achieving economic development (Fayolle 2000: 16).

Many initiatives have been proposed to support entrepreneurship and foster the development of small and medium-scale businesses in African countries. The World Bank and the United Nations (UN) have been assisting African countries in implementing various programs and projects to support entrepreneurship since the late 1970s. Despite those efforts, entrepreneurial and management training difficulties still constitute the top challenge facing the continent (United Nations Development Programs 1994).

Entrepreneurship is crucial for any developing nation; therefore, it is important for nations to invest in sound and effective entrepreneurship education programs. If they invest in entrepreneurship programs that are not effective, it could have a negative impact on both effective government and individual citizenship.

### **1.3 The current study**

This study evaluates the impact of the *Start and Improve Your Business* (SIYB) training program in Botswana. SIYB was developed in Sweden in the late 1960s and introduced in developing countries, including Botswana, in the late 1970s. Chapter 2, section 2.4 provides a descriptive analysis of the SIYB program.

Despite the availability of entrepreneurship programs worldwide, doubts continue about the effectiveness of formal entrepreneurship education globally (Salmon, Duffy & Torabishy 2002) and of entrepreneurship education in Botswana in particular. For instance, there is little research available on the Start and Improve Your Business entrepreneurial training program in Botswana. Consequently, little is known about the impact of this program on the business performance and results of its participants. Botswana provides a suitable environment for: (a) evaluating the efficacy of the SIYB program in an African context; and (b) informing on a range of generic issues pertaining to entrepreneurship education in developing countries. The current study aims to examine the efficacy of the SIYB program in Botswana, and thus improve understanding of issues relevant to entrepreneurship education in developing — as distinct from developed — countries. At a more conceptual level, the current study also aims to define the content for an ideal entrepreneurship-education curriculum. Such insight is necessary to inform the development of an ideal curriculum model for developing countries.

To achieve these aims, a pilot questionnaire was designed based on a review of existing literature, to collect data from two main groups of respondents in Botswana: (1)

entrepreneurs who had undertaken SIYB training; and (2) a comparison group of entrepreneurs who had not undergone SIYB training. The research questions evaluated whether entrepreneurs who participated in the SIYB program demonstrated significantly higher business performance than the non-participants.

Based on these findings, a model was developed to identify the important potential components of an entrepreneurial training model for use in an African context. Specifically, this model optimized a range of variables, including several pre-condition variables (e.g., motivation, self-efficacy, family support), and issues of entrepreneurship curriculum (e.g., problem-solving, innovation, negotiation). The effects of these variables on core entrepreneurial abilities (e.g., opportunity evaluation, competitiveness) and business performance (e.g., profit, cash-flow) were evaluated.

The study has both theoretical and practical implications.

On the theoretical side, the study proposed ‘an ideal curriculum model’ (ICM) for entrepreneurship education and produced a testable model of entrepreneurial performance, placing educational variables in the context of non-educational variables. Since no similar or comparable models were found in the literature, these models contribute significantly to theory. The conceptual model — which was developed and empirically tested — emphasizes the role of key educational variables from the ICM. It appears robust and insightful in identifying the drivers of entrepreneurial and business performance. The theoretical contribution arising from the findings include the following: (a) a conceptual model with testable hypotheses that can be replicated in comparable settings (b) The efficacy of the largest entrepreneurial training organization in Botswana and other developing countries was questionable and needs reconsideration, since it did not appear to be effective (c) The study establishes the importance of entrepreneurial attitudes and support systems as critical for entrepreneurial success. The institutional support especially government and financial support were critical in underpinning entrepreneurship (d) The goals set for the curriculum such as enhancing problem solving skills, innovation, negotiation skills and

adaptability are important determinants of effective entrepreneurial training. (e) The findings indicate that central to entrepreneurial education is the ability to identify opportunities and improving competitiveness. (f) The findings suggest that business performance is a function of many factors and only a few were captured in this study. This resulted in a relatively small percentage of the variance in financial performance being explained by the model.

These insights provide opportunities for future researchers to replicate, extend, and modify the model to suit their specific research contexts and circumstances.

On the practical side, education policy makers simply cannot ignore my core finding. Because of profound transformation in the economic and social environment, it should be Botswana's (and developing world) priority to enhance and support the skills of men and women who can envision and develop value-adding innovations. The educational policy makers can no longer rely on the vagaries of good intentions and the weaknesses of inappropriate, imported programs. They need to be better informed when they make decisions regarding entrepreneurial education. The SIYB program should be stopped immediately. This study has demonstrated that this program is a failure and therefore a great waste of money and resources. Policy makers must have the courage and commitment to make the needed changes. Government has a responsibility to redeploy entrepreneurship education resources, and so do educational institutions and trainers who interact with entrepreneurs.

The results of this study are particularly pertinent to the many native Botswana entrepreneurs who over the last few years have taken an increased interest in the status of entrepreneurship in Botswana and have eagerly wanted to succeed but did not know how to go about it. There is a need for entrepreneurs to (a) contribute more directly to curriculum development; (b) be committed to the training programmed well in advance of any training programmed so that they can ask the relevant questions and receive guidance appropriate to their circumstances; (c) engage in the training in ways that meet



their needs and business challenges; (d) insist on a follow-up program to evaluate training effectiveness and any additional training that may be required.

As for SIYB, the development of entrepreneurial training programs requires many more coverage of issues not currently included in their curriculum. These a set of personal skills, attributes, and behaviors that go beyond the purely commercial aspects of entrepreneurship. As noted by Gibb (2004) it is important to move away from the very prevalent, overly narrow paradigm for entrepreneurship that equates it with new-venture creation and the tools to start and run a business. This research has shown that such a program should include both managerial skills and entrepreneurial topics as depicted in the ideal model in chapter 3. This research has further shown that a focus on developing opportunity evaluation skills – the vital skills for assessing the viability of new and innovative initiatives - will be particularly important. Because in Botswana, as in any other country, entrepreneurs are diverse in terms of education, experience, markets, ambition and so on, an appropriately ‘tuned’ training course should take these factors into consideration, rather than over- generalizing and relying on standardized materials.

### ***1.4 Origins, motives and focal concerns***

In my opinion, the program developers (the Swedish Employers' Confederation) who created the SIYB had good intentions and high expectations that their program would enable enterprises in Botswana and other developing countries to experience positive business performance. However, having had personal experience with SIYB, I questioned the effectiveness of the SIYB program, so I conducted quantitative research to find out whether entrepreneurs who had gone through the SIYB program had more success than those who had not gone through the program.

Botswana is one of many countries running SIYB and has been doing so since 1983. Despite widespread use of the SIYB program, there is currently limited rigorous empirical evidence supporting its efficacy. For instance, in Botswana, the efficacy of the SIYB has been evaluated only once — in 1993. Consequently, the suitability of

entrepreneurship training program (the SIYB) developed in Western contexts for developing African nations is currently unknown. This lack of information and perspective drove me to conduct this study.

As a *Motswana* who is passionate about entrepreneurship education and the development of entrepreneurship in Botswana, my particular motivation for conducting this study was the hope that the results — whatever they might be — would contribute to the enhanced development of entrepreneurship education in my home country in particular, and the developing world in general.

The background to the current situation is that, due to the discovery of diamonds and sound macro-economic management, Botswana has undergone a remarkable economic transformation since independence forty-two years ago. However, despite this impressive record of national progress, the government faces serious challenges regarding unemployment, health, poverty, and many other issues. The rate of unemployment is very high, 17 percent according to the official statistics (Central Statistics Report, 2007). University graduates are roaming the streets, unemployed, which is of great concern. Silas and Gabaitiri (2005) put the unemployment rate among University of Botswana graduates at 27 percent. Overall youth unemployment was estimated at 27.4 percent in 2006 (Central Statistics Report 2007). Subsistence agriculture no longer provides the returns it once did for *Batswana*. To feed its 1.7 million population, Botswana is highly dependent on foreign markets for the import of basic goods. An over-dependence on diamonds is one of the major problems facing Botswana. It is commonly said in Botswana that “diamonds are not forever”. There is need for diversification. The list of challenges encountered in Botswana due to lack of a sound entrepreneurship culture is endless.

To help solve the difficulties listed above and other problems, there is a need for *Batswana* to be innovative and competitive, especially in areas outside of the diamond industry. Botswana has an urgent need to create and promote entrepreneurship; hence

the importance of sound and effective entrepreneurship education with an ideal, curriculum that is relevant for her citizens.

### ***1.5 Research design: a question-centred overview***

This section provides the research design map of the entire thesis, which is summarized in figure 1.1.

**Figure 1.1 Research design map**

Research Questions	Research Activities	Research Method (s)		
TWO FUNDAMENTAL QUESTIONS	ACTIVITY SUMMARY	METHOD SUMMARY		
What constitutes an appropriate theory of entrepreneurship education relevant to the context of developing (as distinct from developed) countries?	(1) Derivation of an 'ideal curriculum model' (ICM) for positing the generic attributes of a contextually relevant entrepreneurship education and  (2) Development of an assessable 'entrepreneurship process and performance' (EPP) model embracing ICM elements in association with other relevant performance variables and capable of operationalization for use in performance evaluations of actual	Literature review and evaluation.  Literature review and evaluation and consideration of the technical issues involved in formal, quantitative program evaluation.		
	Four specific Questions			
Q 1	Can I posit an 'ideal curriculum model' (ICM) for conceptualizing entrepreneurship education in the developing country context?	Literature review featuring the extraction of key curriculum items from selected seminal works. Theory evaluation.	Literature review and evaluation. Application of contextualization evidence and logic.	Chapter 3
Q 2	What is the best way of evaluating the efficacy of an entrepreneurship education program?	Selection of the Kirkpatrick approach. Selection of quantitative program evaluation techniques.	Evaluate contending approaches. Review theory and practice of quantitative program evaluation.	Chapter 4

**Specific Questions  
continued**

Q 3	Can I fit the core elements of entrepreneurial education (from the ICM model) into a broader model of entrepreneurial process suitable for evaluation of a representative entrepreneurial education program current in many developing countries?	Literature review and theory evaluation to develop and 'EPP' model: a mode of entrepreneurship process and performance. This EPP model should articulate the relationships between entrepreneurship education construct (as per ICM) and other key elements of entrepreneurial performance.	Literature review and evaluation and consideration of the technical issues involved in formal quantitative program evaluation.	Chapter 3 Chapter 4
Q 4	Is there a currently well-established entrepreneurship education program, operating in several developing countries, which could benefit from scrutiny using the knowledge formulated in answering question 1 to 3, above and whose evaluation could both test the constructs so far developed in the thesis and potentially add to creation of enhanced constructs and understanding?	Describe and discuss the SIYB program.  Evaluate SIYB via an operationization of the EPP model.	Relevant sections of chapter 2 & 4.  Use of selected statistical evaluation techniques including factor analysis, t-test, structural equation modelling, MANOVA.	Chapter 2 & 4 Chapter 5 & 6

## **1.6 Format and arrangement of the chapters**

Chapter 1 provides an overview of the major objectives of the current study; discusses the origins, motives and focal concerns for the study; and provides the research design map of the study as well as the structure of the thesis.

The aim of Chapter 2 is designed to familiarize the reader with the situation of entrepreneurial development in Botswana, to provide the context for the current study. As such, chapter 2 provides a general background on Botswana. This background consists of physical, cultural, political and economic characteristics. The government's initiatives to encourage enterprise among indigenous *Batswana* are also discussed. Chapter 2 also provides a description of the Start and Improve Your Business (SIYB) entrepreneurial training programme which is evaluated in the current study.

Chapter 3 highlights several important theoretical issues and gaps in the literature and develops two models. It provides a review of selected entrepreneurship and education literature that collectively help inform first to the development of the idealized curriculum model (ICM). This chapter also establishes the larger theoretical framework necessary for evaluating an entrepreneurship education program such as the SIYB program. This larger framework is called the entrepreneurial process and performance model (EPP). Here, educational variables are placed in the context of other variables in a network that culminates in business performance. Specific concepts identified in the review were: innovation, motivation, self-efficacy, opportunity evaluation, and competitiveness, amongst others. These constructs are essential elements for entrepreneurship education. Chapter 3 also evaluated the SIYB curriculum against this entrepreneurial curriculum model.

The aim of Chapter 4 is to: (1) review relevant literature on training and entrepreneurship firm performance in countries that offer SIYB training; and (2) critically evaluate the methodological approaches used in SIYB training evaluation studies. It provides a discussion of abstract concepts relevant to evaluating the outcomes

of training and small firm performance, including: evaluation, program evaluation, and training evaluation. Generic training evaluation models are discussed.

Chapter 5 provides the details of the research methodology used to test the hypotheses in the current study. It describes the research design, including the participants, sampling procedures, operationalization of theoretical constructs, and the research materials (e.g., questionnaires) used in the current study. Issues relating to the procedure (e.g., data collection techniques) and data analysis Multivariate Analysis of Variances (MANOVA) and Structural Equation Modelling (SEM) are also discussed.

Chapter 6 presents the findings of the empirical study. This chapter begins with a description of the data screening process, as well as statistics on participants. Measurement models (using one factor congeneric models), which were developed and tested for each of the study constructs, are also described. The chapter also reports the process and results of group comparisons using a series of Multivariate Analysis of Variances (MANOVAs). A Structural Equation Modelling (SEM) analysis is presented subsequently.

Finally, Chapter 7 summarizes the answers discovered to the study's six principal questions and their implications. Key findings from the study are discussed in relation to the specific theory and practice of entrepreneurship education in Botswana and general theoretical and practical aspects of entrepreneurship education throughout the developing world. In short, the chapter summarises the practical implications of the current study, the limitations of the current research, and recommendations for future research.

## **1.7 Chapter summary**

Chapter 1 has provided an overall introduction to the thesis, including:

- a chapter abstract,
- an explanation of the importance of entrepreneurship in developing countries,
- a introduction to the study,

- an explanation of the origins, motives and focal concerns that led to this study,
- the background to the Start and Improve Your Business Program,
- an overview of the research design, and
- a preview of the format and arrangement of the chapters in the thesis.

Chapter 2 presents the context of the study and a general background to Botswana as well as a detailed descriptive analysis of the SIYB program.



# Chapter Two: The Botswana context

## **2.1 Chapter abstract**

The aim of this chapter is to present the context of the study and a general background to Botswana as well as a detailed descriptive analysis of the SIYB program. The chapter is organized as follows: section 2.2 outlines the general background to Botswana, where data were collected for this study. This background gives an overview of certain historical, physical, cultural, political and economic factors which have affected the current situation under study. In particular, there is a focus on the historical background of government's initiatives to encourage enterprise among Indigenous *Batswana*. The purpose of this overview is to familiarise the reader with the contextual situation of entrepreneurial development in Botswana, in preparation for the detailed research which follows in the later chapters. Reasons for choosing Botswana as a study area are provided. Section 2.3 describes the efforts of the Botswana government to develop entrepreneurship. Section 2.4 provides a detailed descriptive analysis of the program which is being evaluated in this study, that is, the *Start and Improve Your Business* (SIYB) entrepreneurial training programme. Section 2.5 provides details on the location(s) where data were collected and section 2.6 provides a chapter summary.

## **2.2 Botswana: an excellent environment for evaluating entrepreneurship education in developing nations**

The existence of quality data on the SIYB program makes Botswana an ideal country in which to conduct a systematic, quantitative program evaluation of SIYB. Hence, a brief background of Botswana is important for us to appreciate the environment which the program operates.

### **2.2.1 Reasons for choosing Botswana as a study area**

Botswana has an excellent system of public administration and public-record-keeping. This applies both at a general level and specifically to the data relevant to the SIYB

program; hence Botswana has been chosen for this study. Botswana is deeply affected by its climatic and ethnographic characteristics. Its fragile economic situation and its proximity to stronger, more developed neighbours is a major constraint on development of Indigenous entrepreneurship. Politically and economically, Botswana has progressed a great deal since independence in 1966. The political situation is stable and her economic development has progressed extremely well.

Since independence, smaller-than-expected numbers of Indigenous *Botswana* entrepreneurs have emerged. Several institutions which provide training for Indigenous entrepreneurs have had limited impact on the entrepreneurial community (Briscoe 1995). Lack of evaluation of entrepreneurial educational programs, including that of the SIYB in Botswana, continues to be a major problem, for instance, the SIYB program in Botswana has been evaluated once since its inception. McMullan et al. (2001) argue that evaluating the effectiveness of entrepreneurial educational/training programs is necessary for several reasons. First, there is an expectation that the net benefits of such programmes should outweigh their costs and risks. Second, training programmes can be expensive in terms of money for sponsors and time for participants. Given that the government of Botswana has several initiatives and agencies set up to foster entrepreneurship among Botswana citizens, the value and effectiveness of these initiatives should be known.

### **2.2.2 Botswana fundamentals**

Botswana is a large republic of 223,000 square miles, situated at the centre of the southern African Plateau. It rests at an altitude of 3,300 feet above sea level and is landlocked. Formerly the Bechuanaland Protectorate, it is bordered by Zambia in the north, Zimbabwe in the east, South Africa in the south and south-east, and Namibia in the west. The climate is continental and semi-arid with a mean annual rain fall of 450cm per annum (Botswana Export Development and Investment Authority 2003). Water is usually scarce. Despite its size, Botswana is one of the most sparsely populated

countries in the world. This is partly a result of the fact that much of Western portion of the country consists of the Kalahari Desert.

Historically, Botswana has been viewed by the British as a barren “native reserve” in between the former Rhodesia and the republic of South Africa. Her principal role in the region has been to support her neighbours’ economic development by providing labor, raw materials and markets for goods and services while she remained underdeveloped due to lack of infrastructure, capital manpower and low technological capacity. As will be shown later in the coming sections, Botswana’s history, physical conditions, and traditional culture, along with the recent developments on the political and economic plans have not until recently encouraged or nurtured for an entrepreneurial class to develop.

### **2.2.3 Historical context**

The historical events which surround Botswana’s history during the last 100 years can be viewed as result of connections between international economics, geo-politics, land-hunger and a determined desire on the part of the *Batswana* to avoid being ruled by the South African white government (Jones-Dube 1884). The participants in the Bechuanaland Protectorate drama were the British government, the major chiefs of the Tswana (Khama, Bathoen & Sebele) and South African interests which wanted access to Botswana’s lands and people for exploitation (Jones-Dube 1884).

Britain became involved in Botswana as a result of two events in the latter half of the nineteenth century. The first was the involvement the meddling of missionaries from the London Missionary Society, the notable Robert Moffat and, later, his son-in-law David Livingston. The second event was the Sand River Convention of 1872, in which England recognized the independence of the Transvaal Boers from the Cape Colony (Sillery 1952).

Regarding the work of the London Missionary Society, the Boers despised the work of the missionaries among the natives and desired to bring it to an end — preferably by

establishing their own control over the *Batswana*. David Livingston vehemently opposed to Boer control of Africans, having witnessed Boers and African relations to the south of Africa. To him, the extension of Boer control threatened not merely the Bechuana with whom he had temporarily made his home, but the future of all native races to the north, and he began to urge the extension of British protection over these tribes on two-fold grounds. First, he argued for saving the Bechuana from dispossession and exploitation, and secondly for keeping open the road to the north, for missionary effort and for trade (Schapera 1947). Livingston's petitions were a voice in the wilderness and had little apparent effect at the time, but twelve years after his death it became a political necessity that Britain takes an interest in the matter (Schapera 1947). In 1884, well-known as the period of the "scramble for Africa," Germany's imperialistic activities in neighbouring South-West Africa (the current Namibia) and further north in Tanganyika fostered the suspicion that Germany intended to move forward from South-West Africa and take control of the Cape-to-Cairo route. Britain pre-empted that move by declaring the area within her sphere of influence and ultimately claimed most of the land up to the Zambezi River (Sillery 1952)

The period following the scramble for Africa was not a prosperous one for Britain, and that economic downturn meant there was pressure to limit her financial responsibilities abroad. The outcome of this dilemma took the form of Britain's policy of "indirect rule" which emphasized that colonies, rather than the mother country, should bear the expense of their own economic development. In short, Britain was reluctant to extend protection to the Tswana, but the geo-political and economic consequences of not doing so forced her hand (Sillery 1974). Even so, it was made abundantly clear from the outset that Britain had no real interest in the territory, and that a policy of benign neglect was to be pursued. The British High Commission (cited in Jones-Dube 1984) wrote in 1885 that "...we have no real interest in the country north of the Molopo except as a road to the interior; we might therefore confine ourselves for the present to preventing that part of the Protectorate being occupied by either filibusters or foreign powers, doing as little by way of administration or settlement as possible."

Despite the administrative policies of the British, the Tswana chiefs were happy with having achieved Protectorate status which stopped the Boers takeover of the territory for a time. The Tswana chiefs had never been on good terms with the Europeans who lived to the south, and years later Khama wrote in regard to the republic:

The Union has during forty years of rule not only failed to convince the Natives of the Protectorates that their future happiness and prosperity lies inside the Union, but it has also provided them with clear proofs to the contrary, namely that happiness and prosperity do not lie inside the Union.

(Khama cited in Schapera 1947: 58)

Until 1961, the status of the Bechuanaland Protectorate continued to lie in the balance. The British government felt that Botswana should ultimately become part of the Union South Africa (Spence 1964).

The disposition of the Bechuanaland Protectorate can be viewed from three perspectives. First, the Tswana chiefs had always been very clear that they did not wish to be incorporated into South Africa. The British, on the other hand, were willing to turn the Protectorate over to the South Africans if certain conditions affecting civil rights, the guarantees of inalienability of tribal lands, and the agreement of both the British Parliament and the *Batswana* inhabitants could be reached before such transfer took place. South Africa was eager to effect the transfer so that it could have access to African cheap labor and natural resources to help boost its own economic development. However, when the Nationalist Party came to power in 1948 and its leader, Dr. Malan, introduced the apartheid policy and racist rule became the order of the day, the possibility of transfer became less and less likely. Interestingly, although the British government resisted South African pressure to hand over the territory, it remained uncommitted and optimistic that the Union's social policy would take a liberal turn for the better. The question of transfer was finally settled when South Africa became an independent republic in 1961 and was expelled from the Commonwealth (Colclough & McCarthy 1980). No wonder the Bechuanaland Protectorate was less advanced than

other colonial territories at the Bechuanaland Protectorate Independence (the current Botswana).

Regarding Botswana's lack of development as a subsequent result of her colonial experience, it is generally accepted that the British policy of "indirect rule" undermined self-sufficiency of the *Batswana*. The British policies instituted a widespread need for cash income and British traders made available mass-produced and imported consumer goods. The need for cash forced people to seek laboring jobs in South Africa to pay for hut taxes and other expenses. Chiefs also contributed to this need for a cash-based economy by ordering residents to find cash to pay their taxes and to finance local self-help schemes such as building schools which the colonial administration would not finance (Colclough & McCarthy 1980)

In summary, because the British government did not recognize political and economic development as an objective during its tenure, *Batswana* received few of the benefits of 'modernising' forces that appeared in other territories. Investment in Bechuanaland was minimal throughout the colonial period, and the small number of regular jobs that were created was probably insufficient to compensate for the decline in traditional sources of employment. With the exception of expenditures upon veterinary disease control, and the construction of abattoir – both of which did much to protect the territory's export trade – the administration was not very active in improving the welfare of the African population. Progress where it occurred was mainly a result of tribal initiative on the basis of local resources. (Colclough & McCarthy 1980)

#### **2.2.4 Ethnographic factors**

In modern Botswana, traditional society and modern society exist side by side. The events of the past have brought about a number of changes in the characteristics and distribution of the population. The latest census, conducted in 2001, estimates Botswana's population at 1.68 million people, and the annual population growth is rated at 2.39 percent (Government of Botswana 2001, *Population Census 2001*, viewed 07 July 2006 [www.gov.bw](http://www.gov.bw)).

Botswana is made up of cities, major towns, and villages. Many people still live in the villages where they engage in subsistence farming. However, due to rapid migration from rural to urban areas, 52.1 percent of people now live in urban areas, (Government of Botswana 2001 *Population Census* 2001, viewed 07 July 2006 [www.gov.bw](http://www.gov.bw)). The capital city is situated in Gaborone, with a population of 187,007 people, is the fastest-growing city in Africa. The other cities and towns in Botswana have also grown at a faster rate than anywhere else in Africa (Government of Botswana 2001 *Population Census* 2001, viewed 07 July 2006 [www.gov.bw](http://www.gov.bw)).

Characteristics of Botswana's population show a young, mobile, fast-growing population experiencing an intense rural-to-urban shift. Present population and development trends indicate that Botswana is at a state in its development where increasing numbers of new goods and services must be made available to its new urban populations, and for the rural areas where the effects of economic and social transition have also been felt.

In this context, Botswana is an appropriate choice for an investigation of the impact of the encouragement, promotion, and incentives provided for Indigenous *Batswana* entrepreneurs. Botswana recognises the importance of information and of developing efficient information systems and networks for the support of research and education. The Central Statistics Office and the Botswana Archives ensure public access to such information. Since the start of the development of entrepreneurship education in Botswana in the the early 1970's, information pertaining to entrepreneurship education in Botswana has been developed and saved, hence, the existence of good data on the development of entrepreneurship in Botswana makes Botswana an ideal country in which to conduct a systematic, quantitative evaluation of the Start and Improve Your Business entrepreneurial-training program.

### **2.2.5 Climate as a factor in production and capital formation**

In the reviews of theories of entrepreneurship, pure economists have suggested that the supply of entrepreneurs is affected by the ability of a society to marshal the factors of production as a function of capital formation (Jennings 1994). In Botswana's case, the major sources of revenue and expendable income historically have come from agriculture, cattle-rearing, and mining. Of these, the first two used to be the principal sources of income for a considerable portion of Botswana's population, and they used to represent the most important sources of capital with which to finance business activity. However, given Botswana's geographic position in the Southern African Plateau, her ability to sustain high levels of productivity in agriculture and cattle-rearing is affected by climate. Although the entire country lies in the summer rainfall belt, the rains, normally beginning in October and ending in April, are highly variable in Botswana. Since before independence in 1966, Botswana had experienced several severe periods of drought which have damaged an already fragile economy and disrupted production in the country's two major income-earners, farming and cattle-rearing.

In Botswana, grain was, and still is, the staple diet of most *Batswana*, and a large percentage of the population used to engage in subsistence agriculture. Of those who had access to the basic inputs and derived a surplus, many used these earnings to start small businesses. Nowadays, the larger population no longer produce agricultural surpluses. According to the National Development Plan 1979-1985, this situation has come about as a result of the government's neglect of agriculture, and because many rural people do not possess the productive inputs necessary for farming (Ministry of Finance and Development Planning 1978). This state of affairs has resulted in a situation wherein Botswana's ability to feed herself has declined to the point where she is a heavy importer of foodstuffs. One reason why people have stopped attempting to farm is a lack of seasonal rains to make their efforts worthwhile. However, the country would benefit from improved water catchments and irrigation facilities.

Cattle-rearing is another important source of income for Botswana. The revenue from the production of cattle is important for cultural as well as economic reasons. Although



far fewer people engage in cattle-rearing than in crop production, cattle in Botswana are an important aspect of Tswana culture.

Prior to contact with European traders, cattle were not sold in Tswana culture –, but rather accumulated and kept in one family cattle represented instead what an investment portfolio would represent in Western society. According to Colclough and McCarthy (1980), “cattle were for the Tswana a central measure of one’s worth, self-esteem, and peace of mind.” Today, cattle continue to be highly important in Tswana society. In terms of economic importance, the cattle industry began to evolve in Botswana from the time the European traders came to Botswana and exchanged goods for cattle. Later, the colonial administration encouraged the development of the industry in order to generate revenue to pay the expenses of administering the Protectorate (Colclough & McCarthy 1980)

At present, cattle form a principal source of investment capital for those who have large herds. At the national level, cattle and their by-products are the second largest source of income in the country. However, the climate's influence on the cattle industry has been deleterious. The ravaging effects of drought years enabled crippling disease, such as foot-and-mouth disease, to set in and impinged the ability of all but the wealthiest to support cattle on a profitable scale and to reap the benefits at the abattoir.

Mining industry is the major source of income for Botswana. The existence of this sector is important because, as the discussion on agriculture and cattle-rearing has shown, these two sources of revenue would not, under present conditions, be sufficient to support a developing and expanding economy. Because of the income which has accrued from the exploitation of Botswana’s minerals such as diamonds, coal, copper, nickel, and manganese, mining has helped to create an economic environment in which development projects are financed, employment is generated, and demand is created for a range of goods and services obtainable from the enterprising entrepreneur.

### **2.2.6 Settlement patterns**

The settlement patterns that have evolved in Botswana are different from those in most of African countries. Where the majority of countries are affected by rural-to-urban migration, *Batswana* engage in three different kinds of migration. *Batswana* migrate not only from rural to urban migration, but also between their three family homes, (they have three homes (the village, the farm and the cattle post) and between Botswana and surrounding countries, especially the Republic of South Africa.

All three migrations satisfy different needs on the part of Indigenous *Batswana*. In the first instance, when *Batswana* migrate from rural to urban areas, it is because their need for jobs and amenities unobtainable or difficult to obtain in the rural areas in the second instance (when they migrate between three homes) it is because of animal husbandry and agricultural activities. In the third instance, when *Batswana* go to other countries such as South Africa, it is to meet the need for employment. Each kind of migration affects the situation of the Indigenous entrepreneur, as will be shown below.

The first type of migration is from rural to urban areas. This type of migration occurs in many underdeveloped areas in response to limited opportunities or incentives in comparison to urban areas where employment, amenities and ‘modern’ life can be found. When the rural areas present limited opportunities, people leave home in order to search for jobs to earn the money to support relatives and children left behind, to provide the funds for establishing or enlarging the cattle head, or to provide the capital for farming or to build the village home where one goes during holidays and at retirement.

The second type of migration is between three family homes. Traditionally, settlement in Botswana took the form of very large villages, with populations as large as 30,000, where all tribe members lived close to the chief (Colclough & McCarthy 1980) In more recent times, *Batswana* have begun to move away from the tribal capitals because all of the land surrounding them, which has historically been used for fields and pasture, has been depleted. The result of this seasonal migration away from the major villages has

resulted in most *Batswana* having three places of residence: the home in the village; a home in an area devoted to agriculture, commonly called “the lands,”; and another home near their cattle, called “the cattle post”. People move between these three homes on a regular basis, they mostly move seasonally.

The third type of migration in Botswana which has profoundly affected her development is migration for contract labor and wage labor employment in South Africa. Labor migration to South Africa began in the mid-1830s, coinciding with the discovery of diamonds in Kimberly. This type of migration had become commonplace by the 1930s (Schapera 1980). Because South Africa and Botswana maintain a type of neo-colonial relationship in this respect, emigration to the mines, factories and kitchens in the Republic of South Africa continued for a long time. The overall effects of labor migration have been negative. Schapera (1980) notes the extent of the damage done to Tswana society some years ago: “[F]arming and other local activities have been adversely affected by the drain upon domestic labour resources, the stability of the family is weakened by the prolonged absence of husbands and the associated infidelity of wives, and the men on their return have less respect for traditional authorities and obligations” (Schapera 1980: 100).

All three types of migration have had an impact of some kind on Indigenous entrepreneurship. Migrating from one place to the other has negative effects on Indigenous entrepreneurship because during rainy seasons Indigenous entrepreneurs tend to leave the businesses to be managed by their employees when they attend their agricultural activities. Further, some Indigenous entrepreneurs tend to nurture their cattle more than their businesses and therefore spend most of their time at the cattle posts.

### **2.2.7 Political and economic evolution of environment for entrepreneurship**

What might be called “modern” political activity in Botswana started in the late 1950s and culminated in Botswana’s Independence in 1966. That period saw the creation of five political parties, some of which were short-lived. Of this number, the Botswana Democratic Party (BDP), formed in 1962 by the first president, the late Sir Seretse Khama, has held power since independence.

The political climate has so far been stable for investment. Botswana has not experienced the coups, corruption and destabilizing periods common to so many of her neighbours. Entrepreneurs in Botswana have not been exposed to periods of political turmoil which could undermine or destroy their businesses. The apparent calm in the political arena has provided a climate in which entrepreneurial activity should be able to flourish.

Economically, Indigenous *Batswana* have not fared as well as their Asian and European counterparts. The latter, equipped with more capital, education, training, and experience, progressed more than *Batswana*. Government’s recognition of this situation has helped underpin a series of measures which call for considerable deregulation in the trade sector, and for the institution of loan schemes which take into consideration the capital-creation problems of Indigenous *Batswana*. Also the government has called or formed commissions which have examined the status of economic opportunities for Indigenous *Batswana* (Jones-Dube 1984).

### **2.2.8 General commercial and industrial development strategy**

Botswana’s strategy for commercial and industrial development did not begin taking shape at the time of independence. In fact, the roots of the strategy started much earlier when the country was still under British tutelage. Following independence, much of the spirit if not the letter of the British approach to development was retained, through *Batswana* civil servants of British extraction (Jones-Dube 1980). At that stage in Botswana’s development, few *Batswana* were able to make much practical input into

the ministries concerned with business/economics, etc. Unlike other countries such as Nigeria, *Batswana* did not have a mercantile tradition to fall back on (Jones-Dube 1980). This historical lack of experience and expertise continues to limit the emergence of Indigenous entrepreneurs in Botswana.

The coming of Independence in 1966 marked a turning point in Botswana's history. Given the post independence strategy of the centrally controlled economy, a series of rolling development plans have been produced since 1963 (Jones-Dube 1980). These plans, currently called National Development Plans (NDPs), have outlined the evolution of Botswana's political principles and intended development objectives. Based upon country-wide objectives and strategies they are based on a budget. These plans lead to project spending votes authorized by parliament (Ministry of Finance and Development Planning 1996).

The first National Development Plan (1963-65) was written by the outgoing British colonial administration for the soon-to-be Botswana government, but little financial support was provided for the much-needed expansion of essential services (Colclough & McCarthy 1980) or the promotion of Indigenous entrepreneurship. At that time, however, the British did agree to expand and improve formal education facilities and start adult education and community development campaigns. It was thought that sufficient minerals to support a mining industry could be found in Botswana, but they were not yet proven to exist. The future of Botswana as an independent country was bleak indeed. But the then prospective president of Botswana, the late Sir Seretse Khama, was well aware of the importance of proper planning and implementation of plans for his beloved country. He wrote in the Transitional Plan Forward:

Botswana's need for sound planning is great. Our country is beyond doubt one of the poorest nations in Africa. There are unique development problems; the lack of independent access to the sea, the presence of powerful neighbours whose racial policies differ greatly from those of Botswana, the lack of national currency, the inability to impose customs tariffs and so on. In these circumstances direction and impetus must be given to the economy. Domestic resources must be husbanded and

used to the greatest advantage in promoting economic growth, while assistance will be sought ...my Government is aware, too, that planning by itself is not enough, that efficient implementation of the Plan is even more important and pledges itself to this task. The energies of the nation must now be devoted to the economic and social development of the country and the Transitional Plan sets out in much detail what has to be done. Every Motswana must play his part (Transitional Plan for Social Economic Development 1966).

To stimulate the economy and create additional sources of immediate income for the Protectorate to rely on, the 1963-1965 Development Plan proposed that “the private sector be stimulated by offering lucrative incentive while disincentives which already existed should be removed.” In other words, the British colonial administration was well aware that the new country would not be able to support itself and therefore, on the eve of independence, began to call for private investment sectors to come to its assistance. Moreover, at this early stage in Botswana’s history, the investors who were called were not Indigenous Africans, but outsiders (Colclough & McCarthy 1980). As Colcough and McCarthy noted, the shortage of capital partly accounted for the lack of entrepreneurs, and such industrial development as had already taken place had been undertaken by external entrepreneurs, either by South Africans or by the Commonwealth Development Corporation. Commerce and the services industries, on the other hand, were largely controlled by Europeans and Indians who resided in the Territory (Colclough & McCarthy 1980)

The second planning document, covering 1968-73, appeared after several major events had taken place in Botswana, not least of which was the achievement of Independence. It is a more optimistic document than that which appeared several years before diamonds and other minerals had been discovered. The then vice-president wrote in the introduction, “For the first time in the history of Botswana, it is now possible to state confidently that our country has the potential to achieve financial self-sufficiency in the near future, accompanied by rapid and sustained economic growth” (Ministry of Finance and Development Planning, Botswana National Development Plan 2, 1967).

The main objectives of the second development plan, the Botswana National Development Plan 2 (NDP 2), were to make Botswana an economically viable entity in the shortest possible time and rid her of the need to request grants-in-aid from Great Britain in order to balance the budget. As in the previous plan, an extensive development projects scheme emphasized the need for self-help development. The second plan stated, "Development which can take place with little outside aid is that based on self-help, the construction of rural roads, small dams and buildings using local materials ... and these activities are already and will continue to be encouraged by Government ..." (Ministry of Finance and Development Planning, Botswana National Development Plan 2, 1967).

The NDP 2 section 2 devoted to private enterprise refers almost exclusively to foreign investors who would provide the capital to develop the country. The expansion of the industrial base was necessary in order to provide employment opportunities for a population still largely living outside wage employment (Jones-Dube 1984).

To encourage local participation in the commercial sector of the economy, government arranged for credit to be made available to local entrepreneurs and cooperatives on generous terms through the National Development Bank (NDB). The cooperative movement was started and was highly regarded in those days as a means of shepherding the large numbers of citizens into the cash economy and as training grounds for Indigenous entrepreneurs.

By the 1973/78 NDP plans, the commercial trade situation had become clear to the government. President Sir Seretse Khama wrote in the forward to the Botswana National Development Plan 3 (NDP 3): "Not only do we need greater agricultural production, but also Botswana must increasingly become engaged as businessmen in trade, in manufacturing ..." (Ministry of Finance and Development Planning, Botswana National Development Plan 2, 1972). NDP 3 clarified some of the problems facing the small-scale Indigenous entrepreneur and noted that the specialist trades such as

chemists, hoteliers and insurance managers were still dominated by foreign concerns. The Botswana Enterprise Development Unit (BEDU), charged with establishing and encouraging small-scale industries owned by local entrepreneurs, had been established as had the NDB, which became the source of funding for many of Botswana's small-scale business people in both trade and industry (Jones-Dube 1984).

Government had already recognized that, in addition to other supports provided in the commercial and industrial sectors, there was need for an extension service. The Traders' Extension Service, started during the 1970-75 NDP period, was to be revitalised and expanded in order to encourage greater local ownership of trading businesses and greater competition and efficiency (Mushonga 1981). However, reports that emerged later showed that it had had only limited success in encouraging Indigenous entrepreneurial development.

By the time the 1979-85 NDP was put in place, the BDP had been in power for more than ten years, and there had not been any problems in Botswana's development goals. The plan analysed problems and constraints affecting trade and industry in Botswana:

Botswana faces constraints on the development of industry and commerce. Among these are:

- a small internal market based on a population of less than a million with a low average income;
- fragmentation of this marked by low population density and poor communications;
- the remoteness of the country, which is landlocked and surrounded by much more developed economies of South Africa and Zimbabwe
- an acute shortage of skilled and managerial manpower;
- lack of infrastructure-communications, power, water and serviced land and the high cost of what exists;
- lack of local capital markets; and
- lack of a strong raw materials base, apart from certain agricultural products.



(Ministry of Finance and Development Planning, Botswana National Development Plan 1978)

Since the early 1970s, government has made an attempt to provide and expand upon the services available to industry and commerce. However, despite the services provided to the commercial sector, which contains the majority of Botswana's formal sector, the commercial sector has not fared as well as the industrial sector. As is clear from the above, by the end of the first development decade of independence, it was apparent that Indigenous *Batswana* had not advanced in the trade sector as rapidly as had been hoped. Although they held the majority of the small general dealer's licences, 86 percent of the restaurant licences and 70 percent of the fresh produce licences, the specialist trades and virtually all of the industrial enterprises with the largest turnovers in sales were still dominated by non-*Batswana* (Ministry of Finance and Development Planning, Botswana National Development Plan 1978).

Additionally, in terms of training and experience, Indigenous *Batswana* had developed less rapidly than might have been expected. Results from the research (Mushonga 1980) have shown that most Indigenous *Batswana* had not been exposed to any business and management training at that time. The impact of what little raining had been done was not investigated.

Government's intentions to support the efforts and needs of Indigenous entrepreneurs can be found in almost all of the Development Plans produced since independence. For instance, the current NDP (NDP 9) which covers the six-year period from April 2003 to March 2009 has the title: "Towards Realisation of Vision 2016: Sustainable and Diversified Development through competitiveness in Global Markets." It seeks to significantly improve the standard of living for *Batswana* and anticipates accelerated growth in the non-mining sectors of the economy.

### **2.2.9 Current economic situation**

Since its Independence in 1966, Botswana has achieved a remarkable growth in economy, socio-political stability and education (Briscoe 1996). Although the discovery of diamonds has boosted Botswana into the middle-income category for African countries, the country still faces the problem of economic diversification, employment creation, income distribution, and poverty. The country's economy is highly dependent on the mining and beef industries for income revenue. To feed its population of 1.7 million, Botswana depends heavily on foreign markets; many basic goods are imported.

To alleviate the problem of dependency on diamonds and beef, the government of Botswana has put in place programs to support Indigenous entrepreneurship in the country. As in any other developing country, lack of organizational and managerial skills greatly hinders entrepreneurial development in Botswana. Without such skills, Indigenous entrepreneurs are unable to take advantage of opportunities or to advance technical change seen to be more important than capital inputs (Jones-Dube 1984). The major obstacle to economic development in Botswana is not so much the shortage of capital, but the shortage of skill and knowledge needed to mobilize, organize and coordinate capital and other resources of production (Jones-Dube 1984). The crucial role of entrepreneurs, as the productive resource which coordinates and organizes the other roles is indicated by the following: to lend money to entrepreneurs who lack managerial capacity is merely to throw it down the drain ... The main deficiency of local enterprise is not capital but knowledge and experience (Lewis 1954). Botswana, like many developing countries, has been spending considerable money on Indigenous entrepreneurs with the aim of contributing towards economic growth and employment creation.

## **2.3 Development of entrepreneurship in Botswana**

As a result of the over-dependence on diamond mining, Botswana's economic development has been unbalanced. The consequences have been, and continue to be, high and growing levels of unemployment and over-dependence on imports of industrial

and consumer goods (Smith, Kaplinsky, Menz & Selabe 1988). Responding to these challenges and increasingly realising the need for sustained economic growth, the government of Botswana took deliberate measures to encourage citizen entrepreneurship development through programs such as the ones discussed in the following sections.

### **2.3.1 Botswana Enterprise Development Unit (BEDU)**

The government of Botswana's efforts to develop Indigenous entrepreneurship date back to 1974, when the Botswana Enterprise Development Unit (BEDU) was formed to assist in the development of technical skills and the provision of advisory services to entrepreneurs. Thereafter, various different agencies and programs aimed at assisting Indigenous *Batswana* entrepreneurs were introduced; the SIYB is one of such programs.

BEDU was created by the government in response to the slow expansion of *Batswana*-owned and -operated manufacturing enterprises. Its primary objective was to assist Indigenous entrepreneurs in establishing self-sustaining, small-scale manufacturing enterprises which would have a positive effect on the economy by decreasing the number and types of goods which had to be imported from abroad, increasing the number and types of goods which could be exported from Botswana-based firms, and to generating local employment. Financing and support services from the government and training in business management skills would assist local enterprises to help the country meet the above objectives.

*Batswana* who were interested in starting businesses were invited to submit applications to the Ministry of Commerce and Industry. Basic requirements were that applicants had some technical skill and experience in the areas of production. Those who were accepted into the program would receive financial assistance to start and maintain their businesses for a reasonable period (usually a year); they would receive training which would introduce them to the fundamentals of business management and get technical assistance in starting production in goods such as textiles, metalwork, leatherwork,

pottery, jewellery etc. Each entrepreneur was to work under BEDU sponsorship for two years, at which time it was thought that the entrepreneurs would leave BEDU and continue their business activity in various towns and villages throughout Botswana.

By the late 1970s, however, it became apparent that BEDU was experiencing difficulties in meeting its objectives. Chief among the problems was that few of the BEDU enterprises were moving toward self-sufficiency (Jones-Dube 1980). This lack of self-sufficiency meant that the Indigenous enterprises continued to require government financing in order to operate. Those unexpected, prolonged costs precluded the expansion of the project so that other Indigenous *Batswana* could be invited to take part. Also, it was apparent that Indigenous entrepreneurs had not acquired the skills in business management which they were supposed to have gained by the end of the two-year period (Jones-Dube 1980).

By the late 1970s it had also been established that there were a number of contextual factors which affected the viability of the BEDU effort. Those factors included the fact that the types of enterprises supported by BEDU were negatively affected by competition from existing South African industries (Jones-Dube 1980). Further, the limited market for goods produced by the Indigenous entrepreneurs was too small to support both the South African interests and those produced by Indigenous entrepreneurs. In short, the economics of the situation — i.e., South African industrial hegemony — mitigated against the fledgling enterprises in Botswana making progress in controlling the market in the areas of production chosen by the BEDU enterprises (Jones-Dube 1980).

A number of other factors threatened to make BEDU less effective in its attempts to promote self-sufficient Indigenous enterprises in Botswana. One of these factors was the training program, the objective of which was the transmission of business management skills to Indigenous entrepreneurs. As early as 1978, it was clear that the training component of the program had not met the expectations of the Indigenous entrepreneurs (Hunter 1978).

The training program was unable to successfully transmit the fundamentals of business management to Indigenous entrepreneurs for at least two reasons: First, government had little control over the system by which personnel were provided to operate the training program for Indigenous entrepreneurs. The majority of trainers lacked the necessary training, experience and conceptual understanding and practical understanding of the issues involved in entrepreneurial promotion in a developing country (Jones-Dube 1980). The training officers were mainly Peace Corps Volunteers (PCVs) who were young, recent graduates from the United States, who generally lacked knowledge about the world of business in a developing country. Second, not being acquainted with the business world, they were unable to plan, organise, and administer a training program for Indigenous entrepreneurs which suited the exigencies of small-scale manufacturing in a developing country (Jones-Dube 1980).

Another factor which limited BEDU's success at promoting Indigenous entrepreneurship was the outcome of an attempt to redirect BEDU's activities and utilisation of resources. In 1982 an evaluation of BEDU's effectiveness as an institution capable of developing Indigenous entrepreneurship was carried out (Jones-Dube 1980). The evaluation recommended, among other things, that BEDU be revamped so that only those businesses which had the potential to become self-sufficient would continue to receive BEDU support. A further suggestion was that all businesses being sponsored by BEDU which had been shown to have no chance of succeeding should be terminated. Those businesses which had the potential to become self-sufficient would continue to be supported by BEDU with the proviso that the entrepreneurs be required to take part in intensive business-management training (Jones-Dube 1980). Finally, it was recommended that those enterprises which had been identified as viable and capable of continued existence outside the BEDU framework would be required to submit a project plan of their future development goals. Following this exercise, the enterprises which fell into that "viable" category would withdraw from BEDU and set up shops in the urban and rural areas of the country (Jones-Dube 1980).

The recommendations for reorganization of BEDU were soundly and unequivocally rejected by the Indigenous entrepreneurs who had grown used to BEDU sponsorship (Jones-Dube 1980). When BEDU staff pressed for reform within the organization so that the original objectives of the program could be addressed, Indigenous entrepreneurs enlisted political assistance to forestall the implementation of the recommendations of the evaluation. The result was an impasse between organizational elements at BEDU that wanted to conduct a major overhaul and the political elements that insisted that BEDU support for Indigenous entrepreneurs should continue until the entrepreneurs themselves felt ready to leave the establishment (Jones-Dube 1980). The stalemate effectively brought to a standstill BEDU's ability to promote the development of Indigenous entrepreneurship in the small-scale manufacturing sector. Other results of the impasse between staff, clientele, and politicians meant that the training unit became inoperative as the U.S. government stopped sending PCVs to train Indigenous entrepreneurs. It was suggested that business management training be handled by one of the other educational institutions in the country. The Swedish government, which was the major funding agency for the BEDU project, pulled out and BEDU ceased functioning in 1986 (Jones-Dube 1980).

### ***2.3.2 The Business Advisory Services/Partnership for Productivity***

The government realised that Indigenous entrepreneurs could develop their capabilities if they received training and technical assistance which aimed to improve business practices and thus increase the potential for business success. In 1976, two training organizations were established for training Indigenous small and medium entrepreneurs in Botswana. The two were the Business Advisory Services (BAS) and Partnership for Productivity (PFP). BAS, based in the Ministry of Commerce and Industry, catered for the training needs of the small-scale manufacturers, retail traders, hawkers and street vendors. It maintained offices in several of Botswana's central towns and villages. PFP was an American company operating in Botswana. PFP had offices in Gaborone but had clients in the southern part of the country. In 1982 the two organizations were merged into a single unit, BAS/PFP, based in the Ministry of Commerce and Industry (MCI).

Combined, the two services offered advice and training in business establishment, management and administration, problem-solving and bookkeeping skills (Jones-Dube 1984).

BAS/PFP used a number of educational approaches in an effort to reach more of the small-scale business community in the rural areas. Individual instruction and consulting approaches were used, whereby trainers visited entrepreneurs at their respective business premises, and actual business records were used as the teaching materials. However, this method proved to be very expensive and required considerable trained manpower to have even a minimal effect on the business community. The second educational approach consisted of offering periodic seminars in various population centres throughout the country. Although these seminars brought together Indigenous entrepreneurs, they proved ineffective as entrepreneurs were reluctant to attend seminars which took them away from their businesses. The seminar method is still being used to date; however, the seminars do not normally run for more than five consecutive days (Jones-Dube 1984).

In 1986, the Integrated Field Services (IFS) was established by the merger of BEDU, BAS/PFP and another group known as Rural Industrial Officers. Located at the Ministry of Commerce and Industry, IFS was responsible for teaching business management and bookkeeping skills to small and medium entrepreneurs in the whole country; its services are free of charge. With the aim of decentralising the services of IFS, three major regions of operation were established: North, Central and Southern. This separation was done in order to take the services closer to the clients. However, like its predecessors the IFS is plagued by problems, such as an acute shortage of manpower, poor delivery systems, lack of impact evaluation etc (Jones-Dube 1984).

In addition to training services provided by IFS under the Ministry of Commerce and Industry, Botswana has a wide range of institutions and related structures designed to provide assistance in developing managerial functions and entrepreneurial skills for Indigenous entrepreneurship. Institutions delivering managerial assistance to Indigenous

entrepreneurs include, among others: the Business Clinic of the University of Botswana, the Institute of Development Management, the Botswana National Productivity centre, various government Ministries and Agencies, local government Agencies Finance Institutions, non-governmental organization (NGOs), private sector, educational training institutions, and business services consultants (Jones-Dube 1984).

In a country such as Botswana, which is geographically large, with a scattered population, it is inevitable that the strength of the institutional support for Indigenous businesses will vary considerably from one area to the other. Furthermore, most of the above organizations work in isolation from each other, as there is no central body or agency responsible for overseeing and co-ordinating business training programs (Jones-Dube 1984).

In addition, the impact of such programs is never known as they are almost never evaluated. For instance the SIYB Botswana, regarded as the major government training program for Indigenous entrepreneurs in Botswana, was last evaluated more than ten years ago. This lack of evaluation of entrepreneurial training programs also applies to developed countries. Evaluation is an integrate part of most instructional design models. Its tools and methodologies help determine the effectiveness of instructional interventions (Eseryel, 2002). Despite its importance, there is evidence that evaluations of training programs are often inconsistent or missing (Rossi et al., 1979)

It is worth noting that the SIYB program in Botswana falls under the Integrated Field Services mandate and it is discussed in section 2.4

### ***2.3.3. Policies, programs, and institutions intended to assist Batswana entrepreneurs***

The government of Botswana encourages citizen entrepreneurship through schemes such as the Financial Assistance Policy (FAP), the Small Medium Micro Enterprise



(SMME) Policy, the Citizen Entrepreneurial Development Agency (CEDA) and many others.

Introduced in 1982, FAP was regarded as the most significant government policy for supporting small scale enterprises. Its primary objective was to create employment through the establishment of additional productive activities. Small-scale assistance from the FAP consisted of a capital grant from the government to assist the start-up or extension of certain agricultural, manufacturing or tourist projects which required a fixed investment. The FAP was regularly reviewed and evaluated (1984, 1988, 1995, and 2000), and the last evaluation concluded that the FAP was not effective in achieving its objective of promoting sustainable employment creation. The evaluation recommended its winding up (FAP Evaluation Report 2000 (Smith, Kaplinsky, Menz & Selabe 1988) and the FAP was discontinued in 2002.

The Small Medium Micro Enterprise (SMME) Scheme was launched in June 1999 to cater for *Batswana* entrepreneurs. It was coordinated by the Small Business Promotion Agency (SBPA) under the Ministry of Commerce and Industry. The major objective of the scheme was to provide loans and training in leadership skills and actual business management skills to *Batswana* entrepreneurs. The scheme was evaluated in 2001 and was discontinued immediately, as cases of abuse were discovered.

The current Citizen Entrepreneurial Development Agency (CEDA) was established in August 2001 in response to calls to government to restructure assistance and support to citizen entrepreneurs. CEDA emphasizes not only funding, but also the development of Indigenous *Batswana* entrepreneurs through training and mentoring.

## ***2.4 A descriptive analysis of the Start and Improve Your Business Program (SIYB) as an entrepreneurial education program: a global perspective***

The Start and Improve Your Business (SIYB) is an entrepreneurial training program (arguably the largest and longest lived such program in history), supported by the International Labour Organization (ILO). It operates in more than 80 countries (Samuelsen 2003) in an attempt to develop entrepreneurial and business skills. Botswana is one of the many countries running SIYB. The following sections discuss the program in detail.

### ***2.4.1 Approach of the section***

The government of Botswana has benefited from the United Nations International Labor Organization's support through the United Nation's Start and Improve Your Business (SIYB) programs. Since its introduction into Botswana in 1983, the SIYB program has been evaluated only once, in 1993 (Samuelsen 2003). The methods used (a questionnaire administered to an unsystematic (random) sample of past participants) fail to provide a satisfactory evaluation of the program. The next section (2.4.2) gives a descriptive analysis of the SIYB program and its evaluation strategies, including an overview of the Start and Improve Your Business (SIYB) program as it functions an entrepreneurial educational program globally. It outlines the program's historical perspective, its aims and goals, its target participants, as well as its institutional approach and its monitoring and evaluation system.

### ***2.4.2 The Start and Improve Your Business Program***

The Improve Your Business (IYB) is a program of the International Labor Organization's (ILO) (which is a United Nations agency). the IYB originated from business-management training materials called "Look After Your Firm" which had been developed by the Swedish Employer's Confederation in the late 1960s (Samuelsen 2003). During the late 1970s, the Swedish International Development Agency (SIDA) funded an ILO project which adapted the Look After Your Firm materials to suit the needs of the small entrepreneurs in developing countries (Ridsdale 1996). The new

materials were then named Improve Your Business (IYB). At the same time, the ILO developed a specific training method, which was based on participatory learning, with an action-oriented approach. The IYB training materials and methodology together became the IYB program (International Labor Organization 1993)

The IYB was introduced to some African countries in 1983. During the same year, the Regional Project Office for Eastern Africa was established in Nairobi, Kenya. This project was, and still is, funded by SIDA. The project office introduced IYB in Botswana, Ethiopia, Kenya, Lesotho, Mauritius, Mozambique, Tanzania, Uganda, Zambia, and Zimbabwe between 1983 and 1988. In 1988, the project office moved to Zimbabwe, where it is still based. In the years following this move, IYB was also introduced to Angola, Malawi, Namibia, Swaziland, and South Africa (International Labor Organization 1993) In 1996, a business start-up package, Start Your Business (SYB) was introduced to cater for the needs for the business start-ups, and it was introduced on a pilot basis in Uganda, Zambia, and Zimbabwe. It was later introduced in other countries. SYB was then linked with IYB to form Start and Improve Your Business (International Labor Organization 1993) IYB is a management training program for people who are already owners and managers of small businesses, and it introduces the basic principles of management to the entrepreneurs. On the other hand, the SYB component is aimed at prospective entrepreneurs who have business ideas and aim to start new businesses.

Over the years, the integrated program has been introduced in other African countries and in Latin America, as well as in other countries globally. It currently operates in more than eighty countries. During the last decade, more than 100,000 entrepreneurs, thousands of trainers and hundreds of small development organizations around the world have participated in it (Samuelson 2003). The SIYB is now a global program, operating in many regions, including: West Africa, eastern and southern Africa, south-eastern and south-central Asia and Pacific, central Asia, the Middle East, central Latin America, the Caribbean, and Eastern Europe. Its headquarters are in Geneva (International Labor Organization 2003).

The main aims of the program are to contribute towards the economic growth of the participating countries as well as the creation of sustainable employment. Its immediate objectives are to “enable small entrepreneurs to start and grow sustainable businesses and to create sustainable employment for others in the process “(International Labor Organisation Report 2003). The program’s target group is divided into two: the immediate program target group and the ultimate program target group. The immediate target group consists of local Business Development Services (BDS), that is, organizations operating in participating countries, and the trainers working for them. In addition, ILO always seeks collaboration with other agencies such as employer’s organizations, trade unions, and government agencies for implementation of the program. To qualify for collaboration in the SIYB program, BDS organizations should meet the following criteria:

- Have a proven record in or clear potential to provide BDS for small enterprises particularly in training and follow-up activities
- Have, or have access to, financial resources to carry out training
- Be willing to integrate SIYB into their training providers
- Be willing to cooperate with other SIYB training providers
- Preferably, have a geographical spread of operations
- Be willing to network with organizations providing other types of assistance to entrepreneurs, such as technical training and access to credit (International Labor Organisation Report 2003).

The above criteria are important for the integration of the SIYB program at the organizational level for sustainability (International Labor Organization 1993), and more specially, they ensure that, after the introduction of a program to a given country, local BDS organizations are given the mandate to independently implement the program with minimal supervision and support from ILO (International Labor Organisation Report 2003).

The ultimate target group consists of small-scale entrepreneurs who either want to start or grow their own businesses, who are normally contacted via local BDS organizations. ILO builds capacity within BDS organizations to enable them to train and support entrepreneurs using the SIYB approach, methodology, and materials. To fully benefit from SIYB training, entrepreneurs applying for SIYB training courses should:

- be willing and able to contribute towards the cost of training
- be internally motivated to attend the training
- be able to read and write in the language of training
- be able to make simple calculations
- be interested in starting a business
- have the technical skills or have access to technical skills, that are relevant for the planned line of business and
- be in business if they want to attend the IYB program (because IYB designed to help those who are already in business to improve their businesses).

The SIYB program was designed around an institutional approach. Based on the assumption that local SIYB partner organizations are important for the development of the national economics, the SIYB Regional Project Office builds the capacity of local BDS organizations in participating countries to effectively and independently implement SIYB training and related activities. The institutional approach of the program enables the SIYB program to multiply its capacity to reach large numbers of small-scale entrepreneurs (International Labor Organisation Report 2003).

The SIYB program uses a multiplier strategy. Rather than directly training entrepreneurs in the participating countries, the ILO – SIYB project offices train SIYB master trainers in the participating countries. The master trainers in turn, train SIYB trainers, who are responsible for training entrepreneurs in the different packages. Some of the trainers are employed within BDS organizations, while others are independent, private trainers.

One way of building capacity within BDS organizations to effectively and independently implement SIYB training and related follow-up activities is through training of SIYB trainers. Once an organization is selected as a partner organization in the SIYB program, it nominates candidates for Training of Trainers (TOT) seminar. SIYB trainers are the heart of the program and form the driving force behind entrepreneurial activities (International Labor Organization 1999) therefore, a rigorous selection criteria and process are adhered to in selecting suitable trainers. Candidates, who have been selected for training, attend a two-week TOT seminar. Seminar participants are expected to plan and conduct SIYB training immediately upon returning to their organizations. They are assisted in the process through technical back-up support of the master trainers. TOT participants who successfully complete the training and conduct entrepreneurial activities, including follow-ups, are then certified as competent SIYB trainers (International Labor Organization 1999)

SIYB trainers who are highly motivated and have a demonstrated track record in training entrepreneurs are encouraged to apply for the Training of Master Trainers' (TOMT) program. The objective of the Master Trainers' Program is to enable participants to effectively implement the various aspects of the SIYB program in their respective countries. Since master trainers form the backbone of the SIYB program, they are selected via a rigorous process. It is through the master trainers that the SIYB program can be made suitable for the country of operation. Master trainers are responsible for marketing the SIYB program and selecting new partner organizations as well as training and developing trainers. Specifically, master trainers are expected to: market the SIYB program, select new partner organizations, organize and conduct trainer development programs, conduct quality control of the SIYB program, and conduct SIYB impact assessment and evaluations.

TOMT's participants are not automatically certified upon successfully completing the seminar. Prior to final certification, potential master trainers have to show in the field their ability to organize and conduct seminars. The ILO-SIYB regional project officers assess the master trainers during training, and in particular, the following competences

have to be achieved: marketing of the SIYB program and selection of partner organizations, the organization of TOT and its facilitation. Master trainers must also demonstrate the capability of managing the training process as well as follow-up on the trainers. Upon satisfactory demonstration of their abilities, they are then fully certified as SIYB master trainers and are eligible for a license. In addition to the TOTs and TOMTs, the following training interventions' are conducted: Refresher TOT seminars, Generate Your Business Ideas (GYBI) Workshops, SYB Training of Potential Entrepreneurs (TOPE) seminars, IYB Training of Entrepreneurs (TOE) seminars, IYB Refresher TOE seminars, Business Improvement Groups (BIG), and Individual Counselling (IC).

The training output of the SIYB program is measured using a monitoring and evaluation system operated by collaborating with all master trainers and training providers. SIYB trainers and master trainers in participating countries are expected to maintain records about all their training activities and to send activity reports to the SIYB ILO Offices (International Labor Organization 1999).

To ensure the quality and consistency of training activities, SIYB trainers use a core set of training materials. These materials assist certified SIYB trainers to effectively and independently implement SIYB entrepreneurial training and related follow-up activities. Training materials are only introduced and distributed to participants during an SIYB Training of Trainers seminar.

In addition to the training materials, of the TOT program has rigorous evaluation systems. The Monitoring and Evaluation (M&E) kit contains all the forms and tools to conduct SIYB monitoring activities. M&E kits contain cost-effective information, techniques and tools that are easy to use and which are designed to enable trainers to measure the quality and effectiveness of their training and follow up inputs. Through the M&E system, trainers are able to collect information, determine progress in carrying out planned activities and achieving program objectives as well as targeted outputs, and provide feedback to all program stakeholders. Monitoring is an ongoing activity that

focuses on program implementation. It is the basic tool that is used in the SIYB Activity Report. Both trainers and master trainers are encouraged to report all training activities (entrepreneurial as well as trainer, respectively) by filling in and sending these reports to the regional SIYB ILO offices (International Labor Organization 2004).

SIYB M&E kits are management tools for monitoring progress and an evaluation tool for measuring results. Evaluation takes place in national SIYB offices. Monitoring ensures that inputs lead to activities and produce outputs at acceptable speed and quality. Evaluation assesses to what extent outputs help achieve the objectives of contributing to new and improved businesses and creating jobs (International Labor Organization 2004).

The following are some of the monitoring and evaluation tools used on the different system levels. The entry form, used by the SIYB trainers to collect a core set of information about each SIYB applicant, includes current knowledge of basic management topics (only for IYB). It enables SIYB trainers to select and group SIYB applicants, and it also allows for comparison of knowledge levels of participants before and after the IYB training interventions. The SIYB Training Evaluation Forms are used by SIYB trainers to assess the satisfaction level of trainees after the training intervention. The SIYB Activity Report summarizes participants' personal and business background and provides general data on conducted SIYB training interventions. The performance card assesses performance of SIYB participants (both potential and existing entrepreneurs) after training and their opinion on quality of SIYB training interventions (International Labor Organization 2004).

In Botswana, the IYB was introduced in 1983, while SYB was introduced in 1997 and the two programs were merged to form SIYB. The Ministry of Trade and Industry is the national focal point, and the University of Botswana (UB) is the national training institution for the master trainers. SIYB Botswana is under the Regional Project Office for Eastern and Southern Africa which is based in Zimbabwe. This project was, and still



is, funded by SIDA. The Botswana project was initially funded by the International Labor Organization, but it is now funded by the Botswana government.

The Ministry of Trade and Industry is charged with the implementation of Small and Medium Entrepreneur's (SME) policies and programs. The Department of Industrial Affairs within the ministry has a division called Integrated Field Services (IFS) which is responsible for entrepreneurship training in the country. The IFS is responsible for coordinating SIYB activities in the country.

The project office in Harare is responsible for training the master trainers who in turn train the trainers on how to train entrepreneurs. Although the IFS is in charge of the SIYB training in the country, there are other collaborating/partner organizations which are engaged in the training of SMEs. In 2000, there were about twelve SIYB collaborating organizations (International Labor Organization 2001).

The University of Botswana has been responsible for organizing and training in the SIYB Training of Trainers seminars since 1997 to date. Just as in other countries where SIYB training operates, TOT seminars in Botswana run for two weeks. In these seminars, trainers are introduced to methods and methodologies of the program. They are expected to plan and conduct SIYB training within two months after completion, when they are assessed. Trainers are also expected to conduct follow-up sessions on their clients, during which further assessment is conducted. A certificate of competence awarded upon satisfactory performance.

## ***2.5 The data collection area***

As indicated above, Botswana is a landlocked country in the southern part of Africa. At present it has two cities. These are Gaborone in the south, which had a population of 186,007 according to the 2001 census, Central Statistics Office: 2001) and Francistown in the north-east, that had a population of 83,023 in 2001. In addition to these cities, there are five towns, namely, Lobatse (with 2001 population of 29,689), Jwaneng (with

2001 population of 15,179), Orapa (with 2001 population of 9,151), Selibe Phikwe (with 2001 population of 49,849) and Sowa (with 2001 population of 2,879) (Ibid). Botswana also has a large number of villages; major ones have populations larger than 45,000 (Central Statistics Office 2001) A definition of towns and villages in Botswana differs from that used elsewhere, in that towns are referred to as urban areas while villages as rural areas, regardless of the population (Central Statistics Office: 2001). Population size alone is not a sufficient criterion to classify a settlement as a village. However, a village is usually typified by the presence of a tribal authority (chief) and availability of facilities such as schools, clinics, water reticulations etc. (Central Statistics Office: 2001).

As indicated in the introduction to the study, the Ministry of Trade and Industry is charged with the responsibility for developing entrepreneurship in Botswana, and it does so through the Department of Industrial Affairs section of Integrated Field Services (IFS). Integrated Field Services has offices across the entire country, although for smooth operation, its services are decentralised and divided into the following four regions: the IFS Northern Region in the northern part of the country, the IFS Central Region in the central part of the country, the IFS Western Region in the western part of the country and the IFS Southern Region in the southern part of the country. Table 2.1 shows the population of IFS clients by regions. IFS Central Region has the largest proportion of the number of IFS assisted entrepreneurs (51 percent), whereas IFS Western Region has the lowest proportion (3 percent).

**Table 2.1: Population of IFS clients by regions**

<b>Region</b>	<b>Number</b>	<b>Percentage</b>
IFS Northern Region	593	18.09
IFS Central Region	1,660	50.66
IFS Western Region	95	2.90
IFS Southern Region	929	28.35
<b>Total</b>	<b>3,277</b>	<b>100</b>

Source: (IFS Report, 2004)

The Southern region comprises the City of Gaborone and the two towns of Lobatse in the far south of Gaborone and Jwaneng, situated in the south west of Gaborone. In addition to the city and two towns, there are two major villages, Molepolole, the capital of Kweneng District and Kanye, the capital of Ngwaketse District. There are also two medium-sized villages, Mochudi, the capital of Kgatleng District and Ramotswa, the capital of South East District. The Southern Region also has three small villages: Letlhakeng, Goodhope, and Mabutsane (Central Statistics Office 2001).

The Southern Region is the second largest and accounts for 28 percent of the total IFS assisted entrepreneurs in the country. Within the IFS Southern Region, Molepolole village was selected as a study area. Molepolole is one of the largest villages in Botswana and is in the same category as the other large villages of Serowe, Kanye, and Maun. The CSO refers to these large villages as “urban villages” (Central Statistics Office 2001). Molepolole had a population of 62,739 in 2001 (Central Statistics Office 2001). It is situated 60 km west of Gaborone, the capital city of Botswana. Table 2.2 shows the population of the largest rural urban villages of Botswana, including that of Molepolole.

**Table 2.2: Population size of the major villages in Botswana in 2001**

<b>Village</b>	<b>Population</b>
Molepolole (the study area)	62,739
Serowe	52,836
Kanye	48,143
Maun	49,822

**Source: (Central Statistics Office 2001)**

A number of reasons led to the selection of Molepolole as the study area (see figure 2.1). Firstly, it is one of the villages where the government of Botswana encourages rural development (for instance by encouraging residents to set up businesses in rural areas) in order to discourage the movement of people from rural to urban areas. As mentioned earlier, the aim of this study is to contribute to the development of entrepreneurship in Botswana in rural areas by determining whether businesses that participated in SIYB programs significantly created employment in rural areas.

Figure 2.1 Map of Botswana



Source: [www.worldatlas.com](http://www.worldatlas.com)

Second, Molepolole was chosen for the study area because it has the largest population among the large villages, so a substantial number of entrepreneurs could be interviewed. As shown in table 2.2, the 2001 population of Molepolole was more than those of other major villages in the country.

Third, at the time of the survey, Molepolole had the highest number of IFS assisted entrepreneurs in the region, accounting for 38 percent of regional total number. It was thought that a large sample of SIYB-assisted entrepreneurs would maximize the response rate from the sample frame. Table 2.3 shows IFS assisted entrepreneurs in the Southern Region by villages and towns.

**Table 2.3: IFS assisted entrepreneurs in the southern regions by location**

<b>AREA</b>	<b>NUMBER</b>	<b>PERCENT</b>
IFS Gaborone	80	8.6
IFS Mochudi	191	20.56
IFS Ramotswa	62	6.67
IFS Lobatse	53	5.71
IFS Kanye	87	9.36
IFS Goodhope	43	4.63
<b>IFS Molepolole (study area)</b>	<b>350</b>	<b>37.67</b>
IFS Jwaneng	27	2.90
IFS Mabutsane	8	.86
<u>IFS</u> <u>Lethakeng</u>	<u>28</u>	<u>3.01</u>
<b>Total</b>	<b>929</b>	<b>100.00</b>

Source: (IFS Report, 2004)

## **2.6 Chapter summary**

This chapter familiarised the reader with:

- the general background to Botswana,
- Entrepreneurship development and support in Botswana,
- the history and status of SIYB in the Botswana context, and
- the area of and justification for the empirical data collection strategy used in this study.

Chapter 3 provides a detailed literature review of the extant knowledge germane to both a sound general theoretical approach to entrepreneurship education — especially as appropriate for developing countries— and a practical investigative approach to critical assessment of the SIYB in Botswana.

# **Chapter Three: Teaching entrepreneurship in developing countries – review and evaluation of relevant literature**

## ***3.1 Chapter abstract***

The chapter is organized into 6 sections and presents two models. Section 3.2 is an overview Section 3.3 defines key terms in the field of entrepreneurship. Section 3.4 describes several conceptual models of education. It integrates the works of selected seminal entrepreneurship scholars and identifies a list of key program ‘performance indicators’ that would be expected to become enhanced as a result of engaging in entrepreneurship education. Section 3.5 reviews seminal work by entrepreneurship scholars. Section 3.6 deals with the pedagogical aspects of entrepreneurship. Section 3.7, developed largely from a distillation of the precepts of a set of highly respected, much-cited entrepreneurship scholars, presents an ideal curriculum model (ICM) for entrepreneurship education and adapts it to the developing country environment. And section 3.8 presents a derived theoretical framework model, the entrepreneurship process and performance (EPP). The EPP takes the ICM beyond isolated consideration of only educational variables and places educational variables in the context of a wider set of variables which all, in combination, lead to business performance. The EPP model will serve as the functional core of the empirical evaluation performed in this study. Section 3.9 provides a comparative analysis of the SIYB program curriculum and the Entrepreneurship Performance Process model curriculum and section 3.10 gives a summary of the chapter.

## ***3.2 Purpose, approach, selection and presentation***

The purpose of this chapter is to develop a theoretical foundation upon which to build an empirical evaluation of the efficacy of the SIYB program in Botswana. It reviews the



relevant literature and identifies salient research issues. These issues are then synthesised to form an idealised entrepreneurial curriculum. The idealised entrepreneurial curriculum in this study considers an entrepreneurial curriculum to be the one that includes, among other components, entrepreneurial skills and abilities such as innovation, self-efficacy, and opportunity evaluation. First, these skills are used to form an idealised training curriculum model for developed countries, which is later modified to form the ideal curriculum model suitable for a developing country context. This modification was deemed necessary because most entrepreneurship research has been generated in the US and Europe and does – overtly or implicitly – assume a developed country environment.

### ***3.3 Defining and distinguishing key terms***

This section defines and discusses key terms in the field of entrepreneurship. In this section, the focus is on the problems and controversies surrounding the definition of the term ‘entrepreneurship.’

#### ***3.3.1 Entrepreneurship***

Entrepreneurship has traditionally been difficult to define and continues to generate debate (Low 2001). Furthermore, the entrepreneurship field has been criticised for having an ill-defined paradigm (Shane & Venkataraman 2000). The following section focuses on the problems and controversies surrounding the definition of the term ‘entrepreneurship’. The section serves to illustrate some of the difficulties created by this lack of definitional clarity as a predicate to developing more focused scrutiny of entrepreneurship education.

In common usage the word 'entrepreneurship' is linked to enterprise creation, but the term has a wider application (Martins et al. 2007). Today, it is generally used to identify individuals who stimulate economic progress by finding new and better ways of doing things (Martins et al. 2007). However, both words ‘enterprise’ and ‘entrepreneurship’ are used in a number of contradictory ways, (Chell 1991). For example, some authors (e.g., Rosa 1992; Kearney 1996) have suggested that 'enterprise' refers to activities such

as starting a business, being in business, or developing a business. Other authors (e.g. Bridge, O'Neill & Cromie 2003) have suggested that the term 'entrepreneurship' relates to personal characteristics or a style of behaviors that can apply to individual attitudes and skills that lead individuals to exhibit innovative and creative behaviors. Other researchers (Dollinger 1995) have used terms such as 'entrepreneurship' to refer to the exercise of enterprising attributes, such as risk-taking. In contrast, others use the terms to refer to people who adopt specific roles or engage in specific behaviors, such as owning or starting one's own business (Allison, Chell & Hayes 2000).

In a recent paper, Blackman and Hindle (2007) have enhanced Klyver's (2005) model that describes Davidsson's (2003, 2004) classification of the two principal 'schools' of definitional emphasis in the entrepreneurship literature: (1) "the *emergence* perspective", and (2) "the *opportunity* perspective".

The "emergence perspective" emphasises the dynamics of new organization creation whether or not the venture includes innovation "the development of new means-ends relationships as a core component" (Blackman and Hindle 2007).

Following Shane and Venkataraman (2000) – a study discussed in detail in a subsequent section - the 'opportunity perspective' suggests that entrepreneurial opportunities involve the discovery and evaluation of *new* relationships between means and ends, irrespective of whether this involves the creation of a new venture or not. Entrepreneurship, in this perspective, is defined as "the discovery, evaluation and exploitation of opportunities whatever the organizational mode of pursuit." (Shane and Venkataraman 2000) Table 3.1, adopted from Blackman and Hindle 2007, displays the above definition.

**Table 3.1 Two main perspectives of entrepreneurship research**

		Principal Action Focus	
		Creation of new means and ends relationships	Maximising existing means and ends relationships
Organizational Context	New Organizations	(A) Innovation oriented venture creation	(B) Non-innovation oriented venture creation
	Existing Settings	(C) Innovation oriented venturing in existing contexts (e.g. corporate venturing; licensing via markets etc)	(D) Traditional Management

Sources: Klyver 2005; Blackman & Hindle 2007.

The general problem of conflicting definitions of entrepreneurship obviously affects what will be written about how to teach it. Previous discussion of the thorny problem of definition induces agreement with Dollinger (1999: 4) that there have been as many definitions of the term ‘entrepreneurship’ as there have been writers on the subject. As has been demonstrated in previous sections of this thesis, researchers have been inconsistent in their definitions of the term (Brockhaus & Horwitz 1986; Sexton, Smilor & Wortman 1987; Gartner 1988), and definitions have emphasised a broad range of activities, including the creation of organizations (Gartner 1988), the carrying out of new combinations (Schumpeter 1934), the exploration of opportunities (Kirzner 1973), the bearing of uncertainty (Knight 1921), the bringing together of factors (Say 1803), and identification of opportunities within an economic system (Penrose 1963). Bygrave and Hofer (1991), in common with Gartner (1985), and others, adhere to the view that entrepreneurship is fundamentally the creation of an organization.

The reviewed literature reveals that to an economist, an entrepreneur is one who brings resources, labor, materials and other assets into combinations that make their value greater than before, one who introduces changes, innovations and new order. To a psychologist, such a person is typically driven by certain forces, such as: the need to

obtain or attain something, to experiment, to accomplish, or perhaps to escape the authority of others (Hisrich & Peters 2002). Although each of these definitions views entrepreneurship and entrepreneurs from a slightly different perspective, most contain a corpus of quite compatible notions, such as newness, organising, creating wealth, and risk-taking. Stevenson and Sahlman (1986) argue that entrepreneurship is a process. They do not define an entrepreneur in terms of economic functions or individual characteristics or traits, because these are not universally applicable. They further describe entrepreneurship as the relentless pursuit of opportunity without regard to resources currently controlled. They do not regard the creation of a business as being an integral part of entrepreneurship. Other emphases abound. Solomon and Winslow (1991), describe some commonly examined characteristics of the entrepreneur. Hornaday (1992) provides a conceptual approach to entrepreneurship; Halligan (1989) reports on a series of definitions from noted academics that variously describe entrepreneurship as reform, innovation, wealth creation, and risk-taking; and Timmons (1994) includes the business or venture dimension in his definition. He defines entrepreneurship as the capability to create and build something from nothing (Timmons 1994: 78).

Hindle (1991) defines entrepreneurship as the activity of changing the parameters of prevailing economic behaviors within an industry by creating and operating a genuinely new venture with high growth potential. In Hindle's definition, a "genuinely new venture" is one where the mode of wealth creation and delivery is generically distinct from existing combinations of production, distribution, exchange and competition which characterise the industry. "High growth potential" is where the pace of both sales growth and demand for supporting resources is, or is expected to be, at least three times as rapid as that currently enjoyed by experienced firms within the industry. Hindle's entrepreneur is intimately involved in the process of innovation management and implementation. In a recent work, Davidsson subscribes to the Shane and Venkataraman (2000) perspective that entrepreneurship is about discovery, evaluation and exploitation of opportunities (Davidsson 2003).

Overall, experts have defined entrepreneurship in so many different ways and produced so many alternative parameters for the term that it is difficult to focus the discussion of ‘entrepreneurship education’ on an internally consistent set of variables. Nevertheless, the attempt will be made. Some authors (e.g., those following the view of McClelland 1961) have focused on the innate and acquired qualities of the entrepreneur, suggesting that his or her attitudes and behaviors are the key. Others (e.g., those following the view of Kirzner 1973) have suggested that entrepreneurship relates to the confluence of capability and experience placing individuals in the ‘right place at the right time’ for spotting and seizing opportunities.

Generally, the word ‘entrepreneurship’ is more often applied in a business context than in any other. However, entrepreneurship need not be limited to a business environment. The characteristics of entrepreneurship can just as easily be applied in a non-business environment. Furthermore, the terms ‘entrepreneur’ and ‘entrepreneurship’ are often used interchangeably.

The empirical work performed in this thesis does not, as it were, ‘take sides’ in the debate regarding definitions. . The philosophical stance adopted in this thesis is inclusive and eclectic enough to take a broad view of entrepreneurship: any activity that could be classified in any of quadrants A, B and C in figure 3.1.

### **3.3.2 Enterprise**

Enterprise has become a fashionable word, as there is an implicit feeling that enterprising people “get things done” and are “movers and shakers” (Scott, Rosa & Klandt 1998). Rosa (1992) discusses three different senses of the term ‘enterprise’ as follows: (1) a “business organization of some type”; (2) a “series of personal skills and qualities vital to economic development”; and (3) a “series of personal skills and qualities vital to good citizenship and the realisation of the individual’s full potential”. Rosa’s (1992) subdivides personal qualities into those with economic consequences and those without.

Cannon (1991) includes the characteristic of people, groups, and organizations which produces a disposition of self-realisation through achievement. According to Cannon's definitions, the word 'enterprise' means a business venture or a set of personal qualities or skills. Kearney (1996) defines the term 'enterprise' as the capacity and willingness to initiate and manage creative action in response to opportunities or changes, wherever they appear. He maintains that the concept of enterprise is made up of a number of elements, including an action element, a willingness element, a motivation element, a proactivity element, a creativity element, a generative element, and a risk element. According to this definition, an individual may be described in terms of the enterprising attributes they possess, and enterprising attributes will usually be best developed through a formal process of enterprise education.

### **3.3.3 Education**

Before discussing the principles of education, it is important to briefly define the term. The term 'education' is difficult to define since it has been used in a variety of ways. In its most common usage, 'education' is synonymous with schooling and covers the range of activities that take place in kindergartens, schools, colleges, institutions and universities. However, 'education' can also be linked to learning of many kinds, extending from the acquisition of specific instrumental skills, usually linked with the attainment of vocational competency, through to the most abstract and symbolic forms of knowledge which are acquired for their own intrinsic value, for example, informal education. Other approaches (e.g., in formal education) use the term 'education' to refer to the actual behaviors of the students in the school, quite apart from the content of instruction.

There is a consensus that education is one of the key ingredients of sustainable development (Nwomonoh, 1998). (Hamilton 1992) regards education as a driving force for citizen's participation in development and should be viewed and be positioned as the major component in the strategy for development. Adding to this view, Wolfensohn

(2000) believes that no country has succeeded without educating its people and views education as the key to sustaining growth and reducing poverty.

The current study will use the definition of 'education' provided by the United Nations Educational Scientific and Cultural Organization (UNESCO). UNESCO (1997) defines 'education' as deliberate and systematic activities, including cultural and training activities, designed to meet learning needs. As such, education involves organized and sustained communication designed to bring about learning. Communication refers to the transfer of information (messages, ideas, knowledge, strategies etc.) between two or more people. It may be verbal or non-verbal, face to face or indirect/remote, and may involve a wide variety of channels and media. UNESCO (1997) further defines 'learning' as any improvement in behaviors, information, knowledge, understanding, attitude, values, or skills.

The concept of adult education in relation to entrepreneurship programs has been alluded to by Easton, Sidikou and Crouch (2003). They argue that, *adult education programs target the acquisition of particular skills, knowledge and attitudes of participants and are generally designed both to enhance their individual lives and to improve the situations of their families, their enterprises or communities in some specific fashion* (Easton et al., 2003:1) The potential contribution of adult education to poverty reduction by providing skills development and empowering populations through capacity building is considerable, hence, the discussion of enterprise and entrepreneurial education will be based on the concept of adult education

### **3.3.4 Distinguishing enterprise education and entrepreneurship education**

The literature distinguishes 'entrepreneurial education' from 'enterprise education.' Although the two concepts are related, they are not interchangeable terms. Current literature does not discuss enterprise education per se. 'Entrepreneurship education,' although different from 'enterprise education,' is a commonly researched field. The literature reveals that many writers have found it useful to cover both topics – enterprise

education and entrepreneurship education – in a general discussion of the field (Garavan & O’Cinneide 1994; Gibb 1987; Gasse 1985; Singh 1990).

‘Entrepreneurship’ is the more specific term which emphasizes the importance of business creation. Consequently, entrepreneurship education focuses on issues relating to developing businesses. Shook et al. (2003) argued that entrepreneurship involves individuals interacting with their environment, thus discovering, evaluating and exploiting opportunities. Those ‘entrepreneurial’ (as opposed to ‘enterprising’) individuals involved may or may not develop the qualities that are attributed to enterprising people. It is expected, nevertheless, that many of those qualities will develop because of their close connection to the skills required in business creation and operation (Gibb 1999). Because of these similarities, the literature on enterprise and entrepreneurship education has generally evolved separately. Accordingly, they are reviewed separately here.

In contrast, there remains considerable conceptual confusion as to what constitutes ‘enterprise education’ (Gibb & Cotton 1998; Hytti & O’Gorman 2004; Fiedrich & Mentoor 2007). Caravan and O’Cinneide (1994) argue that the major objectives of enterprise education are to develop enterprising people with self-reliance. As such, enterprise education is about developing enterprising people through educational processes that have the aim of developing enterprising skills and attributes. Those enterprising people may or may not be involved in marshalling resources and the creation of a business.

The term ‘enterprise education’ is mostly used in the UK to signify the development of personal capabilities (Paasio & Nurmi 2004). Caird (1992) indicates that the term ‘enterprise education’ has many meanings, some viewing it as the process of assisting the initiation and development of a business, others seeing its aim as the development of life and work skills.



The above scholars seem to agree that enterprise education is about, among other things, inculcating in individuals, through education or training processes, the necessary mindset and skills to discover, evaluate and exploit opportunities. This strikes a helpful synergistic note with the definition of entrepreneurship research favored by Shane and Venkataramman (2000). They – from the group of what might be called ‘opportunity school’ education scholars — argue that the objectives of enterprise education programs should be to enforce and build enterprising behaviors, attitudes and skills.

The business entrepreneur (i.e., the archetypal enterprising person) has become a focus of interest in many nations as an instigator of social and economic change. Hence, there is a search for more and better ways of creating enterprising people and especially developing entrepreneurs, in which the role of education and training is seen as paramount (Scott, Rosa & Klandt 1998). Enterprise education involves *teaching* and *learning* strategies designed to promote an educational environment where enterprising behaviors are regularly practised (Gibb 1999). The major objectives of enterprise education are to develop enterprising people and inculcate an attitude of self-reliance, using appropriate learning processes (Colton 1990).

According to the literature (e.g., Kourilsky 1995), enterprise education is the process undertaken by an educational institution to develop the enterprising person. McMahon (1989) defines enterprise education as any educational activity intended to stimulate and develop enterprising attributes and competences in individuals that may be exhibited or exercised in a variety of tasks or environmental contexts. As such, the role of enterprise education is to facilitate the development of enterprising individuals who will possess a positive, flexible and adaptable disposition towards change, seeing it as normal and as an opportunity rather than a problem (Luczkiw 1998).

### **3.3.5 Entrepreneurship education**

There is a dearth of accepted theories on entrepreneurship education and training. Probably as a consequence, the content of entrepreneurship education and training programs can be seen to vary (Garavan & O’Cinneide 1994) according to the personal

preferences of trainers, teachers, and curriculum designers, rather than to any systematic search for research-based guiding principles such as those that have guided this study. However, some work has been done in the area, and this section of the chapter discusses some important aspects of entrepreneurial education and training as found in what might be called the specific literature of entrepreneurship education.

Kourilsky and Carlson (1995) report on Mini-Society, an entrepreneurial education activity that has been successfully implemented and researched in school classes in the United States. They describe Mini-Society as an interdisciplinary instructional system that employs self-organising and experience-based learning conditions. They discuss the Mini-Society international system in the context of learning theory and conclude that it facilitates student learning at all cognitive levels.

A study of entrepreneurial program graduates conducted by Clark et al. (1984) found evidence to suggest that the teaching of entrepreneurial and small business management skills aided new venture creation and success. A survey conducted by Hood and Young (1993) of 100 chief executives in entrepreneurial firms found that respondents believed that while personality traits are difficult to influence, the vast majority of knowledge required by entrepreneurs can be taught. Additional support for this view comes from a 10-year (1985-1994) literature review of enterprise, entrepreneurship, and enterprise and small business management education by Gorman et al. (1997) that reported that most of the empirical studies surveyed indicated that entrepreneurship can be taught and that many of the behaviors associated with entrepreneurship can be taught. However, other behaviors may be difficult to emulate, and not everyone learns with the same proficiency (OECD 1998). All aspirants of entrepreneurship have to learn their craft somehow, and many do through universities and work experience, (Hindle, cited in Green and Rice 2007: 139). Furthermore, not all of entrepreneurship theory and practice necessarily can be taught to everyone.

All the above contributors except Khan and Hindle describe entrepreneurship in the universities in specific developed countries, while Khan (1994) describes international

developments in the university sector, and Hindle is focused on the generic philosophical aspects of entrepreneurship education in the university environment. His argument is that the field of entrepreneurship education is in need of more reflection on issues such as how to teach it, how to teach about it, the places it should be taught, who should teach it, who should learn it, and how its curriculum should be designed. He critically examines these issues and questions whether the business school is the appropriate home for entrepreneurship education. In Hindle's view, 'the fundamental ingredient in great entrepreneurship education is, as in every discipline, a passionate teacher addressing students with open minds and together working on the mutual imaginative development of knowledge: a kind of reciprocal apprenticeship' (Hindle, cited in Fayolle 2007: 123)

In the UK, universities are more concerned with how students can be taught to become more entrepreneurial in their behaviors and attitudes, and this process is termed 'enterprise education.' However, Paasio and Nurmi (2004) argue that, no matter what term is used, what is important is that the educators should have a clear understanding of what they want to achieve — that is, what the educational objectives are. For an entrepreneurship education program to be truly worthy of a university setting, it needs some intellectual challenges that take it beyond mere training and give it claim to being education (Hindle, cited in Green & Rice 2007: 139).

Entrepreneurship education has experienced a rapid growth all over the world (Linan 2007) and there have been numerous attempts to conceptualize it. The simplest one identifies it with training for firm creation. It is viewed as the process of providing individuals with the concepts and skills to recognize opportunities that others have overlooked and to have the self-esteem to act where others have hesitated (Linan 2007). It includes instruction in opportunity recognition, marshalling resources in the face of risk, and initiating a business venture. And it should be considered as a model of life-long adult education (Linan 2007). Linan (2007) argues that the role entrepreneurship education should be based on the concept of entrepreneurship process as alluded to by Gartner (1985) in section 3.5.7. Hengry, Hill and Leitch (2007) argue that

entrepreneurship education should focus on the preparation of aspiring entrepreneurs for self-employment with the specific objective of encouraging participants to set up and run their own businesses.

As can be seen above, there is no common agreement over what constitutes entrepreneurship education or how it is taught (Kirby 2007). The nature of entrepreneurship education is even made more complicated by the fact that there is little clarity about what the outputs are designed to *be*. This lack of clarity about the intended outputs leads to significant diversity surrounding the inputs (Pittaway and Cope 2007).

Literature on how to teach entrepreneurship presents several dilemmas (Blenker, Dreisler, Faegeman & Kjelden, cited in Fayolle & Klandt 2006: 22). These authors examined literature on teaching and training in entrepreneurship and identified some dilemmas which include: whether teaching should be *for* entrepreneurship or *about* entrepreneurship, and whether the foundation of teaching should be based on management theories or on theories of entrepreneurship. The authors believe that how entrepreneurship education is taught depends on the answers to these questions. According to Kyro (2005), approaches to entrepreneurship education are likely to vary between continents and between countries as well as according to the target group.

### **3.3.6 Evaluation of entrepreneurship education**

Much work has been done to attempt to determine the impact of entrepreneurship education programs. Most of this work has been done in the United States, for example, Small Business Development Centres' (SBDC's) consulting activities (Chrisman et al.1985, 1987; Lang & Golden 1989; McMullan, Chrisman & Vesper 2001).

A paper by Chrisman and colleagues reveals the results of the impact of SBDC consulting services in the states of Georgia and North Carolina in the US. Their study was one of the first systematic attempts to determine the impact of SBDC and to form a standardized method for evaluating state-wide SBDC programs (Chrisman et al.1987). It was conducted between 1982 and 1983 by telephone and mail surveys. Of the 583

small businesses which had been consulted between October 1, 1980 and July 31, 1981, 327 were surveyed. A comparison of performance before and after assistance was done. Participants were asked to provide information about gross sales, numbers of employees, and net income for the years before and after assistance was received (Chrisman et al.1985; 1987). The results from the evaluation indicate that on average, small businesses experienced improved economic performance (based on percentage increases in sales, employment and profits) over non-SBDC clients.

Although the work of Chrisman and his colleagues was a breakthrough for the states where the SBDC program operated, the method used to calculate the impact of the program was highly criticized by Elstrott (1981) after his attempt to replicate Chrisman and his colleagues' study, in the state of Louisiana, encountered methodological problems. Among many other concerns about Chrisman et al's work Elstrott claimed that the evaluators did not initially perform statistical tests to see whether their client sample was representative of the entire client population.

In another study, Lang and Golden (1989) analyzed operational efficiency as measured by counselling contacts, attendee training, and total costs of Kentucky SBDCs over a three- year period. They used a mathematical programming model called Data Envelopment Analysis Method (DEA). The model relies heavily on an efficiency measure (Lang & Golden 1989) and specifically evaluated the efficiency of resource utilization by the centres. The study was longitudinal and the data used was from three fiscal years (1985–87). While the overall results of this analysis were supportive of SBDC effectiveness, they found that four of the SBDCs were inefficient at one time or another during the period of their investigation.

The literature review of SBDC programs reveals that quantitative methods of evaluation were used in both reports. Impact assessment was a comparative study which targeted business people who had experienced SBDC intervention and those who had not experienced it. The study by Lang and Golden (1989) was an efficiency assessment which was concerned with the cost effectiveness of SBDC program. Using the theory of

planned behavior, Fayolle et al.(2006) proposed an assessment for the entrepreneurship education programs. They developed an assessment tool which focuses on students' attitudes and mindsets, and they argued that this approach avoids several pitfalls that are identified in the literature such as their ambiguity in the selection of criteria and their measurements as objective dependent variables. Evaluation is the main focus of chapter 4.

Most extant empirical studies of entrepreneurship education have been primarily descriptive or sui-generis evaluations of whether programs achieved their self-set objectives. Very little attention, prior to this study, has been given to the generically important issue of what *ought* to be taught (the 'ideal entrepreneurship curriculum' issue developed in depth in previous sections of this study) or how to measure and evaluate *how well* what ought to be taught is actually taught. It is in addressing these difficult issues that this thesis provides an original contribution that has a generic relevance that transcends the specific focus on evaluation of SIYB in Botswana.

### **3.4. Theories of learning and education**

This section discusses theories of learning and education. These theories are later discussed in relation to entrepreneurship education.

#### **3.4.1 Three broad approaches**

The extensive literature about theories of education is closely related to theories of learning. Learning theories attempt to describe how people learn and explain the complex process of learning. There are several perspectives on learning theories, including: (1) behaviorism, (2) cognitivism and (3) constructivism (Rogoff 1984). However, given the objectives of this study, perhaps the most useful theoretical perspective on the learning process comes from Vygotsky's (1978) sociocultural theory. This section will briefly explain the behaviorist, cognitivist and constructivist perspectives on education, before describing Vygotsky's work in greater detail.

Behaviourism argues that learning is the result of ‘operant conditioning’. Operant conditioning is a process both named and investigated by Skinner(1953), who believed that behaviors results in reinforcement, and that reinforcement increases the likelihood that the behaviors will occur again. In Skinner’s view, punishment decreases the likelihood of the same behaviors recurring in the future. Reinforcements and punishments are defined within behaviorism by their effects on behaviors (Bowen 1974). The behaviorists are oriented by the assumption that the outcome of learning is change in people’s behaviors resulting from a stimulus-response relationship (Ormorod 2003). This implies that learning can be shaped by selective reinforcement (Jonassen 1991). In the behaviorist view, the goals of an educational program should be pre-determined.

As can be seen above, behaviorists consider that learning involves response to stimuli from the environment. However, it can be argued that learning is a complex phenomenon and involves much more than that. The behaviorist theory of instructional design would not be suitable for entrepreneurship education, as it would be heavily instructor- dependent with high demands on resources in order to adapt to changes in needs; and such an arrangement could be prohibitively costly and time consuming. Further, behaviorism encourages rote learning, and with rote learning, it is easy to forget what is learnt (Ormorod 2003). Thus, rote learning isn't good for entrepreneurs because they have to remember what they have learnt all the time, in order to use it in their businesses. There is also an argument that it is preferable for entrepreneurship education to be open-ended whereas behaviorism, with pre-defined objectives, is closed.

In contrast to behaviorist perspectives, a cognitivist approach argues that learning does not take place purely through principles of conditioning. Rather, supporters of the cognitivist approach suggest that learning is also explained by the existence of internal mental states, states which can be described and analyzed. Cognitivism carries the notion that learning involves the reorganization of experiences in order to make sense of stimuli from the environment. A prerequisite knowledge is believed to be the main facilitator of learning as it makes learning more meaningful. Cognitive theorists of

learning also believe in the pre-determined goals. These theorists believe that change has to take place as a result of learning; hence knowledge and knowing are seen as the outcome of learning (Woolfolk 2007)

While prerequisite knowledge can make learning meaningful, there is a problem if it does not exist in the learner. Should this be the case, the learner would be at a disadvantage. And therefore to account for this, the course designer will have to ensure that the instruction is appropriate for all skill levels and experiences; and designing such instruction could be costly and time consuming. One of the weaknesses of - cognitivism which also applies to the behaviorists is that positing pre-determined goals may be desirable since it offers clear direction and purpose, but pre-ordaining a fixed set of expectations can limit the potential of the learning.

In contrast to both behaviorist and cognitivist approaches, the constructivist perspective provides what is, potentially, a less restricted model of learning. Constructivism views learning as a process in which the learner actively constructs or builds new ideas or concepts based upon current and past knowledge. Thus, learning involves constructing one's own knowledge from one's own experiences (Rogoff 2003) as well as the imbibitions and interpretation of new information. Constructivist learning, therefore, reflects a process whereby internalized concepts, rules, and general principles are applied in a practical, real-world context. In this perspective, knowledge construction is a social process.

Three basic premises underlie the constructivist approach to learning:

- one's world is understood through a process in which the learner actively reshapes and transforms their knowledge;
- the learner seeks to reduce discrepancies between what she/he knows (learns) and observes; and
- the learner's knowledge is refined through negotiations with others and the evaluation of their individual understandings. The medium for this is talk, which is now widely accepted as a means of both promoting the learner's understanding and of evaluating their progress (Bennett & Dunne 1992; Dimock 2000).



According to constructivism, people learn meaningfully when they obtain an understanding of the world by making a real connection of their prior knowledge to new information (Driscoll 2005). Thus, meaningful learning gives the notion that new material expands, modifies, or elaborates information already contained in a person's long-term memory (Schunk 2004)

The previous paragraphs discuss learning as prescribed by three different, broad schools of thought. Summarizing, the behaviorist tradition emphasizes the principles of reinforcement and punishment, the cognitivists are concerned with the working of minds and the social learning theorists (constructivists) argue that the wider context influences what is learnt and how learning takes place. Constructivists believe that culturally acceptable behaviors, values, attitudes and motives should be accounted for in designing an educational program. This social nature of learning was discussed by Vygotsky in the 1920s. He recognized the role of society in influencing an individual's symbolic concept of reality. Vygotsky's work is a highly proto-typical example of a constructivist approach and it has formed the basis of this study's attitude to the process modelling of education and learning. Vygotsky's analysis suggests that an appropriate way to help learners improve their metacognitive skills and quality of their learning is to allow them to regulate their own behaviors (Vygotsky 1920, 1978, 1986).

His theory will assist in addressing the core question of this study, which relates to the evaluation of an entrepreneurial program designed in one country/culture (Sweden) and delivered in others (Botswana in particular and developing countries in general). In line with the constructivist approach, this thesis takes the approach that active, social and creative sides of learners are crucial aspects to be considered when developing an entrepreneurship education curriculum.

It is commonly cited that entrepreneurship is a plural, social, contextually-embedded process (see, for instance, Julian 2007) and this makes the constructivist approach relevant for entrepreneurship education. Furthermore, the resources, commitment and

cognitive processes that entrepreneurs are expected to deploy to identify opportunities, evaluate and exploit opportunities (Shane & Venkataraman 2000; Venkataraman 1997) provide a good argument to justify the appropriateness of the constructivist perspective in entrepreneurship education.

### **3.4.2 The approach adopted: Vygotsky's sociocultural theory**

As described above, Vygotsky's (1920, 1978, 1986) work provides a useful example of a constructivist approach to learning. At the heart of Vygotsky's theory lies the attempt to understand human cognition and learning as social and cultural rather than as an individual phenomenon. The Vygotskian approach emphasizes the importance of sociocultural forces in shaping the learner's learning and points to the crucial role played by teachers, peers and the community in defining the types of interaction occurring between learners and their environments. More specifically, Vygotsky (1978) claims that learning is directly related to how people interact with others and how learners internalize and transform the help they receive from others to direct their subsequent problem-solving behaviors. As such, the origin of learning is in sociocultural practices (Thompson 2005), and reflects a transformation of experiences taken from participation in culturally determined social activities. One main premise of this model is that social interaction profoundly influences cognitive development. The principle of learning through participation offers an important message for adult educators. The concept of a zone of proximal development pre-supposes the presence of ideal forms towards which professional development maybe oriented and directed (Froum 1995). From Vygotskian perspective, ideal forms are based on the central cultural meanings (values, goals) attached to the core activities in an activity system, for example schooling. Ideal forms may be available in documentary form such as educational paradigms. In education setup, ideal forms may clarify the relationship between values and aims of school education (Van Huizen, Van Oers and Wubbels, 2005)

Another main premise of Vygotsky's (1978) model of learning is that the developmental process is a constructive one. In particular, each learner's understanding of the world is developed and is constructed through ongoing interaction with others, where meanings are negotiated and established through evolving interactions in various social contexts. In this way, Vygotsky was concerned with the social interactions in the development of 'higher mental functions'. He argued that the social context of learning is critical since higher mental functions develop through participation in social activities. A third principle of Vygotsky's sociocultural theory involves the premise that learning also reflects how people appropriate and master the tools a culture uses for thinking and acting. Two different kinds of tools are identified: physical tools, which may include things such as paper, pens or computers; and psychological tools. Resources of thinking are psychological tools and are stored in language (Vygotsky 1986). By varying the psychological and physical tools, different features of a problem become visible to the learner.

The Vygotskyian approach to learning is particularly germane to the domain of entrepreneurship. Taking an entrepreneurial perspective, it could be argued that entrepreneurs create and they are created by their social reality. Any learning or insight is a result of interaction with people in the environment and cooperation with stakeholders. Furthermore, it can be argued that the establishment of an enterprise emerges from the interaction of agents and the environment. The entrepreneurial literature also underlines the role of the social context (Fayolle et al. 2007: 187). Julien (2007) emphasizes the fact that the orientations and behaviors of students are influenced by a number of personal and environmental factors (Luthje & Frake 2003, cited in Fayolle et al. 2007: 187).

Following the above, one may then ask, what are the necessary ingredients for an 'ideal' entrepreneurship education curriculum – one that simultaneously embraces the wide range of issues contained in this study's very broad definitional approach to entrepreneurship and its adoption of a constructivist approach to the educational/learning process. The next section addresses this question by examining the

works of some highly cited and highly respected scholars of entrepreneurship. At the risk of revisiting works that have possibly been over-examined, the basic aim of this particular revisiting is to search the core ideas of seminal scholars in a new way: with a new agenda. I am looking at these core works as sources of concepts which might inform the development of an ‘ideal’ entrepreneurship education curriculum.

Vygotsky’s theory emphasizes the role of interactions with the environment in learning. Considering the fact that environmental factors have a major role in entrepreneurial education, it is essential that his theory is incorporated in an ideal entrepreneurship curriculum. However, the nature of the interactions that facilitate entrepreneurial education are not clear from Vygotsky’s work, hence it is necessary to consult other sources of literature, specifically germane to the context that is to be taught and learned: in this case, entrepreneurship. The next section provides some literature that can attempt an answer to the crucial question: what should an ‘ideal’ entrepreneurship education curriculum contain?

### **3.4.3 Searching for the ideal entrepreneurship curriculum**

Previous sections of this thesis have provided discussions on entrepreneurship and entrepreneurship education as articulated by respected scholars of the field. This section of the chapter discusses some important aspects of entrepreneurial education and training as found in the specific literature of entrepreneurship education, which is a fast growing sub-field despite the lack of consensus on what entrepreneurship actually *is*. The specific literature is even more confusing than the general when it comes to pinning down what entrepreneurship education actually *is*. The confusion arises because most people know a lot about other professions say, “doctors” than they do “entrepreneurs” or “about entrepreneurs” (Hindle, cited in Green & Rice 2007: 139). One point of agreement is the question *whether* entrepreneurs can be taught. It is found in all literature concerning entrepreneurship education. So, my investigation can start with the need to discuss the question: *Can entrepreneurship really be taught?* To address this question, a composite definition is provided for educational purposes. For the purpose of examining entrepreneurship education, entrepreneurship is defined as *behaviors, skills and attributes applied individually and/or collectively to help individuals and*

*organizations of all kinds to create, cope with and enjoy change and innovation involving higher levels of uncertainty and complexity as a means of achieving personal fulfilment.* Entrepreneurial behaviors, attributes and skills may be taken as synonymous with enterprising behaviors, attributes and skills (Gibb 1993, 2000, 2001). Gibb's definition suggests three concepts which have already been alluded to by other researchers in the field of entrepreneurship, including behaviors, skills and attributes.

As can be seen from the above definition, it is clear that every person possesses the potential for engaging in enterprising activities and can demonstrate enterprising behavior to some degree. However, the mix of entrepreneurial/enterprising skills and attributes exhibited will vary from one person to another. Furthermore, it can be argued that the possession and expression of these skills, attributes and behaviors will be stimulated (or not) by different factors, such as environment, culture, teaching and learning (learning mode, teaching style, approaches and focus), and other factors (Gibb 2001).

Hytti and Kuopusjarvi (2004) maintain that there are three objectives of enterprise education which can serve as a proper yardstick for the evaluation of the education. The first objective is to increase the understanding of the participants/students of what entrepreneurship is all about (learning about entrepreneurship (Hytti & Koupusjarvi, 2004: 34). Knudsen and Lindgren (2004) maintain that this type of education is valuable, and suitable for all segments of society. The second objective is about 'equipping individuals for the world of work' (Hytti & Kuopusjarvi, 2004: 6). This means teaching students how to become entrepreneurial. And the final objective should be to prepare individuals to act as entrepreneurs and managers. Hanan et al. (2004) provide a process model for university entrepreneurial education using the three stages provided by Hytti and Kuopusjarvi (2004). De Faoite et al. (2003) alluded to the above objectives and argued that the major features of entrepreneurs and innovators are particular knowledge, skills and attitudes.

The reviewed literature indicates that indeed entrepreneurship can be taught, but some researchers argue that, while many of the aspects of entrepreneurship can be taught, it also requires a certain flair or attitude towards taking risks (Garavan & O’Cinneide 1995). Plaschka and Welsch (1990) argue that the question of whether entrepreneurship can be taught has been posed and addressed by many researchers, and now it is time to pose other important questions such as, ‘What should be taught?’ and ‘How it should be taught?’, because, despite general agreement that entrepreneurship can be taught, there is little uniformity in program offerings (Gorman et al. 1997; Solomon et al. 2002). Current researchers (Kuratko 2005, Henry et al 2005) also maintain that the extent to which entrepreneurship is teachable, or even worth teaching, is no longer a matter of debate among scholars – the crucial question is rather how it can successfully and effectively be taught in different contexts.

Based on the above literature, table 3.2 presented in section 3.5.10 sets out the factors to be considered in the formulation of the developed countries curriculum. The table combines factors derived from different entrepreneurship scholars, including those concerned with entrepreneurship education. The concepts provided in this table are further used to form an entrepreneurial curriculum model discussed in this chapter and in subsequent chapters. The proposed model links different conceptions of entrepreneurship to form an ideal curriculum in developing country environments; it depicts the interrelationship between attributes and behaviors which in turn can be developed into entrepreneurial skills. It should be noted that given the focus and space limitations, not all concepts are included. In the search of a suitable model for developing countries, this initial model is a building block or base or guide for the development of a model for the developing-country context.

To develop the ideal curriculum model suitable for a developing country context, it is necessary to introduce modifications to the existing models, because certain implicit assumptions about the inherent munificence of a developed-country environment (e.g., depth of capital markets, property rights regimes, general levels of education, and many more) simply cannot be assumed in the developing- country context. Da Silva Martins

(2007: 1) maintains that entrepreneurship is conditioned by various factors, and while essentially a product of individual behaviors, motivations and knowledge, it depends on opportunities, available resources, and the nature of the environment (that is, on local and regional infrastructures – social, economic and financial). It is important to modify this understanding because most entrepreneurship research has been generated in the US and Europe and does – overtly or implicitly – assume a developed-country environment. So, concepts and theories which are derived from such research and used in the developed country ‘ideal curriculum model’ might not be relevant in developing countries. In order to formulate a curriculum model suitable for developing countries, it is essential to take into account many differences in the environments of developed and developing countries.

The following section, although perhaps not exhaustive, enumerates all the key issues that might be covered in a hypothetical, universal, comprehensive, ideal entrepreneurship education curriculum. The key issues will be distilled from some of the seminal studies in the field of entrepreneurship, and then the key issues will be used to formulate a description of an ‘ideal’ curriculum for entrepreneurship education, first in a developed world context, then – after consideration of relevant modifications germane to the developing countries’ context — to a curriculum which might be deemed generically relevant to developing countries, and specifically appropriate to Botswana. These curriculum issues will then be further distilled into a theoretical framework that postulates the structure of the core relationships that underpin entrepreneurship education.

The selected contributions are reviewed chronologically. The key concepts found in the works of Cantillon, Say, Weber, Schumpeter, Knight, McClelland, Gartner and Penrose have been selected, as they provide a broad basis for exploring the historical evolution of the field of entrepreneurship and its connection with economic, educational, and training concepts. I will employ the device of naming my inspection of each scholar’s work as the scholar’s ‘curriculum’. Here I present an articulation of the key concepts

and issues which would find their way into a teaching program if the scholar's work were used as the basis of an entrepreneurship education program.

### **3.5 The 'giants' revisited: distilling entrepreneurship education curriculum principles from seminal entrepreneurship scholars**

This section provides a review of seminal works by entrepreneurship scholars. The information gathered from this review is further distilled to design a curriculum model for entrepreneurship education which is presented at the end of this chapter.

#### **3.5.1 Cantillon's curriculum**

Cantillon in his early work describes a three-tiered hierarchical economic system. At the top are the landlords, whom he calls *capitalists*, and views as financially independent. Second from the top are the entrepreneurs, whom he calls *arbitragers*, and at the bottom are the wage-workers, whom he calls *hirelings* and regards as people for whom decision-making is not easy and who therefore work for wages in order to avoid making decisions (Jennings 1994; Van Praag 1996). He describes an economy in terms of the above individuals, each defined by an economic function. The entrepreneurs are set apart from the other two categories because they live in uncertainty. Cantillon postulates that, for instance, a farmer cannot foresee the number of births and deaths among the population of a state in the course of a year; neither can he foresee the increase or reduction in expenses which might come about for the families involved (Swedberg 2000). Cantillon argues that the entrepreneur's production depends upon such unforeseen circumstances and that he conducts the enterprise of his farm in a climate of uncertainty (Swedberg 2000). Therefore, future prices are never known in advance; they depend on demand and supply, which in turn depend on ever-changing circumstances (Van Praag 1996).

Cantillon's entrepreneur pays a certain price for a product to sell it at an uncertain price, thereby making decisions about obtaining and using resources while assuming the risk of the enterprise (Swedberg 2000). Cantillon believes that an entrepreneur need not be innovative. Rather he should be alert and forward-looking. Also, he does not necessarily



start his venture backed by his own capital but may borrow capital from the money market and pay it back later with interest (Van Praag 1996). Cantillon postulates that the laws of demand and supply determine the number of entrepreneurs in each occupation and that the worst-equipped merchants would go bankrupt, since the principle of the survival of the fittest would apply (Swedberg 2000). According to Jennings (1996), social standing is not a characteristic of Cantillon's notion of entrepreneurship. Even beggars and robbers are identified as entrepreneurs, provided they earn an uncertain income. The key characteristics defining entrepreneurs are twofold: opportunity determination and moderate risk-taking (Swedberg 2000).

So, some of the key concepts that would be taught to entrepreneurs in a Cantillon curriculum are: how to manage/deal with uncertainty, how to be innovative, how to evaluate opportunity as well as techniques in moderate risk-taking.

### **3.5.2 Say's curriculum**

Say was the first entrepreneurship scholar to differentiate between capitalist profits and entrepreneurial profits (Jennings 1994: 24) He views entrepreneurship as a process whereby an entrepreneur commands necessary resources and organises the production process (Jennings 1994). He regards an entrepreneur as a coordinator of supply and demand and proposes that production creates the necessary means to purchase the output. As such there is no limit on the sale of any volume of output, since the willingness to work is motivated by the desire to consume. Hence there is no need for unemployment, as output expands to the point where the labor force is fully employed. Say's entrepreneur would have to identify a business opportunity, and then estimate the supply of raw materials according to demand, as well as organize the workforce. The entrepreneur would then proceed to identify the market or the consumers. Say views these agents of production as the most important in the production processes, since they are also the custodians of other factors of production, such as land, labor, and capital (Jennings 1994). The individuals responsible for each of these factors need to be remunerated for their efforts. They should also be remunerated for the rent, interest, and expenditures, or on whatever they incur on utilities (Jennings 1994).

Say identifies the barriers which restrict the entrepreneur venturing into business.

Among others, he mentions the following: the unavailability of the necessary finance or initial capital to fund the venture; and the lack of entrepreneurial attributes, such as prudence, intelligence, honesty, moral qualities, judgment, perseverance and knowledge of the world. A successful entrepreneur needs a rare combination of qualities and experiences (Swedberg 2000).

Say notes that in any production process there are tripartite functions: effort, knowledge, and the application of the entrepreneur. His interpretation of the functions is that the knowledge of how to do something is a necessary but insufficient condition for production, and the really important condition is the application of that knowledge to a specific end. For that reason, the entrepreneur is essential as an agent of production. Other operations are indispensable, but it is the entrepreneur who gives them effect and confers value on them (Swedberg 2000).

Say did, however, recognize that the three functions could be combined in one person, who would be regarded as a performer of distinct economic functions. Thus, in his view, an entrepreneur is an intermediary in the processes, who identifies both the factors of productive services necessary for the production of commodities, and the demand, which the entrepreneur attempts to satisfy (Jennings 1994). In Say's view, the entrepreneur occupies a central role in the economy, and he/she plays a crucial role in both the demand and the supply side of the economy. He/she is a working person who carries out the function of an enterprise as well as a coordinator and manager (Jennings 1994). Say's contribution to the definition of the understanding of entrepreneurship was not only with respect to the economy, but also in the managerial aspects of enterprise, business development and business management (Filion 1997).

So, some of the key concepts that would be taught to entrepreneurs in a Say-perspective curriculum are: identification of markets and customers, organization of the production process, and identification of a business opportunity or opportunities.

### **3.5.3 Weber's curriculum**

Weber's view of entrepreneurship focuses on the charisma of the individual. He believes that a charismatic person attracts followers by virtue of his/her extraordinary personality. This person should be a special type of human being (Swedberg 2000). Entrepreneurship means the taking over and organizing of some part of an economy in which people's needs are satisfied through exchange, for the sake of making a profit and at one's own economic risk (Weber cited in Swedberg 2000). He views the entrepreneur as a distinct and continuing entity, as distinct from the speculator, who undertakes ventures sporadically. Profitability is planned, and profits are measured and recorded (Swedberg 2000). Weber's famous grand concept, 'the protestant work ethic', demanded that people be hard workers – this concept became a major motivating factor in entrepreneurial activity. In his writings he advocated that there is a 'spirit' of capitalism, stating that man is dominated by the acquisition of wealth as the ultimate purpose of his life. This spirit of capitalism was called the "profit ethic." In the later work, Weber contributed sociological and political writings to the study of entrepreneurship. He put more emphasis on entrepreneurship as the skilful direction of enterprise which responds to opportunities in the market economy, rather than on the personality of the individual entrepreneur (Swedberg 2000). Weber places much emphasis on individualism; his entrepreneur is individualistic. His model of the protestant work ethic stresses the benefits of hard work, which results in the creation of profits.

So, the key concepts that would be taught to entrepreneurs in a Weberian curriculum are: response to opportunity, creation of profit, and economic risk-taking.

### **3.5.4 Schumpeter's curriculum**

Schumpeter launched the academic study/field of entrepreneurship by associating it with innovation, which he viewed as the criterion of entrepreneurship (Filion 1997). A great supporter of the cyclical impact of technology, Schumpeter introduced the term 'creative destruction', which occurs when old technology becomes obsolete as a result of innovation. To him, economic growth occurs through a process of this creative

destruction, whereby the old industry structure is continually changed by new, innovative industrial activity (Swedberg 2000; Herbert & Link, cited in Jennings 1994). The notion of economic development, endogenous growth, and change within an economy, as 'creative destruction', (Schumpeter, cited in Swedberg 2000) was the basis upon which the entrepreneur's world breaks out of established patterns and disrupts the circular flow (Schumpeter cited in Swedberg 2000). To describe the entrepreneur's contribution to the economy, Schumpeter starts with his theory of a *contrasting world*, one without the entrepreneur, which has *circular flow*. Here, every day is a repetition of the preceding one; hence the *circular flow*. Schumpeter's entrepreneur is the one who seeks opportunity for profit and introduces new combinations or innovations to reach his goal. The entrepreneur's task is to innovate and to lead. The entrepreneur is not a risk-bearer or a supplier of capital; he is a leader and thus leads existing means of production into new channels (Van Praag 1996). Schumpeter conceived of five principal types of disruptive innovation: the introduction of new goods, the introduction of new methods of production, the opening of new markets, the conquest of a new source of supply of raw material, and the creation of a new organization (Swedberg 2000). His theory of economic development is based on new combinations or innovation, and the entrepreneur is seen as the key figure in any economic development (Jennings 1994).

Schumpeter also researched the motivation of the entrepreneur. He argued that there are three main motivators of entrepreneurs: (1) the dream and the will to find a private kingdom, which was available to any individual; (2) the will to conquer, to fight, to prove oneself superior to others and to succeed for the sake of success itself and not for the fruit of success (Jennings 1994), and (3) the joy of creating (Schumpeter cited in Swedberg 2000).

So, some of the key concepts that would be taught to entrepreneurs in a Schumpeterian curriculum are: innovation, opportunity seeking, leadership, the skills needed to develop new methods of production, the ability to find alternative sources of supply of raw materials, creation of new organization, and motivation.

### **3.5.5 Knight's curriculum**

Knight's initial contribution to the field of entrepreneurship was his PhD thesis entitled, *Risk, Uncertainty and Profit*, first published in 1921. In that work he examined the relationship between knowledge and change in the economy; he was the first to formally distinguish between risk and uncertainty (Van Praag 1996; Jennings 1994). Knight said that risk comes from *repeated* changes (modern examples include car accidents and hijackings), for which probabilities can be discovered and against which people can insure (Van Praag 1996). He defined 'risk' as a random event with a known distribution, and 'uncertainty' as randomness where the distribution of probability is completely unknown (Knight, cited in Jennings 1994; Van Praag 1996; Swedberg 2000).

Knight believed there can be no insurance against uncertainty, because uncertainty involves the unpredictable changes in the 'givens' of an economy; for example, the unpredictable changes in preferences, knowledge, and resources. Knight's entrepreneur is the bearer of uncertainty, but his view of entrepreneurship differs from Cantillon's in that Knight emphasises that entrepreneurship involves much more than arbitrage. Knight defines the entrepreneur's task as that of bearing uncertainty in the knowledge that such uncertainty may provide the opportunity to make profits (Van Praag 1996). In Knight's view, the entrepreneur assumes the uncertainty of changes in consumer wants and purchasing power (Swedberg 2000) and is responsible for decisions, direction, and control wherever uncertainty is involved (Jennings 1996). He must decide what goods to produce and how, where and when to produce them. Knight's entrepreneur is also responsible for guaranteeing a fixed remuneration for the factors of production (Van Praag 1996). Knight also provides a thorough analysis of the motivation and characteristics needed to become a successful entrepreneur (Van Praag 1996). He said that a successful entrepreneur must have the ability to deal effectively with uncertainty; a high degree of self-confidence; and the power to judge one's own personal qualities compared to those of others, such as competitors, suppliers, customers and employees (Swedberg 2000).

For Knight's entrepreneur to be successful, he or she must have the ability to act on his or her own opinion and foresight, effective control over other people and the intellectual capacity to decide how to ensure the success of the enterprise (Van Praag 1996). A further requirement is the availability of enough capital or the ability to obtain capital to guarantee that wages, utilities, and other payments are made when due (Van Praag 1996).

Knight postulates that the entrepreneur's primary function is to initiate innovations. But the introduction of innovations involves costs, and because the innovator cannot accurately predict the results in advance, innovation activity is connected with the risk-taking (Swedberg 2000). Knight further states that even an established business is affected by various changes in conditions, and for it to remain successful it must constantly adapt to the environment, and the entrepreneur should attempt to forecast the changes (Swedberg 2000). Problem-solving and administrative skills as well as leadership skills are required in order for the entrepreneur to "lead" the existing means of production into new channels out of the accustomed ones (Van Praag 1996).

So, some of the key concepts and skills that would be taught to entrepreneurs in a Knight curriculum are: risk-taking, managing or working with or dealing with uncertainty, profit-making, directing, controlling all aspects of business and decision making, opportunity seeking, motivation, self-confidence, ability to obtain capital, and initiation of innovations as well as problem solving and administrative skills.

### **3.5.6 McClelland's curriculum**

Motivation is a cognitive construct which has two components, namely, representation of future outcomes and goals (Bandura, cited in Hall & Lindzey 1985). As a psychologist, McClelland maintained that human beings have desires, driven by human needs, which in turn motivate them to strive for positive outcomes. McClelland identifies three needs that influence and affect motivation: (1) need for achievement (n

Ach), (2) need for affiliation (n Affil), and (3) need for power (n Pow). He argues that these needs exist regardless of culture, race, or and gender (Hall & Lindzey 1985), and he links Protestantism and the need for achievement (n Ach) with economic development.

In his work *The Achieving Society*, McClelland postulates that the ‘n Ach’ is associated with economic growth and derives from a particular historical sequence of events in Western Europe – the Protestant Reformation and the rise of capitalism. However, in its most general form, it might be applied to any society at any time and place (Jennings 1994). The method of determining the n Ach level of a preliterate culture relies on analysis of the content of folktales, widespread in the culture (McClelland 1976). The way the tales are told will reflect a kind of averaging level of motivation among the people of the tribe. The presumed mechanism by which the n Ach level translates itself into economic growth is the entrepreneurial class. If the n Ach level were high, there would presumably be more people behaving like entrepreneurs and aiming to produce more than they consume (McClelland 1976). In the preliterate cultural study, McClelland argues, one would find few individuals or a family deriving all their income from entrepreneurial activities, since raising at least some food for subsistence is widespread. Therefore, a full-time entrepreneur is defined as someone who receives 75 percent or more of his income from entrepreneurial activities (Kuratko & Welsch 2001).

McClelland’s research suggests that the need for achievement is a distinct human motive that can be distinguished from other needs. A society with a generally high level of n Ach will produce more energetic entrepreneurs who in turn will produce more economic development (Jennings 1994). While there is an undeniable core of inborn characteristics, such as energy and raw intelligence, which an entrepreneur either has or does not have, possession of these characteristics does not necessarily make an entrepreneur. McClelland argued that entrepreneurs are born and made better and that

certain attitudes and behaviors can be acquired, developed, practised, and refined through a combination of experience and study (Timmons 1999).

McClelland maintains that achievement-motivated people are not gamblers. They prefer to work on a problem rather than leaving the outcome to chance. He identifies three attributes as key characteristics of entrepreneurs: (1) individual responsibility for problem solving; (2) setting and reaching of goals through own efforts, moderate risk-taking as a function of skill, not chance; and (3) knowledge of results of decision/task accomplishment (Hisrich & Peters 1998).

So, some of the key concepts and skills that would be taught to entrepreneurs in a McClelland curriculum are: moderate risk-taking, problem-solving skills, development of entrepreneurial attitudes and behaviors, and goal-setting attributes.

### **3.5.7 Gartner's curriculum**

Gartner (1985) defines entrepreneurship in terms of new venture creation and views new venture creation as the 'organizing of new organizations'. To Gartner, a seminal scholar subscribing to the 'emergence' perspective of entrepreneurship (see above) acknowledges that the creation of new organizations is but one of many topics germane to entrepreneurship, albeit a fundamental one. The emergence of new organizations requires individuals with expertise, and these individuals are viewed as the key elements of new ventures. A new venture is seen within the context of its environment, where individuals are forced to seek out resources and compete in the marketplace. Gartner identifies the four dimensions of new venture creation as (a) the characteristics of the individuals who start the venture, (b) the organization which they create, (c) the environment surrounding the new venture, and (d) the process by which the new venture is started.

Gartner further identifies variables within each of these four dimensions. Variables within (a), the individual involved in starting a new organization, include need for achievement, risk-taking propensity, age, education etc. Variables within (b), the



organization – that is, the kind of firm that is started, include the new product or service, customer contract, leadership etc. Variables within (c) the environment – that is, the situation surrounding and influencing the new organization, include venture capital availability, a technically experienced labor force, accessibility of customers or new markets, governmental influences, availability of financial resources etc. Variables within (d) the new venture process, which includes actions undertaken by the individual to start the venture, include locating business opportunity, accumulation of resources, marketing of products or services, production, building of the organization, and responding to government and society.

Gartner's framework indicates the importance of the interactions between the variables within the dimensions; for example, whether an individual's education influences the type of activities undertaken to start an organization. Gartner discusses many variables that have been employed in past research to describe entrepreneurs and argues that past research has neglected the 'individual' and concentrated on aspects such as economic circumstances, marketing, and finance when defining new venture creation. He argues that although these aspects are important, none of them alone will create a new venture, and hence there is need for the person to believe that innovation is possible and have the motivation to persist until the job is done.

So, some of the key concepts and skills that would be taught to entrepreneurs in a Gartner curriculum are as follows: need for achievement, risk-taking propensity, new product or service skills, customer contract skills, leadership, locating business opportunity, accumulation of resources, marketing of products or services, production, building of an organization and responding to government and society. Contextual factors would be very important to a Gartner curriculum and would require close attention to: venture capital availability, technical experience of the available labor force, accessibility of customers or new markets, governmental influences, and availability of financial resources.

### **3.5.8 Penrose's curriculum**

Edith Penrose's work (1959, 1995) on the theory of growth of the firm draws into the discussion the role of entrepreneurs inside existing firms and their relationship to growing economies. Penrose's view of the entrepreneur makes the distinction between resources and the services provided or facilitated by those resources with respect to people within the organization. She defines entrepreneurial competence and compares it with managerial competence, to distinguish between the two types of service that may be available from human resources in the firm. In her view, growth of the firm depends upon the entrepreneurial attributes of the services available to it.

She views ambition as the distinguishing feature of entrepreneurial service. In addressing entrepreneurial ambition, Penrose (1959, 1995) suggests there are two types of entrepreneurs: the 'goodwill builder' and the 'empire builder'. The goodwill builder is seen as product-minded or workmanship-minded, the type of entrepreneur who focuses on improving quality, reducing costs and developing better products and technologies. This type of entrepreneur acts to improve the enterprise, to reduce costs, and to develop better products. On the other hand, the empire builder is a financial speculator who uses clever strategies to bargain during business dealings. Her entrepreneur – whether "goodwill builder" or "empire builder" is innovative, and she emphasizes that the entrepreneur is an agent of growth in a firm. She focuses on entrepreneurship within the firm, opportunities, and the management of both entrepreneurial and ongoing business operations.

So, the key concepts and skills that would be taught to entrepreneurs in a Penrose curriculum are: distinction between resources and the services provided or facilitated by those resources, managerial competence, innovation, ambition, the management of both entrepreneurial (new and future-oriented) and ongoing (established and currently oriented) operations.

### **3.5.9 Shane and Venkataraman's curriculum**

In a key work of theory, Shane and Venkataraman wrote: “We define the field of entrepreneurship as the scholarly examination of how, by whom and with what effects opportunities to create future goods and services are discovered, evaluated and exploited” (Shane & Venkataraman 2000: 218).

At the core of entrepreneurship, according to Shane and Venkataraman (2000), are the entrepreneurial opportunities and the process of discovering, evaluating and exploiting them. This means that for one to enact entrepreneurship there must first be opportunities and then they must be discovered, evaluated, and exploited. Shane and Venkataraman (2000) describe entrepreneurial opportunities as situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production. They argue that recognition of entrepreneurial opportunities is a subjective process and that the opportunities themselves are objective as they are not known to all parties at all times. Drawing from Kirzner's seminal work, they maintain that entrepreneurial opportunities exist because different members of society have different beliefs about the relative value of resources, given the potential to transform them into a different state.

Based on the work of Casson (1982) Shane and Venkataraman argue that entrepreneurial discovery occurs when someone conjectures that a set of resources is not being put to its best use; if the conjecture is acted upon and is correct, the individual will earn an entrepreneurial profit. If the conjecture is acted upon and is incorrect, the individual will incur an entrepreneurial loss.

People tend to notice information that is related to information they already know; therefore Shane and Venkataraman postulate that entrepreneurs will discover opportunities because prior knowledge triggers recognition of the value of the new information. They maintain that any given entrepreneur will discover only those opportunities related to his or her prior knowledge. Drawing from the perspectives

entertained by Hayek (1945) they posit that, given that an asymmetry of beliefs is a precondition of the existence of entrepreneurial opportunities, all opportunities must not be obvious to everyone all of the time. Hence, at any point in time only some subset of the population will discover a given opportunity.

According to Shane and Venkataraman, the discovery of an opportunity is a necessary condition for entrepreneurship but it is not sufficient on its own. Once the opportunity has been discovered, a potential entrepreneur must decide to exploit the opportunity. Due to the joint characteristics of the opportunity, once opportunity has been discovered, the discoverer will automatically be willing to go on with the exploitation. The decision to exploit an entrepreneurship opportunity is also influenced by individual differences in perceptions. Drawing on the work of Chen, Greene, and Crick (1998), Shane and Venkataraman argue that people with greater self-efficacy and more internal locus of control are more likely to exploit opportunities, because exploitation requires people to act in the face of skepticism of others. They also believe that the exploitation of opportunity is a setting in which people can achieve, providing a valuable cue for those who possess a high need for achievement; also those who are high in need for achievement may be more likely than others to exploit opportunities. This is related to the preceding idea about exploitation of opportunity.

Following on from Casson (1982), Shane and Venkataraman argue that a distinctive characteristic of entrepreneurship lies not in the act of organizational creation and development, but in the management of entrepreneurial opportunities. This is the approach that fundamentally distinguishes the opportunity perspective from the emergence perspective of entrepreneurship, and was adopted by Hindle and Blackman as discussed in the preceding section, 3.3.1.

So, the important key concepts and skills that would be taught to entrepreneurs in a Shane and Venkataraman curriculum are: entrepreneurial opportunity and the process of discovering, evaluating and exploiting it.

### ***3.5.10 Emergent key concepts of an ideal entrepreneurship education curriculum***

Scrutiny and synthesis of the work of seminal entrepreneurship theorists can be summarized in a list of key concepts which must enter into the initial formulation of any 'ideal' entrepreneurship education curriculum. They are summarized in table 3.2. , which indicates which variables (i.e., characteristics of the environmental interactions that would facilitate entrepreneurial education) are common 'key curriculum items' attributed to the various seminal theorists of entrepreneurship.

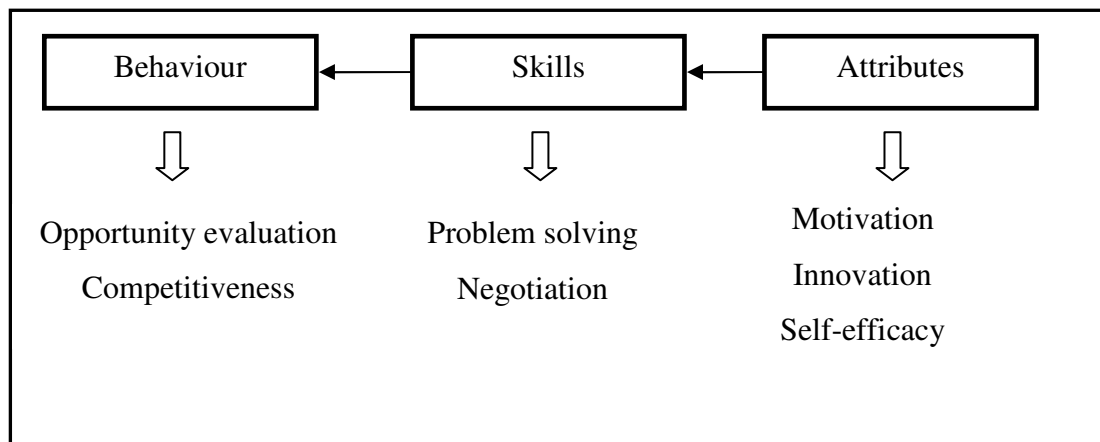
**Table: 3.2 Core entrepreneurship education concepts from selected scholars**

Variables and total of appearance	Entrepreneurship scholars								
	Cantillo-n	Weber	Say	Schumpeter	Knight	Mc-Clelland	Gartner	Penrose	Shane & Venkataraman
Uncertainty 3	X	X			X				
Innovation 5				X	X		X	X	X
Opportunity 8	X	X	X	X	X		X	X	X
Risk-taking 5	X	X			X	X	X		
Identification of markets 3			X				X	X	
Organization of Production process 5			X	X	X		X	X	
Leadership, managerial & administrative skills 6			X	X	X		X	X	X
Motivation 7			X	X	X	X	X	X	X
Need for achievement 3						X	X		X
Profit making 5		X			X	X		X	X
Internal locus of control 2						X			X
Self-efficacy, self confidence 3					X	X			X
Problem-solving skills 2					X	X			
Competition 4				X	X			X	X
Creating new organization 2							X	X	X

### 3.5.11 An Ideal Curriculum Model (ICM) for entrepreneurship education

In one sense, an ideal curriculum model for teaching entrepreneurship could be posited by simply saying ‘do everything listed with an “x” in Table 3.2, above.’ Figure 3.1, below, provides a summary of an ideal curriculum model at a slightly higher level of generality.

**Figure 3.1 A highly abstract Ideal Curriculum Model for teaching entrepreneurship**



Entrepreneurial training as a procedural approach benefits from understanding the attitudes and preparation of the trainees (motivation, innovation and self-efficacy). These allow the development of a curriculum emphasizing the skills needed for success. These may include problem-solving and negotiation skills among others. At the end of the training programme, it is assumed behaviour change may have been achieved as an objective of the training.

What emerges from the literature of entrepreneurship education is that three conceptual categories are at the heart of an ideal curriculum. Instruction needs to: inform *behaviour*, enhance certain *attributes* and develop specific *skills*. Distilling all the collected wisdom of the entrepreneurship education literature, especially as contained in the writings of the seminal scholars previously analysed, I believe the following can be

argued. First, the key behaviours to be developed in an entrepreneurship curriculum focus on opportunity evaluation and the ability to be competitive in a highly competitive market place. Second, the literature can be summarised as indicating that the three entrepreneurial attributes of key importance to the development of an entrepreneur are motivation, innovation and self-efficacy. Third, at the broadest level of generality the key entrepreneurial skills are, fundamentally, problem solving and negotiation. In this thesis, I will draw from the conception of entrepreneurship alluded to by Shane and Venkataraman (2000) perspective where they claim that the emergence of new organizations requires individuals with expertise, and these individuals are viewed as the key elements of new ventures. Shane and Venkataraman (2000) view new venture within the context of its environment, where individuals are forced to seek out resources and compete in the marketplace. Competition and environment are included in the curriculum designed in this thesis as key elements of entrepreneurship education. Shane and Venkataraman (2000) further discuss the concept of business opportunity. In the literature, there is a considerable debate about whether opportunities are discovered or enacted (Alsos and Kaikkonen 2004). The former would imply they are objective potential businesses that are there waiting for someone to exploit them (Shane and Venkataraman 2000). The latter, on the other hand, would mean opportunities have to be built by combining personal knowledge, skills, experience and so on (Gartner 2003). Alsos and Kaikkonen (2004) consider that the opportunity-generation process may include both discovering and creating elements. Gartner (1985) identifies the four dimensions of new venture creation as (a) the characteristics of the individuals who start the venture, (b) the organization which they create, (c) the environment surrounding the new venture, and (d) the process by which the new venture is started. The characteristics of an individual (behaviors, attributes) are the cornerstones of entrepreneurship and thus have to be addressed in any entrepreneurship education curriculum. The curriculum developed in this thesis seeks to go beyond the traditional pedagogic process of teaching participants *about* entrepreneurship. It seeks to develop attributes and behavior of the entrepreneurial person, who will, in addition to knowing about how to create new ventures, be equipped with a set of personal attitudes and competences that enable them to see opportunities and bring them to fruition. In the



process, they initiate change and create wealth or/ and improve the quality of life. (Kirby 2007) The curriculum recognizes that entrepreneurial practices combine a variety of roles, each demanding different skills, knowledge and capabilities and therefore the content of entrepreneurship education need to reflect these roles (Solomon 2008).

To save “double handling”, I will wait until section 3.7, below, to argue in detail as to why development of these behaviours, attributes and skills ought to be at the heart of the Ideal Entrepreneurial Curriculum.

At this stage, it is appropriate to summarize all arguments from the literature as the broad embrace of figure 3.1: the ideal curriculum model for teaching entrepreneurship: a generalized set of related concepts, drawn from leading theorists in the entrepreneurship literature, to be important components of entrepreneurship education. However, these concepts were extracted from a review of general theoretical models of *what* should be taught, and it remains to be seen whether these variables have actually featured in real-world applications. The aim of the next section is to provide a review of the issues involved in *how* entrepreneurship should be taught.

### ***3.6 Distinguishing how to teach from what is taught: pedagogical issues in entrepreneurship education***

As has been noted above, entrepreneurship requires a wide range of behaviors, skills and attributes. This chapter has identified variables which should be the focus of any entrepreneurial education program. Arguably, these programs can be developed only through the use of an equally wide range of carefully tailored pedagogies (Gibb, cited in Fayolle 2007: 79). Hence, other important pedagogical components of fostering entrepreneurship include, among others: (1) style of teaching; and (2) lesson structure.

Approaches to entrepreneurship education are likely to vary between countries, depending on the concept of education in different cultures (Carrier, cited in Fayolle

2007: 143). This variation means that another important issue in fostering entrepreneurship through education is the manner in which these skills and abilities are taught. Caird (1990) suggests that enterprise education (and here we may agree that entrepreneurship education should follow suit) should be characterised as: (a) being experientially based; and (b) teacher-facilitated. Another important attribute of entrepreneurship education programs is that, they: (c) permit flexible instruction. These additional recommendations for an entrepreneurial education program will now be discussed in greater detail.

### **3.6. 1 Experience-based learning**

Overall, the literature on entrepreneurship education emphasises the value of practical experiences. For instance, Dana (1993) quotes from a range of authors who suggest that some skills are learned through observation, while others are learned through trial and error. Hood and Young (1991) report on a survey of successful US entrepreneurs and find that the suggested pedagogical methods for the development of entrepreneurs should involve less of traditional teaching methods and more of simulation and experiential activities. Similarly, Wildman (1986), in a description of vocationally based training in the context of enterprise skill development, suggests that training needs to be experiential, applied, situational and practical.

Kearney (1991) argues that education and training activities delivered in an enterprising manner should involve 'training through enterprise' where the activities are experientially based. Similarly, Turner (1988), Dunn (1996), and Luczkiw (1998) argue for experientially based learning models. Kearney (1991) describes education and training activities that he conducted in Australia as being delivered in an enterprising manner and refers to activities which are experientially based. Dunn (1996) and Luczkiw (1998) also describe experientially based learning models involving participation in projects.

Learning taps the knowledge about entrepreneurship that students acquire during a programme (Souitaris, Zerbinati and Al-Llaham. Hjorth and Johannisson (2007)

describe learning as an entrepreneurial process. They believe that entrepreneurial processes should be regarded as forms of social creativity that are also opportunity-creating, not simply opportunity –recognizing/exploiting. They consider education to be the achievement accomplished through learning processes. They argue that if entrepreneurship is a creation process, then learning in the case of entrepreneurship would be creating new knowledge about the making of *the new, about creation*. Entrepreneurship education is not only about learning *what to do*, but also about learning *how to do new things, how to create*. One particular way to redesign an entrepreneurship curriculum is to shift from a teaching perspective to a learning perspective (Hjorth and Johannisson 2007). The critical goal of an entrepreneurship program is to give the participants a rigorous learning experience that translates into real world value (Harrison and Leitch 2008). Kirby (2006) recommends that, in addition to teaching students *about* entrepreneurship, they should also be educated *for* entrepreneurship and *through* entrepreneurship by placing the curriculum in a *real world* context Kirby (2006). This can be done by using the new venture creation process to help students acquire a range of both business understanding and transferable skills and competencies further (Kirby (2006). Further, there is a consensus that entrepreneurial behaviours are learned through experience and discovery, *hands-on, learning-by-doing* (Vincent and Farlow 2008). Hong (2004) concurs with this and argues that programs providing *real-world* experience are useful in enhancing entrepreneurial intentionality. He proposes experiential methods and claims that entrepreneurs learn better via experience. Smilor (1997:344) supports this by stating that:

“Effective entrepreneurs are exceptional learners. They learn from everything. They learn from customers, suppliers, and especially competitors. They learn from employees and associates. They learn from other entrepreneurs. They learn from experience. They learn by doing. They learn from what works and, more importantly, from what doesn’t work“

Pittaway and Cope (2007) define entrepreneurial learning as ‘learning that occurs during the new venture creation process. Their definition encompasses the *learn-as-*

*you-go* process associated with venture creation. They support the view that entrepreneurs are action-oriented and that learning occurs through experience and discovery, a view held by many other entrepreneurship scholars such as (Dalley and Hamilton, 2000; Rae, 2000; Rae and Carswell, 2000). Pittaway and Cope (2007) have argued that entrepreneurs learn through doing and reflection, including learning by copying, learning by experience; learning by problem solving and opportunity taking; and learning from mistakes. Concurring with this, Politis, (2008) maintains that, entrepreneurs develop certain skills, preferences and attitudes through their involvement in multiple business start-ups. These skills preferences and attitudes can be seen as an experientially acquired action capability that helps entrepreneurs to deal with novel and ill-defined business concepts in the process of new venture creation (Politis, 2008).

In view of the above, the curriculum in this thesis is built on the premise that people learn from experience and thus recommends engaging the concept of experiential learning. Understanding how entrepreneurs learn is an important precondition for curriculum developers and facilitators, hence, the importance of this section in this thesis.

### ***3.6.2 The instructor as facilitator and entrepreneur***

Dana (1993) argues that the entrepreneurial teacher's role should be that of facilitator. Kourilsky (1990) also suggests that the teacher must take on the role of a facilitator, who guides participants through first-hand, real-world entrepreneurship experiences. McMullan and Gillin (1998) describe a program in Australia where the professor's role is that of academic practitioner who teams with an industry specialist called a 'practitioner academic.' Durham University Business School (DUBS) (1990) describes the enterprise approach as one where the teacher encourages the pupils to learn and to know 'how to learn' and 'what to learn'. This approach encourages pupils to take responsibility for much of their own learning. Teachers need to provide pupils with the opportunity to learn in a proactive way and share knowledge with one another.

Kent (1990) argues that entrepreneurship should also be taught by creative entrepreneurship teachers. He sees a problem in that many American teachers have limited understanding of entrepreneurship and, therefore, need a great deal of professional development in this area. According to Kent, an effective entrepreneurship program depends on the ingenuity, innovation and inspiration of an effective educator who is willing to tailor the classroom setting to the needs of the student and the particular circumstances and opportunities of the day. This point is supported by Hindle (cited in Fayolle 2007). Rabbior (1990) concurs, and argues that an entrepreneurship program should expect the teacher to be entrepreneurial.

### ***3.6.3 Flexible instruction***

Surveys conducted by Gibb (1994) and Glover and Wentworth (1998) have shown that entrepreneurs, especially small entrepreneurs, constitute a heterogeneous population operating in diverse industrial sectors. These studies support the notion that entrepreneurship education programs should not rigidly adhere to a standard training structure. Rather, entrepreneurial training courses should be differently based on an evaluation of the entrepreneurs' various backgrounds and their motivations and goals for their business. Consistent with this, Curran and Stanworth (1989) and McMullan and Long (1987) also describe the need for increasingly flexible methods of instruction that simulate the environment of real entrepreneurs. In agreement with this, Rosa et al. (1998) maintain that the world of the entrepreneur is heterogeneous in the extreme and that it is dangerous to assume that what is reasonable and effective in one context will be so in another.

### ***3.6.4 Bringing prior knowledge, experience and context into the mix***

For empirical program testing of SIYB, there remain two overwhelming facts: though one might have a notion of an ideal curriculum, the ideal world does not exist and education does not take place in a vacuum. Before undertaking any program of

education, people coming to the program ‘bring to the table’ certain pre-existing skills and attributes and the nature of the environmental context affects the ability to teach and learn any of the skills that may be posited in an ideal curriculum.

So, the time has come to place educational variables in the context of others. Only then will we have a testable model of entrepreneurial education. The next section moves the study from the realm of ideals to the realm of testable practicalities and adds the vital measure of any curriculum’s actual efficacy: performance.

### ***3.7 A derived theoretical framework: a model for evaluating any entrepreneurship education program***

#### ***3.7.1 Education in context: moving from the contents of an ideal curriculum to a model of education’s role in the total entrepreneurial process***

In the sub-sections of section 3.7, I go beyond the notion of an Ideal Curriculum Model (ICM) to develop an Entrepreneurial Process and Performance Model (EPP) for entrepreneurship education. In order to position entrepreneurship educational elements embodied in the ideal curriculum model (ICM) within a full model of the entrepreneurial education, I commence by expanding upon the three critical areas of the ICM: (1) behaviors, (2) attributes, and (3) skills. These three categories guide the selection of more detailed variables that should be targeted in entrepreneurial education.

Behaviors refer to actions taken by an individual. Among the entrepreneurial behaviors cited are: moderate risk-taking, identification of the markets or customers, organization of the production process, identification of business opportunity, response to opportunity, creation of profit, economic risk taking, the ability to find alternative sources of supply of raw materials, creation of new organizations, profit-making, directing and controlling, decision making, opportunity seeking, and the ability to obtain capital.

Related to these behaviors are a number of supporting attributes. These attributes refer to intrinsic characteristics of individuals, and include: motivation, self-efficacy and self-belief, creativity, locus of control, need for achievement, goal-setting, and innovation. Previous studies have emphasized that these attributes are key to explaining new business startups and the success of the existing enterprises (Phan, Wong & Wang 2002). These attributes are of high importance in entrepreneurship education because of their implications for entrepreneurial success.

Finally, skills refer to knowledge which is demonstrated by action, that is, ability to perform in a certain way. Relevant skills include: negotiation, creative problem-solving, administrative skills, innovativeness, leadership skills, and skills needed to develop new methods of production. Table 3.3 summarizes, potential entrepreneurial education variables, grouped into the three categories.

**Table 3.3: Identification of entrepreneurial behaviors, attributes, and skills drawn from the literature**

<b>Behavior</b>	<b>Attributes</b>	<b>Skills</b>
<b>Opportunity evaluating,</b> opportunity seeking, opportunity dictatorship, opportunity discovering, and opportunity exploiting	<b>Motivation</b>	Leadership skills
Risk-taking	Uncertainty	Skills needed to develop new methods of production
Identification of the markets or customers	Need for achievement	<b>Innovation</b>
Organization of the production process	<b>Self-efficacy</b>	<b>Problem-solving skills</b>
Identification of a business opportunity	Creativity	Administrative skills
<b>Competitiveness</b>	High locus of control	<b>Negotiation skills</b>
The ability to find alternative sources of supply of raw materials	Self-confidence	
Creation of new organization	Goal-setting attributes	
Profit making	Uncertainty	
Directing and controlling	<b>Innovation</b>	
Decision making		

Note: Words in bold are adopted for the curriculum to be formed

### **3.7.2 Distilling necessary elements for entrepreneurship education**

It should be noted that more extensive discussion of elements of entrepreneurship education is located in section 3.5. In this section, I have selected the necessary elements to build entrepreneurship education models.



The literature reveals that entrepreneurship is not a genetic trait; it is a learned skill, and so it can be taught. The literature suggests that every person possesses the potential to engage in enterprising and entrepreneurial activities, and that in doing so an individual can demonstrate, to some degree, some enterprising behaviors. However, the mix of entrepreneurial/enterprising skills and attributes exhibited will vary from one person to another and can be stimulated or not or stymied by factors such as environment, culture, teaching and learning. Some researchers argue that while many of the aspects of entrepreneurship can be taught, a certain flair or attitude towards taking risks is also required.

The literature acknowledges the fact that entrepreneurs, especially small-scale entrepreneurs, constitute a heterogeneous population operating in a diversity of industrial sectors and markets. They therefore display a diversity of training needs, which should be catered for according to context and circumstances. A standard training course may thus fail to meet different demands. Hence, entrepreneurial training courses should be differently based on an evaluation of the entrepreneurs' various backgrounds and their motivations and goals for their business, because the world of the entrepreneur is heterogeneous in the extreme, and it would be dangerous to assume that what is reasonable and effective in one context will also be so in another.

The reviewed literature supports the argument that there is no generic, accepted definition of the terms 'entrepreneur' and 'entrepreneurship', and likewise, despite a multitude of articles focusing on entrepreneurship education, no consensus about its definitions has emerged. This is alluded to by Kirby in Fayolle et al. (2007: 21) when he states, "There is no common agreement over what constitutes entrepreneurship education". For example of the diverse opinions and definitions, there exist different types of entrepreneurship education structures such as academic/university, short training programs, individual coaching, and many others. Furthermore, entrepreneurship education literature reveals a variety of approaches based upon the rubrics of small business, entrepreneurship, and enterprise, combined in various permutations with education, learning, teaching, and training (Green & Rice 2007: 15). With such a large

scope of study and variation in viewpoints, it is very difficult to find a meaningful approach to provide a synthesis of the above literature.

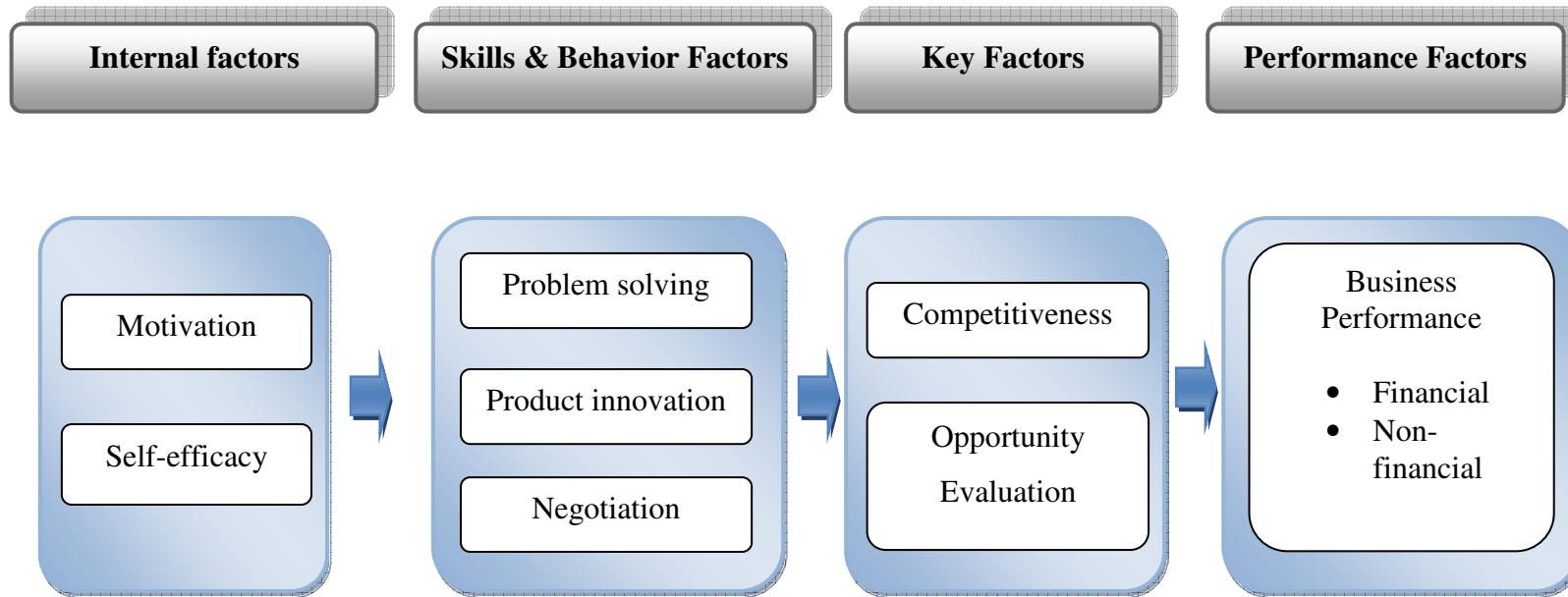
However, since the examination of the literature – especially scrutiny of the theoretical offerings of seminal scholars — delivered a number of concepts about which there is consensus, it should be possible to incorporate them into a theoretical framework, which may claim some research-based theoretical relevance.

The next section develops a generic entrepreneurship education model with the view to having it serve as a theoretical framework for an eventual program evaluation of the SIYB program. An attempt has been made to include as many attributes from the literature as possible.

### ***3.7.3 A derived conceptual framework: an entrepreneurial process and performance model for evaluating any entrepreneurship education program***

The synthesised model presented in this section uses variables derived from literature. It consists of four levels. Level 1, Internal factors, comprises motivation and self-efficacy. Level 2, Skills & Behavior Factors, comprises curriculum goals consisting of problem-solving, innovation, and negotiation. Level 3, Key Factors, shows two necessary variables for entrepreneurship — opportunity evaluation and competitiveness. Level 4, Performance Factors, comprises two categories of business performance: financial outcomes (profit, cash-flow, sales) and non-financial outcomes (employment). The generic ideal curriculum model is shown in figure 3.2.

**Figure 3.2 A generic entrepreneurial process and performance model (EPP)**



The framework features essential elements of entrepreneurship and how they relate. The first two variables at the top left of the model show the internal forces of motivation and self-efficacy. These are attributes, which are intrinsic to the individual. The second level of the ideal curriculum model depicts skills and creativity essential for entrepreneurship, as indicated by entrepreneurship scholars. They are: problem-solving, creativity at product innovation, ability to adapt to business needs, and negotiation skills. The fourth variables in this model depict competitiveness and opportunity evaluation which affect business performance.

The proposed model recognizes the fact that education/training is best evaluated at a skill-development level. The other outcomes — such as increased sales, profit, employment, and assets — are usually realized long after education/training; hence, they are treated as delayed outcomes. Therefore, competitiveness and opportunity evaluation are regarded as skills which can be accrued from training, and which can be benefits of training. The model further addresses the question of whether skills outcomes can translate to financial outcomes. The model includes business performance variables, such as financial performance measured by cash flow, increased sales and profits. The model recognizes that good financial performance would translate to high employment and accumulation of assets.

The following sections provide detailed support for various levels of the model. They provide a brief description of the variables in each cluster.

### ***3.7.4 Level one***

For entrepreneurship, key internal attributes include two variables, motivation and self-efficacy.

#### **Motivation**

The underlying question related to motivation is: why do people do what they do? In general terms, motivation can be described as the direction and persistence of action.

Motivation determines why people choose one particular course of action in preference to others, and why they continue with a chosen action even in the face of difficulties and problems.

Many theories attempt to explain the nature of motivation, including expectancy theory, achievement motivation theory, motivation hygiene theory, and hierarchy of needs theory. This multiplicity of theories, and the complexity of motivation itself, makes it difficult to arrive at a definitive theory of motivation (Wickham 2001: 374). However, because of its impact on entrepreneurial performance, motivation is of great interest to entrepreneurship scholars. In a review of motivation theory, Wickham (2001): identifies four common characteristics which underlie the definition of motivation, as follow:

(1) Motivation is typified as an individual phenomenon. Every person is unique, and all the major theories of motivation allow this uniqueness to be demonstrated in one way or another.

(2) Motivation is described as intentional, and it is assumed to be under an individual's control, and behaviors that are influenced by motivation, such as effort expended, are seen as choices of action.

(3) Motivation is multifaceted. The factors of greatest importance are: (i) what gets people activated and (ii) the force of an individual to engage in desired behaviors (direction or choice of behaviors).

(4) The purpose of motivational theories is to predict behaviors, thus, motivation is not the behaviors itself, and it is not performance. Motivation concerns action, and the internal and external forces which influence a person's choice of action.

On the basis of the above characteristics of motivation, motivation can be defined as a driving force within an individual by which he or she attempts to achieve some goal in order to fulfil some need (Wickham 2001: 374). However, motivation is highly personal, and it is influenced by many variables. If people's behavior is determined by what motivates them, this determination can enhance entrepreneurship behaviors and

skills and contribute to business performance (Wickham 2001: 374). Entrepreneurship literature has clearly indicated that motivation is at the heart of entrepreneurship; hence, motivation is regarded as one of the most important variables in this study.

### **Self-efficacy**

A critical factor in the decision to start a new business or continue with and succeed in an operating business is the degree of confidence that an individual possesses in their skills and abilities to do so. The concept of self-efficacy (Bandura 1997) is central to the willingness of individuals to act in an entrepreneurial way, to identify and seize opportunities. Self-efficacy beliefs are “people’s judgment of their capabilities to organize and execute courses of action required to produce given attainments” and have the consequence that “people’s level of motivation, affective states, and actions are based more on what they believe than on what is objectively true” (Bandura 1997). Self-efficacy has been shown to predict individual behaviors and performance in a range of contexts (Stajkovic & Luthans 1998) resulting in effects which, in many cases, endure for years. Highly efficacious people are likely to persist in the face of obstacles between them and their goals.

The link between self-efficacy and persistence is particularly significant to entrepreneurship. The path to entrepreneurship is characterized by the need to recognize opportunities, create products/services, and perform many other tasks associated with business development (starting and improving the business); hence entrepreneurs have to have high level of confidence in order to achieve their objectives. Confidence in one’s skills has been linked to behaviors such as innovation, opportunity recognition, and evaluation (Markman et al. 2002; Baum & Locke 2004).

From the above literature, it is evident that self-efficacy has an important role to play in entrepreneurship; hence, it is reasonable to expect that self-efficacy might play an

important role in the development of entrepreneurs and their performance. Therefore, it is included in this model.

### ***3.7.5 Level two***

The current literature in the field reveals the core skills that are essential for successful entrepreneurship. They are discussed below.

#### **Problem-solving**

Problem-solving skills are essential for entrepreneurs. The work of entrepreneurs can be seen as processes of problem solving. In the busy life of an entrepreneur, problems evolve, actions have to be selected, and solutions have to be found. A seminal contribution related to problem solving has been made by Simon and Newell (1972) who argue that the starting point of the problem-solving procedure is the perception of a problem. They argue that a person is confronted with a *problem* when he wants something and does not know immediately what series of actions he can perform to get it, hence, Problem-solving is the process of finding out a sequence of states between the initial and the desired final state under the given constraints. The process is based on a set of mental representation (Simon & Newell 1972) and requires both certain personal qualities of individuals as well as motivation (Amabile 1996). The role of an entrepreneur involves a lot of different functions which require problem-solving skills; hence the importance of problem-solving variable in this study.

#### **Product innovation**

Product innovation has a variety of definitions. Some writers describe it in terms of a product which is first of its kind. Olson, Walker & Ruckert (1995) describe taxonomy of product innovation in terms of innovation and product modification. They define innovation as products new to the world, whereas product modifications are line extensions. The advantages of product innovation are greater productivity, better quality, durability, uniqueness, cost-effectiveness and efficiency; those qualities are the

signs of organizational competitiveness (Atuahene-Gima 1996; Song & Parry 1997). In this study, "product innovation" means development of new product/service and product/service modification and the need for people to be creative.

### **Negotiation**

A negotiation is an interactive communication process that may take place whenever one wants something from someone. Entrepreneurship involves dealing with a range of people and organizations with differing attitudes and working practices. Negotiation is an ability to understand what is wanted from a situation, understand what is motivating others in that situation, and recognize the possibilities of maximizing the outcomes for all parties. Being a good negotiator is more about being able to identify and explain win-win scenarios than being able to "bargain hard" (Wickham 2003: 55).

Entrepreneurial performance results from a combination of skills, of which negotiation skills are part, hence, the importance of negotiation skills in the development of entrepreneurship education curriculum.

### ***3.7.6 Level three***

#### **Competitiveness**

The variables before business performance in this model depict competitiveness and opportunity evaluation. Entrepreneurial theorists Miller and Chen (1994) state that "competitive inertia" refers to the level of activity that a firm undertakes to alter its competitive stand. This definition implies that competition is based on action. Such action could be linked to an organization's competitiveness, which Porter and van der Linde (1995: 97) suggest is at the industry level; "Competitiveness ... arises from superior productivity, either in terms of lower costs than rivals or the ability to offer products with superior value that justify a premium price." This discussion of rivalry is core to the competitive concept that Dickson (1992: 69) describes: the principle driving



force of competition is the “intensity of the rivalry between sellers for the demand of buyers”.

Crouch and Richie (1999) acknowledge the difficulty inherent in the effort to put into operation and measure competitiveness. "The difficulty arises, because competitiveness is both a relative concept — that is, the definition has to address the question, 'superior relative to what?' and the concept is multidimensional — that is, the definition has to address the question, 'what are the salient qualities?'" Schumpeter (1934, 1950) described competitiveness as "the ability to carry out a range of competitive actions to capture and sustain a lead" (Ferrier et al. 1999: 375). Kirzner, (1973, 1997) supports this by describing effective competitiveness rivalry as the ability to create new ways of doing things and being entrepreneurial.

Porter’s (1980) early theory of competitiveness has been around for some time. Porter discusses innovation as being critical to competitiveness and thus to a firm’s performance. According to Porter, innovation is a competitiveness attack. However, there has been little empirical examination or operationalization of competitive action (Slater & Olson 2002). Slater and Olson (2002) point out that innovation can be as threatening as competition. This threat is mostly applicable to “disruptive innovation,” which is an innovation that has the potential to destroy incumbent businesses and products (Porter 1980)

The competitiveness literature offers definitions that are both micro and macro oriented. From a micro perspective, competitiveness is seen as a firm-specific characteristic. The specific behaviors of the firm determine its competitiveness (Porter 1980). For a firm to be competitive it should provide products and services for which customers are willing to pay a fair price. And innovativeness determines the firm’s competitiveness.

At a macro level, competitiveness is the concern of the nation. The goals of any nation are to improve the real income of its people. The competitiveness of a nation is affected by a number of factors, including social, cultural, economic, and political, and it is

measured by the performance of the country's products on the international market (Crouch & Ritchie 1999). For a nation, improved competitiveness should translate into new jobs and better living conditions.

Competitiveness has been looked at and defined from different perspectives. Scott and Lodge (1995) looked at competitiveness from a national perspective. They defined national competitiveness as, "a country's ability to create, produce, and distribute products in international markets, earning returns on its resources" (Scott & Lodge 1995: 195). Competitiveness is the production of high-quality goods and services that are successfully sold nationally and internationally, whose results are well-paid jobs and the production of resources that can be used to provide infrastructures and help the disadvantaged in society (Jennings 1994)

At the national level, a competitive economy exports goods and services profitably at world-market prices. The World Competitive Report (WCR) (1992) defines competitiveness as the ability of a country or company to proportionally generate more wealth than its competitors in world markets. Competitiveness can be viewed as combining assets and processes to come up with economic results. The report further argues that each nation owns certain types of inputs, which can be used to produce output, and lists seven sets of inputs, which it identifies as the determinants of a country's ability to compete internationally. These are: 1) domestic economic strength, 2) internalization, 3) government, 4) finance, 5) infrastructure management, 6) science and technology, and 7) people. According to the report, the competitiveness of any country is determined by the following factors: technology, capital, labor skills, productive capability, managerial expertise, imports, exchange rates, government policy competition, labor-management relations, globalization, and influence of foreign investors. The above study confirms a link between innovation and competitiveness linking it to business performance.

In this study, competitiveness refers to micro perspective competitiveness; that is, it is seen as a firm-specific characteristic.

## **Opportunity evaluation**

Recent entrepreneurship literature has focussed on understanding and explaining what constitutes an “entrepreneurial opportunity” (McMullen et al. 2007; Plummer et al. 2007). In Shane and Venkataraman’s (2000) influential article, they define the field of entrepreneurship as the study of “how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited.” They define entrepreneurial opportunities as “those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their costs of production” (Shane & Venkataraman 2000). This is similar to the view, from an economics perspective, taken by Casson and Wadeson (2007), that entrepreneurial opportunities can be manifested through the generation of products and services.

Some of the questions about entrepreneurial opportunities include whether these opportunities are subjective, selected by the entrepreneur due to self-interest, (Yu 2001), or objective, separating the opportunity from the individual (McMullen et al. 2007). An objective opportunity is defined as one that anyone in the marketplace can be aware of.

However, it is possible to see subjective opportunities as potential objective opportunities. (McMullen et al. 2007) explain: opportunities can be objective if they are generalizable, accurate, and/or timeless. Generalizability makes an opportunity objective if (1) more individuals share similar (subjective) goals; and (2) if the opportunity advances a wider variety of goals. In their view, accuracy leads to objectivity if the entrepreneur is “correct” in that he or she realizes an entrepreneurial profit (and not an entrepreneurial loss). What may have been initially a subjective goal becomes objective by the “correctness” McMullen et al. (2007)

Furthermore, opportunities are also increasingly objective if they can be considered timeless, i.e., if they are based on physical laws of nature (cause and effect), as opposed

to being based on fleeting societal patterns. An example of a timeless opportunity is an improvement in productivity through a “revelation of natural laws” (McMullen et al. 2007).

Kirzner (1973) sees entrepreneurial opportunities as objective due to the price system. It becomes a matter of exploiting various opportunities, i.e., arbitrage opportunities. However, Kirzner (1973) also views the recognition and exploitation of *objective* opportunities as a subjective process. An example of an objective opportunity is the discovery of the telephone, which created new opportunities for communication, whether or not people discovered these opportunities (Shane & Venkataraman, 2000). Scholars have ascribed the origins of entrepreneurial opportunities to various reasons (see Plummer et al., 2007), including: (1) information asymmetry (Kirzner 1973); (2) exogenous shocks (Schumpeter 1934); (3) changes in supply (Schumpeter 1934); (4) changes in demand (Kirzner 1979; Schumpeter 1934); (5) factors that disequilibrate the markets (Holcombe 2003); (6) factors that enhance production possibilities (Holcombe 2003); and (7) prior entrepreneurial activity (Holcombe 2003).

It may seem counterintuitive that opportunities arise from prior entrepreneurial activity,—as if the entrepreneurial opportunities are “used up” once exploited. One way to understand the idea of renewed or repeated entrepreneurial opportunity is through the continued alertness of entrepreneurs to select how to best choose the means to pursue his or her desired ends. This means-to-ends framework can create additional entrepreneurial opportunities (Plummer et al. 2007).

The importance of defining what authors mean by “opportunity” or “entrepreneurial opportunity” cannot be underestimated. As with the term “entrepreneur,” different authors define “entrepreneurial opportunity” in different ways, and they are usually not explicit in their definitions (Gartner 1990). This lack of definition creates confusion, especially when authors are using the same term with different meaning. McMullen et al. (2007) call definition “the *most* important step,” of communicating concepts and recommends that authors should define what they mean by the words ‘entrepreneurial

opportunity'. As we have seen from the Shane and Venkataraman, (2000) study, elements of entrepreneurial opportunity include, opportunity recognition, opportunity discovery and opportunity evaluation. For this study, the evaluation of opportunity is more important to the entrepreneurial curriculum model than evaluation of other elements of opportunity.

### ***3.7.7 Level four: Performance measurements***

Level four of the model deals with both financial and non-financial aspects of business performance.

#### **Business Performance**

Performance is a concept associated with the phenomenon being studied. In the context of organizational financial performance, performance is a measure of change of the financial state of an organization (Carton & Hofer, 2006: 2).

Since the early 1980s, evaluation studies on entrepreneurship education and training have received increased attention in the literature (Philips 1994). However, despite the application of many evaluations of training, there is no agreed procedure for these studies. There are problems in measurements for entrepreneurship because there are currently no generally accepted measures for several of the major concepts of the field (Carton & Hofer 2006: 2). The lack of clear consensus on the definition of entrepreneurship and small business contributes to the confusion in the existing research on training (Gibb 1993). Hill (1988) found a lack of accepted paradigms or theories of entrepreneurship education and training. There are several reasons for this shortcoming and lack of standardised procedures for evaluations; some of them are: "problem of time and resources, data access and collection; difficulties in designing experimental studies with longitudinal approach and control groups, impracticability of controlling all intervening variables; the right evaluation questions not always being asked, links between training and performance being often unclear" (Friedrich & Frese 2004). Storey and Westhead (1994) point out that often there is an implicit assumption that

training will improve business performance. They criticise the training-performance link approach by arguing:

*Even if you accept that training has caused the performance, how do you decide when looking at the performance measure which parts of the performance change were due to training and which were due to other factors such as the market, the personal life of the owner, action of competitors and so on?(Storey and Westhead, 1994).*

Cushion (1996) summarised several often-quoted stages of success measures in entrepreneurship training as follows: "Behaviour occurs in recipients as a result of learning, behavior leads to a change in business performance, change in business performance measured." However, he does not state how business performance is measured.

Friedrich and Frese (2004) conducted a literature review on the evaluation of entrepreneurial training programs and found little evidence of success of the training programs in any of their reviewed literature. They further conducted an evaluation of the training program which they designed for their clients. Their longitudinal study sample included a control group and an experimental group; the result indicated that the groups showed statistically significant differences in innovation and number of ideas after training.

Carton and Hofer (2006) reviewed organizational performance literature and proposed a new model of evaluation. Their research identified appropriate measures. They acknowledge the fact that performance is multidimensional for each performance construct and came up with a mix of variables including: a profitability dimension that deals with financial issues, such as profits; an operational dimension that includes non-financial issues, such as customer satisfaction; a growth dimension that gives some indication of growth, such as growth in sales, assets and employees; and many more. Their overview study reveals that a total of 88 different variables were used in 138 studies. They found that although at face value many of the performance measures

used in the studies appeared to be similar — such as sales growth and profit growth — they did not normally measure the same phenomenon (Carton & Hofer 2006: 13). They conclude by asserting that there is no consensus with respect to just what “business performance” means. Furthermore, how to measure it remains unsolved.

The literature abounds with discussions of the difficulties of measuring business performance. In this study, business performance will be gauged by financial (profit, sales and cash flow) and non-financial (employment and assets) measures. However, should the actual business performance be difficult to predict, the overall performance of the entrepreneurial training will be assessed using competitiveness and opportunity evaluation as measures of performance.

### ***3.8 Entrepreneurship Performance Process: A derived theoretical framework for evaluating entrepreneurship education program in developing countries***

Figure 3.2 depicts a generic entrepreneurship education model. As discussed above, this model was created by taking into account a collection of variables from the entrepreneurship literature. The model is a conceptual framework and gives the important elements required for an ideal entrepreneurship curriculum. Before the introduction of this model, a synthesis of variables from the previous sections was provided, and elements of this model were derived from that synthesis. It should be noted that only variables deemed most crucial for this study were included; however, this does not mean that other variables are not important. The variables occurring most often in table 3.1 were used.

The above model (in figure 3.2) is a proposed overall model based on previous theoretical works on entrepreneurship. The proposed model links different conceptions of entrepreneurship to form an ideal curriculum for the developing country environment. Many entrepreneurship scholars have attempted to define entrepreneurship using the above concepts; hence, they are included in this model.

Given the focus and space limitations, not all concepts are included. Figure 3.2 focuses

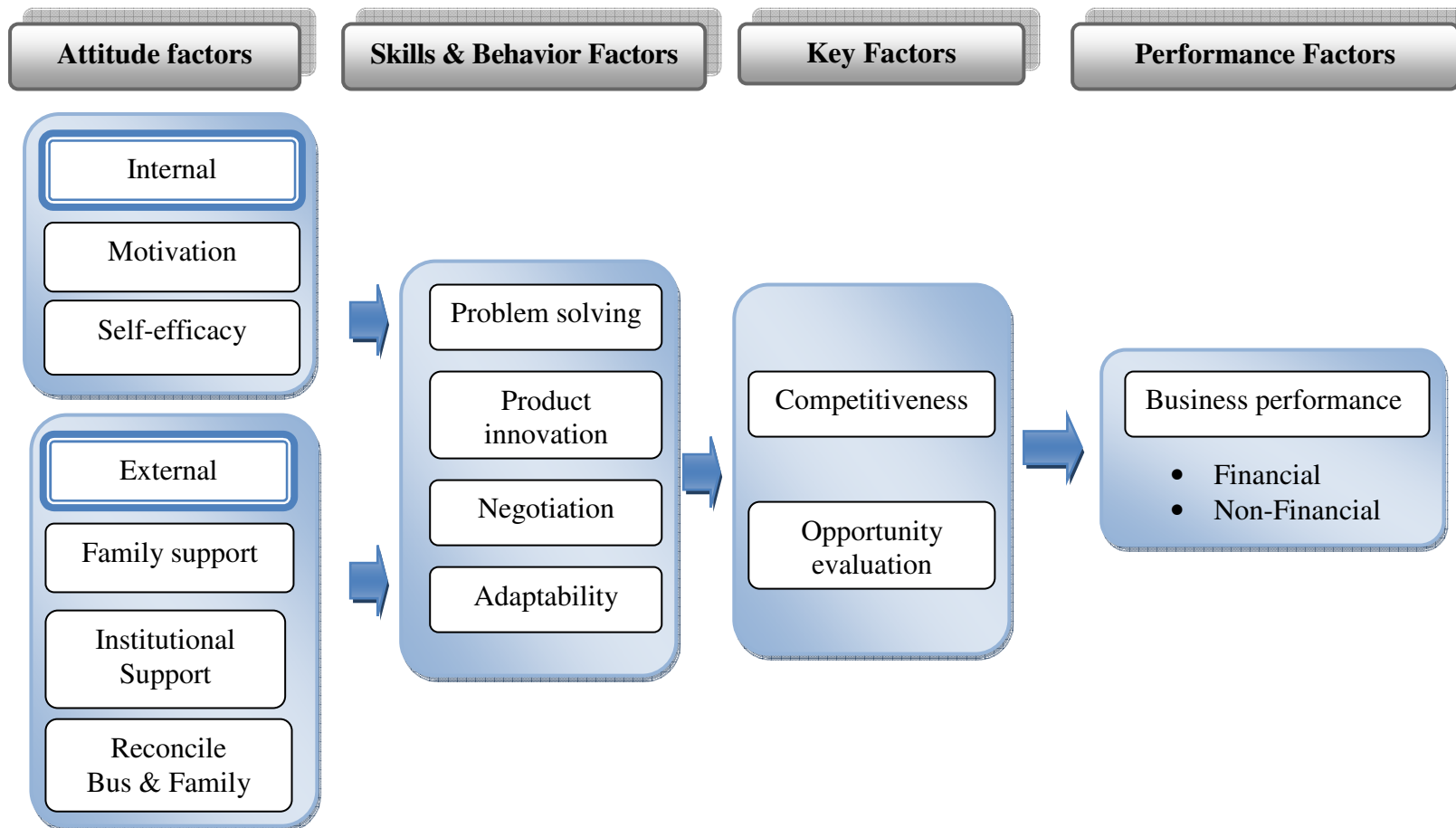
on concepts selected for the generic curriculum and depicts the interrelationship between attributes and behaviors which can be developed into entrepreneurial skills. This initial model is regarded as a building block on which to base the development of a model for the developing-country context. In this section (3.8) the model is modified to suit a developing country context.

To develop the ideal curriculum model suitable for a developing-country context it is necessary to introduce some modifications based on certain assumptions about the inherent munificence of a developed-country environment (e.g., depth of capital markets, property rights regimes, general levels of education and many more) – assumption that cannot be made for the developing-country context. Martins (2007: 1) maintain that entrepreneurship is conditioned by various factors and while it is essentially a product of individual behaviors, motivations and knowledge, it is dependent on opportunities, available resources and the nature of the environment (that is, on local and regional infrastructures – social, economic and financial). Modification was necessitated by the fact that most entrepreneurship research has been generated in the US and Europe and does – overtly or implicitly – assume a developed country environment. So, concepts and theories which are derived from such research and used in the developed-country ‘ideal curriculum model’ might not be relevant in developing countries. In order to formulate a curriculum model suitable for developing countries, it is essential to consider such differences.

Figure 3.3 shows a framework of the ideal entrepreneurship curriculum relevant to a developing country. It results from modifying the previous generic framework (figure 3.2) in light of the distinctions articulated above, between the developed and developing country.



**Figure 3.3 An enhanced Entrepreneurship Process and Performance model (EPP)**



The framework features essential elements of entrepreneurship. The first two variables at the top left of the model show the internal forces of motivation and self-efficacy. These attributes can contribute to entrepreneurship education.

In addition to the internal forces of motivation and self-efficacy discussed above, level 1 of the ICM (ideal curriculum model) for developing countries has three more variables, which are macro issues relevant to creating an enterprising culture, or ‘enabling environment.’ These additional variables include “support from government and financial institutions”, “reconciling business and family,” and “support from family”. The model takes environment into consideration, as it can pose both opportunities and threats to entrepreneurs.

The second level of the ideal curriculum model depicts skills essential for entrepreneurship as indicated by entrepreneurship scholars. The “Ability to adapt to business needs” variable has been added to level 2 list. The subsection below discusses these additional variables.

### **3.8.1 Family support**

There is lack of empirical evidence to support the premise of a relationship between family support, entrepreneurship, and business performance. However, it can be argued that family social support is important for entrepreneurship and business performance. According to Rogoff and Heck (2003) family and business are as closely connected as oxygen and fire. This emphasizes the importance of family to business. Penrose (1959) presents organizations as collections of idiosyncratic resources and capabilities that provide bases of competitive advantage and influence performance. The family is considered part of those resources and therefore of utmost importance for the success of entrepreneurial companies; hence, its inclusion in this study. According to Hisrich and Peters (2002: 73), it is important for each entrepreneur to establish a moral support network of family and friends, called “a

cheering squad". They believe that this cheering squad plays a critical role during the many difficult and lonely times that occur throughout the entrepreneurial process. Family Business literature emphasizes the need to build relationships with family members (DeNoble, Ehrlich and Singh 2007). This applies to family business from both developed and developing countries.

### **3.8.2 Institutional support**

"Institutional support" in the ICM refers to public and private organizations that support entrepreneurs, in particular, government and private financial institutions. A viable entrepreneurial society has its basis in such institutional support. It is therefore critical for these organizations to be involved in the building of entrepreneurship of any country.

Generally, governments understand the importance, both economic and political, of entrepreneurship in the economy. Governments are normally responsible for providing economic efficiency, for bringing innovations to market, and for creating new jobs. As a result, governments are normally inclined to support entrepreneurs. This support can take the form of tax incentives and liberal employment laws, or it can be more direct and involve cheap subsidized loans and credit. Support may also be offered for technical development, education, and consulting. Such support is normally expected to have strong positive effect on the creation and expansion of enterprises. Also, it seems necessary that governments provide at least some of the funds for the implementation of policies pertaining to entrepreneurship in respective countries.

The influence of government is of paramount importance to the development of an effective entrepreneurship climate in three ways. Firstly, any governmental development strategy will determine which forms of economic activity will be encouraged. The attitude of the government toward entrepreneurship determines whether the climate will be favorable or unfavorable for entrepreneurship. Secondly, although the success or failure of any government policy will ultimately depend on the motivation of individuals,

government actions can affect entrepreneurs' motives in a positive fashion setting forth the proper regulations. Thirdly, in many developing countries, government programs are the only means for providing financial help, technical assistance, entrepreneurial education and training programs, and other aid needed by entrepreneurs (Briscoe 1994).

The majority of entrepreneurs identify finance as their primary constraint. Although Bowie, (1997) argues that, constraints other than finance, can affect the development of entrepreneurship, he found a significant correlation between those entrepreneurs who received credit and their enterprise growth.

Besides government, financial institutions able to assist entrepreneurial effort include government development/industrial banks, government development finance companies, commercial or trading banks, credit unions, savings loan institutions, co-operatives, and others.

It is evident from the above that entrepreneurship cannot enhance in economic development unless certain pre-conditions exist and institutional support forms part of such pre-conditions. Such enabling environments can fulfill entrepreneurs' needs, induce or reinforce their desire to go into business and thus facilitate the process of entrepreneurship (Gnyawali and Fogel, 1994). Enabling environment is important for entrepreneurship in both developed and developing countries.

### ***3.8.3 Reconciling business and family***

Business-family conflict is a type of role conflict in which the role demands stemming from one domain such as business are incompatible with the role demands stemming from another domain such as family (Stoner, Hartman & Arora 1990). Business-family conflict is normally bi-directional. That is, business can interfere with family and can be referred to as business-to-family conflict and family can interfere with business and can be referred to

as family-to-business conflict (Stoner et al. 1990). These interferences can cause tension for entrepreneurs in which the role pressures from the business and home domain are incompatible, and where involvement in one role becomes more difficult because of involvement in the other role (Stoner et al. 1990). The conflicts can generate stresses and strains at home and at work for business people juggling multiple demands which can then have negative consequences for their enterprises. Elloy and Smith (2003) conducted a study on 'work and family' and their results confirmed that work-family conflict existed among people who had families and jobs. There is, therefore, need to take account of the potential conflict among entrepreneurs so as to assist them accordingly.

The extent of business-family conflict for entrepreneurs has received little attention. To date, most entrepreneurial studies have not fully explored the variables assisting in balancing these roles. The existing work-family role conflict literature has a distinctive non-entrepreneurial slant, in that it deals with employees rather entrepreneurs. Further, it does not suggest means for reconciling these conflicts. (Wickham 2001: 53) asserts that entrepreneurs work long and anti-social hours; therefore, balancing the needs of their ventures with other life commitments such as family and friends is one of the great challenges which faces the entrepreneur. Hence, it is important to include *reconciling business and family* in this study and in the entrepreneurship curriculum. Reconciling business and family responsibilities is a major concern for many of the world's entrepreneurs wherever they live. In both developed and developing countries, people are struggling to try to earn a living from their businesses for the family while coping with the care needs of their dependents such as children and /or elderly parents. It is crucial for entrepreneurship educators to consider how the conflict between business and family responsibilities could be addressed more effectively.

It should be noted that variables in sections 3.8.1, 3.8.2 and 3.8.3 were not included in the initial model because all the variables used to form the initial model were purely derived from the entrepreneurship literature which did not reflect these variables.

#### **3.8.4 Adaptability to business needs**

Adaptability occurs with respect to the external environment within which the entrepreneurial firm operates. Adaptive entrepreneurs interact with their environments by gathering informational inputs, evaluating these inputs, and then acting upon them.

Bourgeois (1980) suggests that adaptability to business needs and environment is linked to positive business performance.

In this study "adaptability" refers to an entrepreneur's willingness and ability to make appropriate adjustments to the business concept as the venture evolves from an initial idea through the early stages and thereafter, throughout the life of the business according to events of the external environment.

It is argued that timely adaptability represents one of the most critical factors explaining entrepreneurial success (Wickham 2003). The adaptive entrepreneur allows the business concept to evolve over time as he or she gains experience with products, markets, suppliers, employees and other key variables surrounding the enterprise.

Having covered the components of the model, the next step moves to the integral part of this study, namely, an investigation of whether the Start and Improve Your Business program compares well with the ideal curriculum model. Hence, the next section compares the Start and Improve Your Business program curriculum with the ideal curriculum model recommended for developing countries.

### **3.9 Comparing the SIYB curriculum to the EPP**

As discussed in chapter 2, the Start and Improve Your Business (SIYB) program combines the two components, Start Your Business (SYB) and Improve Your Business (IYB). SYB

has its own curriculum materials consisting of two core modules, business awareness and business planning. The IYB curriculum comprises the following modules: buying and stock control; marketing; costing and pricing; keeping and using business records; managing people; and legal responsibilities of the business owner.

The contents of the ideal curriculum model are as follow: institutional support; support from family; competition; internal forces including motivation, self-efficacy, and ability to reconcile family, culture and business; skills including problem solving, product innovation; ability to adapt to business needs; and behaviors, including negotiation skills, competitiveness and opportunity evaluation. Table 3.4 presents a comparison of the two curricular models.

**Table 3.4 A comparative analysis of the SIYB curriculum and the EPP for developing countries**

<b>Contents of the SIYB curriculum</b>	<b>Contents of the proposed EPP</b>
Business awareness	Institutional support and family support
Business planning	Competitiveness
Marketing	Motivation
Costing and pricing	Self-efficacy
Problem-solving skills	Problem-solving
Legal responsibilities of the business owners	Opportunity evaluation
How to start a business	Innovation
Ability to reconcile business and family	Ability to reconcile family, culture and business
Basic record-keeping	Adaptability
Managing people	Negotiation skills

The above comparison indicates that the SIYB curriculum does not take into account a significant number of elements considered ideal for entrepreneurship development, thereby evidencing the necessity for a new entrepreneurship curriculum for entrepreneurs in developing countries.

It is clear from the above comparison that the SIYB curriculum focuses on traditional management functions. Some of these were presented by Penrose (1995) and discussed in section 3.5.8 above. This means that the SIYB curriculum does not address entrepreneurial skills, motivation and self-efficacy. Although according to Penrose (1995), traditional management functions are crucial, it is important to include both managerial functions and entrepreneurship skills in ICM. Such inclusion leads to a curriculum designed to equip entrepreneurs to meet the challenges of creating as well as growing their enterprises.

### **3.10 Chapter summary**

This chapter has presented:

- an evaluation of relevant entrepreneurial and associated literature;
- the synthesis of pertinent concepts from theorists and scholars of entrepreneurship into an entrepreneurial ideal curriculum model (ICM);
- a structured, theoretical framework – in the form of an entrepreneurial process and performance model (EPP) – suitable for a program evaluation of any entrepreneurship education program in general, and the SIYB program in particular.

On the assumption that entrepreneurship can be taught, specific concepts appearing repeatedly in the literature review and considered as important to entrepreneurial education were selected and incorporated into an ideal curriculum framework that would be sensitive to the business environment in developing countries.



The model prominently features innovation, motivation, self-efficacy, opportunity evaluation and competitiveness, which are viewed by diverse scholars as essential elements of entrepreneurship education. The literature review shows that these concepts are fundamental and critical to the entire entrepreneurial process. Also the curriculum framework, takes into account that the interplay of economics, culture, and individual motives has a strong influence over an individual's decision and ability to act as an entrepreneur. Some aspects of the framework cater for those factors.

A comparative analysis of the SIYB curriculum with the ideal framework indicated that the SIYB curriculum focuses on traditional management functions and does not address entrepreneurial skills and motivation. Issues relating to this SIYB curriculum will be further discussed in forthcoming chapters (4, 5, 6 and 7).

Key findings of the literature review permit us to conduct an empirical investigation of the efficacy of the SIYB program. Chapter 5 will present the design and execution of that empirical investigation. As indicated above, this chapter has highlighted several important theoretical issues and gaps. While there have been recent efforts to develop entrepreneurial curriculum models, to the researcher's knowledge no study has yet combined the four categories as classified by clusters in this study. The four categories are:

- Level 1 – *Internal factors*, which consists of both internal and external categories. The internal category consists of motivation and self-efficacy, while external category consists of family support, institutional support, family support and reconciling business and family;
- Level 2 – *Skills & Behavior Factors*, which consist of problem-solving, innovation, negotiation, and adapting to business needs;
- Level 3 – *Key Factors*, which include opportunity and competitiveness; and
- Level 4 – *Performance Factors*, as divided into two areas: financial outcomes (profit, cash-flow, sales) and non-financial outcomes (employment).

This structure in itself is a contribution to knowledge. Finally, the literature review and theoretical framework-building tasks conducted in this section of the study permitted the development of five hypotheses which can be tested in an empirical program evaluation.

Chapter 4 will discuss and evaluate program evaluation techniques and applications.

# Chapter Four: Program evaluation technique and application

## ***4.1 Chapter abstract***

The primary focus of this chapter is to: (1) review relevant literature on training and entrepreneurship firm performance in countries that offer the Start and Improve Your Business (SIYB) training, and (2) critically evaluate the methodological approaches used in these studies. Accordingly, this chapter consists of two sections. Section 1 provides a discussion of abstract concepts relevant to evaluating the outcomes of training and small firm performance, including: evaluation, program evaluation, and training evaluation. Some generic training evaluation models are discussed. Section 2 of this chapter reviews literature specifically on the evaluation of entrepreneurship education, including the SIYB program. It evaluates literature on generic theoretical models of approach to evaluations, such as Kirkpatrick's evaluation theory, and various previous attempts to evaluate specifically entrepreneurship education programs. Evaluation of literature on the evaluation of the SIYB program is also conducted. A discussion on the inadequacies in the current evaluation approaches to the SIYB programme is provided. This leads to chapter 5, the empirical investigation at the heart of the study.

The chapter is organized as follows: section 4.2 provides definitions and approaches to evaluation; section 4.3 provides an overview of the concept "program evaluation." Section 4.4 gives indices of program performance; section 4.5 summarizes the evaluations of entrepreneurship training programs, while section 4.6 is a specific assessment of the SIYB program, and section 4.7 deals with an evaluation of the SIYB in Botswana. Section 4.8 suggests an appropriate evaluation of SIYB in Botswana, and section 4.9 summarizes the chapter.

## **4.2 ‘Evaluation’ and ‘program evaluation’: definition and approaches**

The general purpose of the evaluation of education programs is to examine whether the program is effective in achieving its intended goals. Systematic program evaluation is particularly important in the context of educational and training institutions. In their 1977 review of evaluation studies, Guttentang and Saar (cited in Calder 1994) emphasised that education is one of the field with the most highly researched evaluation methods. As such, it is important for education and training institutions to have proper program evaluation systems that facilitate: (a) systematic reviews of program performance; and (b) modification and improvements of program content and implementation. The determination of the key points to be evaluated is crucial in any teaching or training institution, and it should be done in such a way that it matches the goals of the institution (Calder 1994). The process starts with a commitment to precise definition of key terms.

There are many different definitions of the term ‘evaluation’. According to Rossi, Freeman and Lipsey (1998), program evaluation is the use of social research procedures to systematically investigate the effectiveness of social interventions program. More specially, evaluation involves testing the performance of a program and comparing it against predetermined standards or criteria for effectiveness (Rossi et al. 1998).

Franklin and Thrasher (1996) distinguish the difference between the terms ‘evaluation’ and ‘program evaluation’. They argue that the terms refer to different aspects of the same phenomenon. Specifically, the generic term 'evaluation,' particularly in social and health programs, refers to the assessment of needs or eligibility of service to customers (e.g., individuals and families); for example, social services evaluation or rehabilitation evaluations, which evaluate the needs of clients to receive services or rehabilitation. As such, the use of the term ‘evaluation’ emphasizes service eligibility and does not involve judgments concerning the value or worth of the individuals receiving the services. When

the term 'evaluation' is applied to programs, it is not related to the above use, but it is concerned with the individuals only in the aggregate, Franklin and Thrasher (1996).

In contrast to the usage of the term evaluation discussed above, 'training evaluation' refers to the systematic process of collecting data to determine if training is effective (Goldstein & Ford, cited in Brown & Gerhardt 2002). It is the process of attempting to assess the total value of training; that is, the cost, benefits and general outcomes which accrue to the organization as well as the value of the improved performance of those who have undertaken training (Buckley & Caple, cited in Lewis & Thornhill 1994). It identifies the impact of an intervention or program by analyzing cause and effects: that is, tracking causes to outcomes (e.g., relevance, performance, success) over time (World Bank 2002). Training evaluation normally aims to answer specific questions about program outcomes, to guide decision makers, program managers and educators by providing information on whether or how well the designed program had worked (Rossi et al. 1998: 20).

One of the main objectives of this study is to evaluate the effectiveness of the SIYB training program. Specifically, the thesis aims to assess if participants who undertook SIYB training performed better in some aspects of entrepreneurship (attitudes, skills, and behaviors) than people who had not taken the SIYB training. Hence, the term 'evaluation' is used here in regard to the impact of the SIYB program. Although the study uses the term 'evaluation' as "the process of attempting to assess the total value of training; that is, the cost, benefits and general outcomes which accrue to the organization as well as the value of the improved performance of those who have undertaken training" (World Bank 2002), due to the constraints of time and finance, the study focuses on the 'improved performance' aspect of evaluation. In short, the evaluation assesses how well SIYB participants' performance improved, as compared to that of businesspeople who were not SIYB participants.

The study assesses the impact of the SIYB on behaviors, attitudes, and skills of the entrepreneurs and the impact of those behaviors, attitudes, and skills on their enterprises. In

view of the fact that the overall study evaluates the impact of SIYB on its participants, it is important to include the concept of impact evaluation. According to Rossi et al. (1988) impact evaluation is one of the major approaches of evaluation, especially training program evaluation. It is crucial for trainers to keep track of the effects of a program. Impact evaluation is undertaken to find out whether interventions actually produce the intended effects. An impact evaluation assesses the extent to which a program has caused desired changes in the intended audience therefore impact evaluation consists of assessing outcomes (Rossi et al. 1988). Hence, it is important for this study.

### **4.3 Program evaluation process**

Program evaluation commonly aims to determine the relevance, efficiency, effectiveness and impact of a program. Most evaluations are concerned with issues of program design, delivery and performance; and performance issues relate to the actual program results.

Any comprehensive evaluation should examine several dimensions of program performance. These dimensions include: (1) the need for the program; (2) the design of the program; (3) the program implementation and service delivery; (4) the program impact or outcome; and (5) program efficiency / cost effectiveness (Rossi et al. 1998; Cook & Reichardt 1997; Cronbach 1982; Mohr 1995). Rossi et al. (1998) provide a particularly accessible approach which emphasizes: needs assessment, assessment of progress by theory, monitoring of program process and impact assessment (Rossi et al. 1998). These concepts are discussed in more detail in 4.3.1 and following sections.

#### **4.3.1 Needs assessment**

Needs assessment is often used as a first step in designing and planning a new program or restructuring an established program. It functions to provide information about what services are needed and how these services might best be delivered (Rossi et al. 1998). Needs assessment also provides baseline information necessary for later examination of whether programs were responsive to the needs of the target participants (Rossi et al. 1998).

Needs assessment is a systematic approach to identifying: (a) the need for a program; (b) the extent of that need or the extent of the program; and (c) the target population.

Assessment of these areas is critical to the effective design of new programs, because the needs assessment determines what is needed and defines the target population to be catered for (Rossi et al. 1998). Also, it is the means by which an evaluator determines if indeed, there is a need for a program and, if so, what program services are most appropriate to that need. However, it is equally relevant to established programs because in many circumstances it cannot be assumed that the program is needed or that the services it provides are well suited to meeting the needs of the population (Rossi et al. 1998; Breakwell & Millward 1995).

In the current study, the process of need assessment took the form of synthesizing theories of entrepreneurship to find out what they would include in an entrepreneurship curriculum, one were developed based on those theories. This is as a systematic approach to identifying what needs to be included in an entrepreneurial training program. This approach is detailed in chapter 3.

#### ***4.3.2 Assessing program theory***

Need assessment is usually followed by overtly stated, thus comprising an implicit program theory (Rossi et al. 1998). Assessment of the quality of the program theory is essential to understanding and evaluating any program. An effective program theory represents the “know-how” necessary for program. A program theory involves a detailed description of the relationship between program resources, program activities, and program outcomes. It indicates how the program is supposed to work and, in particular, how it is supposed to bring about its intended outcomes (Fitz-Gibson et al. 1987). The objective for program theory is to detail the program “as intended” that is, the actual expectations held by program decision-makers about what the program is supposed to do and what results are expected to follow.

Every program embodies a program theory, or set of assumptions and expectations that constitute the logic or plan of the program and provide the rationale for what the program does and why (Rossi et al. 1988). These assumptions may be well formulated and explicitly stated, representing an articulated program theory, or they may be inherent in the program but may not attain the desired results. In particular, an effective program theory will present a detailed and plausible process for improving the targeted objectives, e.g., overcoming social objections (Rossi et al.). An ineffective program theory, in contrast, would not produce the intended effects even if implemented well (Rossi et al. 1998). In particular, if the program's goals and objectives do not relate specifically to the needs the program is intended to satisfy, there is little prospect that the program will be effective (Rossi et al. 1998).

### ***4.3.3 Monitoring program process and performance***

To be effective in bringing about the desired improvements in social conditions, a program needs more than a practical program theory. It also needs a good plan for implementation (i.e., the program activities that actually take place and services that are actually delivered in routine program operation, the way the program's plan is implemented is equally important, and so the plan must be evaluated. Program monitoring is the systematic documentation of program performances that indicates whether or not it is delivered as intended. According to Scheiner (1994: 10, process evaluation “verifies what the program is, and whether or not it is delivered as intended to the target recipients”. Process evaluation does not, however, attempt to assess the effects of the program on those recipients, as that is the province of impact evaluation. Process evaluation is the same as program monitoring, whereas impact evaluation evaluates the impact of a program on those who participated on it.

Program monitoring provides feedback on the progress of the program. It also helps to distinguish cases of poor program implementation from ineffective intervention concepts,



and it informs policy-makers, program sponsors and other stakeholders about how well programs perform their intended functions (Breakwell & Millward 1995:20; International Labour Organisation 2002:22). Program monitoring is usually directed at evaluating whether: (a) a program is reaching its target population, (b) service delivery and support functions are consistent with program design specifications; and (c) positive changes appear among the program participants and social conditions the program addresses. Monitoring may also examine what resources are being, or have been, expended in the conduct of the program.

As can be seen from the above, program evaluations aim to determine the relevance, efficiency, effectiveness, and impact of programs, be they training programs or non-training programs (that is, other programs which do not include training). The information about program evaluation will assist in determining if the evaluation of SIYB has been conducted according to the required standards. Further, this information will provide the guidelines on how to conduct the current evaluation of SIYB program which is performed in this study.

The next section (4.4) examines two existing evaluation models which have been in existence since the 1950s, the Kirkpatrick and the Brinkerhoff models.

#### ***4.4 Indices of program performance***

A literature search has revealed a number of training evaluation models that try to assimilate levels of evaluating training programs. For the purpose of this thesis, two models have been chosen: Kirkpatrick (1999) and Brinkerhoff (1988). The two evaluation theorists provide the most detailed work to date, and their works have been used widely since their development. Also, they have been recommended by many writers in the field of evaluation (Alliger & Janak 1989), hence their adoption for this study. These two models, Kirkpatrick (1999) and Brinkerhoff (1988), were analysed and compared, in order to select appropriate elements from both, for use in evaluating the SIYB program.

#### **4.4.1 The Kirkpatrick model**

In the latter 1950s, Kirkpatrick developed a training evaluation model, which became popular and enjoyed widespread adoption by many different organizations worldwide (Alliger & Janak 1989). The model has been reproduced and adopted by many authors, such as Casao 1982, Hodges 2002, and others. As mentioned above, this study used Kirkpatrick's levels 2, 3 and 4, as these levels are most relevant to the evaluation of SIYB. The Kirkpatrick (1994, 1996, 1999) framework provides the most detailed articulation of the evaluation approach, and parts of his latest model have been adopted for this study. The whole model is discussed below.

Kirkpatrick's model outlines four categories for measuring training outcomes. Each category is termed “step,” and these steps are 1) *learner reactions*, 2) *learning*, 3) *learner behaviour* and 4) *business results* (Kirkpatrick 1999). Kirkpatrick suggests that the four steps, or levels, represent a sequence of ways to evaluate programs. According to Kirkpatrick (1999), each level is important and has an impact on the next level. In his model he also shows that, the process becomes more difficult and time-consuming as the researched moves from one level to the next, but the progress also provides more valuable information.

The four levels in the Kirkpatrick (1999) model follow.

##### **Step 1 – Reactions**

'Reactions' are the trainees “liking of” and “feelings for” a training program. A reaction measure is described in attitudinal rather than behavioral terms. Evaluation on this level measures how those who participate in the program react to it; this could be called a measure of customer satisfaction. To Kirkpatrick, this measure is essential for any training provider if it wants to stay in business and attract new customers as well as get present customers to return to future programs. He argues that although positive reaction is ideal it

does not guarantee or ensure learning. In his view, negative reaction reduces the possibility for learning to occur.

At the reaction level, evaluation aims to measure how those who participated in the training react to it — that is, assessing reaction the training participants' feelings after completing training. This can be seen as, course/program satisfaction assessment. This evaluation level is important because it tells the trainers and all the stakeholders how favourably trainees react to training. This level is also important because the future of a given program and its improvement depend on how positively the audience reacts to it.

Although this level is highly recommended by Kirkpatrick (1999), it has not been adopted for this study. Research has shown that there is relatively little correlation between learner reactions of Step 1 and measures of learning or subsequent measures of changed behavior. It has been suggested that 'satisfaction' is not necessarily related to performance.

This study is evaluating the effectiveness of the SIYB using levels 2, 3, and 4, which are appropriate for evaluating the training impact even long after the training has taken place,

### **Step 2 — Learning.**

'Learning' is defined as “principles, facts and techniques understood and absorbed” by trainees (Kirkpatrick1999). On this level, evaluation measures the extent to which participants change attitudes, improve knowledge, and/or increase skill as a result of participating in a training program — three changes which. Kirkpatrick views as essentials that a training program must accomplish. In his model, learning takes place when one or more of the following occurs: attitudes are changed; knowledge is increased; skill is improved. Kirkpatrick argues that one or more of the above changes must take place if a change in behavior is to occur.

He states that in order to evaluate learning, the specific objectives must be determined.

This level is helpful in assessing whether or to what extent the SIYB program is effective. The skills, attitudes, and knowledge of entrepreneurs who participated in the SIYB program would be assessed, and those who had completed the program would be expected to exhibit attitudes and demonstrate skills in accordance with the SIYB entrepreneurial curriculum. In other words, we expect that people demonstrate a change in their capacity for a desired outcome when learning has occurred.

### **Step 3 — Behavior**

Like level 2, level 3 is concerned with change, but this change is in behavior. 'Behavior' is defined as “using learned principles and techniques on the job” (Kirkpatrick 1999). At this level, evaluation is concerned with the extent to which change in behavior has occurred because the participant attended the training program.

In Kirkpatrick’s opinion, in order for any change to occur, and particularly change in behavior, four conditions are necessary:- a) the person must have a desire to change, b) the person must know what to do and how to do it; c) the person must work in the right climate; and d) the person must be rewarded for changing. However, a training program can accomplish the first two requirements (a and b) only by creating a positive attitude toward the desired change and by teaching the necessary knowledge and skills (Kirkpatrick 1999).

This level of assessment measures how people behave as a result of training. Hence, entrepreneurs who had been through the SIYB should be able to exhibit entrepreneurial behavior as set out by the SIYB curriculum objectives. Level 3 will still be adopted for this study. In using level 3 of the model, I recognize that a number of individual factors influence transfer and application of learning; among them, motivation and self- efficacy.

#### **Step 4 — Results**

'Results' are referred to as the “ends, goals, or results desired” – for example, “reduction of costs, reduction of staff turnover and absenteeism, increase in quality and quantity of production, higher profits, increased sales etc” (Kirkpatrick 1999).

Kirkpatrick contends that these results are the reasons that some training programs exist; therefore, the objectives of the training program need to be stated in terms of the expected results.

Level 4 of Kirkpatrick’s model is the most difficult level of evaluation. It refers to the results that trainers and other stakeholders expect to occur as a result of attendance to training. The results are measured according to the objectives that were stated prior to the delivery of the training program. He notes that there are both tangible (e.g., increased sales) and intangible results (e.g., good customer care). This level is relevant for this study; however, as Kirkpatrick states, measuring effectiveness of the SIYB within the entrepreneurship domain on topics such as evaluation of opportunities and competitiveness may prove difficult. However, level 4 has been adopted for this study regardless of these anticipated difficulties.

The model is arranged in order of activities. It first evaluates reaction, then learning, behavior, and results, with corresponding four levels of outcome for any training program. Kirkpatrick prescribes a separate evaluation for each level to answer questions such as: - (Level 1) Did trainees react favourably to the training – did they like it? (Level 2) Did trainees learn? (Level 3) Did trainees use what they learned? (Level 4) Did using the learning make a difference? He emphasizes the importance of each level.

The Kirkpatrick model of training evaluation criteria met a felt organizational need as it became well known in training departments in the entire world and its framework became largely accepted in the field of industrial/organizational psychology (Alliger & Janak 1989). The model has been viewed by many authors as being straightforward, simple, and

step-by-step (Cascio 1987; Alliger & Janak 1989). Its definition of four levels of outcome was considered useful as it pushed the focus of evaluation beyond mere favourable reactions and learning, to where it rightfully belonged: focused on true “end results” (Brinkerhoff 1998).

Since its introduction in the late 1950s, Kirkpatrick’s approach to training evaluation has become a classic model for trainers to follow (Newstrom 1978; Goldshtein 1986; Campion 1987). Many research texts on training including Goldstein 1986; McGee and Thayer 1961; Wexley & Latham 1981; and Cascio 1991) encourage their readers to follow it.

However, the model has been criticised for its narrow focus. Brinkerhoff (1988) argues that the model is entirely outcome-oriented and reflects a bottom-line bias and was not legitimate in some way. In Brinkerhoff’s view, evaluation of training programs should be conducted even during the time when programs are running – well before they have had a chance to produce results, because looking for effects only after the program is to perpetuate trial-and-error learning (Brinkerhoff 1988).

Some authors, e.g. Newstrom (1978); Alliger & Janak, (1989); Phillips, (1996) have identified four assumptions which are made by researchers concerning the model. The first assumption is that the ‘steps’ are arranged in ascending value of information, and it is assumed that each subsequent step is more meaningful or useful than the one before it – for example a measure of learning provides more information than a measure of reaction, and so forth (Goldstein 1986).

The second assumption is that the 4 levels of evaluation are causally linked (Newstrom, 1978; Alliger & Janak 1989). This assumption is implied in Hamblin’s (1974) model which he adopted from the Kirkpatrick model. Hamblin’s model depicts that “training leads to reactions which lead to learning which leads to changes in behavior which leads to changes

in organizations,” thus implying that each level is caused by the previous level (Megirri & Blackman 2005).

The third assumption associated with Kirkpatrick’s model is that the reaction criterion is the most frequently used and therefore it is the norm for the profession. Here, the assumption is that trainers tend to use the reaction criterion of evaluation because it is easy and inexpensive to use (Goldstein 1986). This assumption was demonstrated by the study which Catalanello and Kirkpatrick (1967) undertook to determine the extent to which the four evaluation steps were being used. Catalanello and Kirkpatrick reported that 77 per cent of a national sample of training directors used reaction criterion, whereas only 46 per cent used results (Meyer & Raich 1983; Goldstein 1986).

The fourth assumption is that there is a high sequential inter-correlation among the criteria, thus if trainees react favourably, they will probably learn more; if they learn more, they will probably change their behavior, and if they change their behavior, the results of their performances will be positive. Similarly there is an assumption that a negative reaction will affect learning, behavior, and results negatively (Newstrom 1978). However, this assumption has been criticised by Newstrom (1978) for its simplistic approach. Nickols (2005) argues that the Kirkpatrick model is so wrapped up in assessing the effectiveness of the training program that it loses sight of more important objectives and audiences. Nickols claims that the stakeholders should be have a say in evaluation design and development. Phillips (1996) criticizes the model for being too focused on the learners or participants. Although these authors and others— for example, Newstrom (1978); Hamblin (1974); Brinkerhoff (1988), Alliger & Janak (1989); criticise Kirkpatrick’s evaluation model — their criticisms are not drastic and do not call for drastic changes. The critics suggest few modifications to Kirkpatrick’s approach, and this is an indication that the model has received an extensive endorsement by other writers and practitioners and that it has been accepted as a standard approach to evaluation worldwide. Hence, it is adopted for use in this study.

However, it would be useful to include some knowledge on other goal-based evaluation models. The following model is that of Brinkerhoff (1988).

#### **4.4.2 The "Integrated evaluation model"**

Kirkpatrick's model is based on specification of four different levels of evaluation. Other models have been developed using his model as a base. The integrated evaluation model by Brinkerhoff (1988) suggests six levels, and it ties evaluation into every part of the training process. Brinkerhoff (1988) argues that evaluation can help programs succeed, as well as measure whether or not they succeeded, but this two-fold result can happen only if evaluation is made part of the program development process. Brinkerhoff (1988) adds two presage factors focused on evaluating the design and concepts of the program prior to and during initial implementation (Megirr & Blackman 2005). In his view, programs should be designed to produce beneficial results on an organizational level. For example, a sales training program should not simply train salespeople. It also should increase sales volume, open new markets, or have some other positive effect on the company's goals; hence trainees should go through training in order to learn something that would eventually benefit the organization (Brinkerhoff 1988).

The integrated evaluation model has six main stages, as follow:

- **stage 1** – a need problem, or opportunity work- there is a need or opportunity for addressing issues that could be influenced favourably by someone learning something
- **stage 2** – there is a human resources program capable of teaching what is needed, or what is designed
- **stage 3** – the organization successfully implements the designed programs
- **stage 4** – the participants exit the program after successfully acquiring the intended skills, knowledge or attitudes
- **stage 5** – the participants retain and use their new learning
- **stage 6** – the organization benefits when participants retain and use their learning.



In Brinkerhoff's view, the six-stage approach can show clearly whether programs benefit an organization, and if so, how. He believes that the approach can also help the evaluator trace any failures to one or more of the six stages (Brinkerhoff 1988).

The six-stage model follows the traditional evaluation model in that its stage 1 assesses needs, stage 2 evaluates the design, stage 3 evaluates the procedures, stage 4 evaluates how much the trainees have learned, stage 5 assesses retention and learning transfers, and stage 6 evaluates the impact of the training program to the organization. According to Brinkerhoff (1988) all the six stages are crucial as they encourage the recycling of evaluative information – from and to each of them. The model emphasises a formative approach.

Brinkerhoff (1988) further claims that, if the six-stage approach is used properly, people responsible for training (trainers, managers et cetera) would have information from the evaluation ready when needed. Also, they would always be in a good position to proudly report the impact of training, the importance of the designed training, the details of the training design used, how the training operates, whether people learned and liked what was taught, whether what was taught was used, and whether the training had any positive impact on the organization.

Brinkerhoff's evaluation model incorporates evaluation at every stage of the process. His evaluation questions address issues during planning, design, program implementation, as well as program outcomes and program efficiency.

The element of needs assessment, which is lacking in Kirkpatrick's four-level approach, is important in any training situation to establish the needs or wants of the target population. The six-level approach includes needs assessment. It is more comprehensive and would be more effective than the four-level approach if used according to the specified levels; hence,

this thesis has adopted some parts of this model (the training analysis and needs assessment) to complement other evaluation theories and approaches used in this thesis. It should be noted that other parts of the six-level approach model were not adopted as they are similar to parts of Kirkpatrick's four-level approach, and their inclusion could be redundant.

#### ***4.4.3 Other approaches to evaluation of training***

As stated above, evaluation is an important operation in curriculum development. It is therefore worth discussing other approaches to evaluating training in order to justify the relevancy and appropriateness of the choice of an evaluation model suitable for this study. Commonly used approaches to educational evaluation have their roots in systematic approaches to the design of training (Ezeryel 2002). Evaluation is traditionally represented as the final stage in a systematic approach with the purpose of improving interventions (formative evaluation) or make a judgement about worth and effectiveness (summative evaluation) (Ezeryel 2002). More recently instructional system development approaches incorporate evaluation throughout the process (Ezeryel 2002). The Context, Input, Process, Product (CIPP) Model, the Training Validation System (TSV) and the Input, Process, Output (IPO) are some of the system-based models of evaluation. Goal based models (such as Kirkpatrick's four levels) and system-based approaches (such as CIPP, TSV, and IPO) are predominantly used in the evaluation of training (Philips 1991) Table 4.1 presents a comparison of some of the system-based models with a goal-based model.

Table 4.1 Goal-based and systems-based approaches to evaluation. Adopted from Eseryel, 2002

<b>Kirkpatrick (1959)</b>	<b>CIPP Model (1987)</b>	<b>IPO Model (1990)</b>	<b>TVS Model (1994)</b>
1. Reaction: to gather data on participants reactions at the end of a training program	1. Context: obtaining information about the situation to decide on educational needs and to establish program objectives	1. Input: evaluation of system performance indicators such as trainee qualifications, availability of materials, appropriateness of training, etc.	1. Situation: collecting pre-training data to ascertain current levels of performance within the organization and defining a desirable level of future performance
2. Learning: to assess whether the learning objectives for the program are met	2. Input: identifying educational strategies most likely to achieve the desired result	2. Process: embraces planning, design, development, and delivery of training programs	2. Intervention: identifying the reason for the existence of the gap between the present and desirable performance to find out if training is the solution to the problem
3. Behavior: to assess whether job performance changes as a result of training	3. Process: assessing the implementation of the educational program	3. Output: Gathering data resulting from the training interventions	3. Impact: evaluating the difference between the pre- and post-training data
4. Results: to assess costs vs. benefits of training programs, i.e., organizational impact in terms of reduced costs, improved quality of work, increased quantity of work, etc.	4. Product: gathering information regarding the results of the educational intervention to interpret its worth and merit	4. Outcomes: longer-term results associated with improvement in the corporation's bottom line- its profitability, competitiveness, etc.	4. Value: measuring differences in quality, productivity, service, or sales, all of which can be expressed in terms of dollars

Of the above systems-based models, the CIPP is widely used and therefore warrant more elaboration. The CIPP model is termed Stufflebeam's four types of evaluation.

Stufflebeam (2003) defines educational evaluation as *the process of delineating, obtaining and providing useful information for judging decision alternatives*. He claims that the main purpose in the CIPP model is to facilitate rational and continued decision making; therefore the main activities consist of identifying upcoming alternatives, studying of implications and setting up quality control. In carrying out these activities Stufflebeam argues that evaluators should not only look at *what did happen* but should look at *what might have happened if things were done differently* (Bao 1982)

Research indicates that goal-based models may help practitioners think about the purposes of evaluation ranging from purely technical to covertly political purposes. However, these models do not define the steps necessary to achieve purpose and do not address the ways to utilize results to improve training. The difficulty for practitioners following such models is in selecting and implementing appropriate evaluation methods (quantitative, qualitative, or mixed) (Ezeryel 2002). Because of their simplicity, trainers use them without taking time to assess their needs and resources or to determine how they'll apply the results (Bernthal, 1995). Many organisations do not use the entire model, and training ends up being evaluated only at the reaction or at best, at the learning level (Ezeryel 2002). Further more, as indicated in section 4.4.1, as the level of evaluation goes up, the complexities involved increase. This may explain why only levels 1 and 2 are used (Ezeryel 2002).

On the other hand,

*“Systems-based models seem to be more useful in terms of thinking about the overall context and situation but they may not provide sufficient granularity. System-based models may not represent dynamic interactions between the design and the evaluation of training. Few of these models provide descriptions of the process involved in each steps. None provide tools for evaluation. Furthermore, these models do not address the collaborative*

*process of evaluation, that is, the different roles and responsibilities that people may play during an evaluation process” Ezeryel 2002).*

This section has reviewed literature on concepts of evaluation. It has dealt with definitions of evaluation, evaluation approaches and evaluation models. The review indicated that a number of evaluation models exist, most of which have drawn a number of elements from the Kirkpatrick evaluation model. The reviewed models are useful as they contribute to our understanding of different structural approaches to evaluating programs. This formalization of the process can assist in conducting the evaluation of the SIYB as well as in determining if the previous SIYB evaluations were conducted in a systematic manner.

The next section focuses on the evaluation of entrepreneurial programs. It discusses difficulties in the evaluation of these programs.

#### ***4.5 Evaluation of entrepreneurial training programs***

The evaluation of entrepreneurial programs forms the basis of this study. Evaluating entrepreneurial training programs is different from evaluating other, general training programs, because such evaluation has several potential pitfalls, particularly ambiguity in the selection of the measurements criteria, (Fayolle et al. 2006). Hence, it is important to discuss evaluation of entrepreneurial training separately from general training programs. This section is focused specifically on the evaluation of entrepreneurial training programs rather than evaluation of general training programs, which was discussed in the previous sections.

McMullan et al, (2001) suggest that there are three standard measures used to evaluate the effects of entrepreneurship programmes namely: subjective assessments of client satisfaction, clients’ attributions of the impact of assistance on their subsequent performance and objective measures, such as the number of business and jobs created, as well as increased sales. Programme evaluations which rely solely on participants’ satisfaction or subjective judgements of programme effectiveness, can lead to erroneous

conclusions about a programme's impact on performance (Hengry, Hill and Leitch 2004). However, attribution measures, when used together with objective measures, may well have some value in supporting effectiveness claims (McMullan et al, 2001). Hengry, Hill and Leitch (2004) suggest that it may be that subjective measures of satisfaction which are used some time after completion of a programme (participants having had time in the interim to reflect upon its content and upon their own subsequent performance) can produce useful insights.

#### ***4.5.1 Problems of evaluating entrepreneurial programs***

In recent years, the relationship between training and small-firm performance has been subject of heated debate. Stakeholders in training institutions, including academics and policymakers, have sought to find a relationship between participation in entrepreneurship training and business performance (Patton, Marlow & Hannon 2000). However, according to Westhead and Storey (1996), the relationship between participation in entrepreneurship training and business performance is currently not well established.

The extent of literature on the relationship between training and performance is inconclusive and a number of criticisms have been made the research methods employed on the evaluation of entrepreneurial training (Westhead & Storey 1996; 1997). Furthermore, Westhead et al. 2001 describe considerable debate over the most appropriate method of measuring effectiveness. Hengry, et al. 2003b cited in Fayolle, et al. (2007: 250) concurs with Westhead 2001 et al. that there does not appear to be a standard methodological approach to the evaluation of new business creation interventions, nor does there exist a common set of evaluation criteria for determining their effectiveness. This problem or lack is also alluded to by Fayolle et al. 2007: 250, who observed that, despite the enthusiasm expressed by many entrepreneurship programme advocates, there has been little effort devoted to rigorous, objective analysis of impacts in terms of desired outcomes. This lack causes concern as increasing levels of resources are allocated to such training initiatives

globally, Fayolle et al. 2006: 702; hence the need for establishing the impact of such programs.

Entrepreneurship performance has been operationalized through such measures at the firm level as growth in sales, growth in profit, or some measure of innovation. At the level of the entrepreneurs it has been measured primarily in terms of growth in personal income or income in comparison to wage earners. These additional differences not only create confusion but also may be the cause of conflicting findings (Dickson, Solomon and Weaver 2008). A complicating factor in relation to policy and evaluation is that governments need to secure votes and policy-makers need to demonstrate the effectiveness of their policies. Thus, there may be a tendency to encourage 'sloppy' analysis, (reinforced by limited budgets), and/or to claim that the target is anything an intervention happens to hit (Hengry, Hill and Leitch 2007)

In addition to the above problems, a review of the literature reveals another set of evaluation problems, those related to the research design and measurement. Storey (2000) argues that to evaluate the impact of a policy, it is necessary to establish what would have happened to entrepreneurs and their businesses in the absence of that policy. The same sentiments are expressed by Jenssen and Havnes (cited in Fayolle et al. 2007). In relation to evaluation measurements, Storey (2000) suggests comparison of a group exposed to the policy (treatment group) with a non-exposed group matched on a range of appropriate variables with the treatment group. Commenting on the measurement issues, Fayolle et al. (2007) argue that it is essential to control for confounding variables which could obscure the relationships between the variables of interest, such as entrepreneurship training and the performance of entrepreneurs.

As can be seen from the above literature pertaining to the evaluation of entrepreneurial training programs, previous studies have proposed various methods for assessing the entrepreneurial effectiveness of such programs. These methods assess individuals involved

in entrepreneurial training programs, and they use various approaches, such as qualitative and quantitative methods and others. This makes the evaluation of entrepreneurship training program a complex task.

In addition to all the above problems, the time frame of assessment poses a number of questions, such as: when is it appropriate to conduct evaluation? Who should determine the time of assessment? Who should conduct the evaluation? There are many others. However, Souitaris, Zerbinati and Al-Laham (2006) emphasize the importance of evaluating entrepreneurship programmes, claiming that, it is necessary to do so in order to confirm (or disconfirm) conventional wisdom that entrepreneurship education increases the intention to start a business and has positive effects on the performance of the business.

Having discussed evaluation of other entrepreneurial training programs, it is appropriate to discuss evaluation of the SIYB entrepreneurial program specifically. Section 4.6 presents the extant evaluation of SIYB programs globally as well as describing the limitations of such global evaluation.

## ***4.6 Specific assessment of the SIYB program***

The objectives of the specific assessment of the SIYB program are to determine the effectiveness and efficiency of the current SIYB assessment procedures. In this section, a brief description of the SIYB evaluation process is presented followed by literature review on the actual evaluation of the SIYB program in selected areas of operation and a critical review.

### ***4.6.1 Extant evaluation of the SIYB program globally***

While the overarching aims of entrepreneurial educational and training programs are to provide learning opportunities the overseeing institutions also have diverse range of subsidiary goals. Therefore, evaluation of such programs is not usually a clear-cut activity (Calder 1994). In most entrepreneurial training programs, the purpose of evaluation is



determined by the program or evaluation sponsors — for example, the SIYB program evaluation approaches are determined by the International Labour Organization (ILO) in Geneva.

The overall objective of the SIYB program is to increase the viability of small-scale enterprises through the application of sound management principles, which leads to improving the profitability and viability of businesses and creating or sustaining employment. Much research has been conducted concerning what should be the objectives of an entrepreneurial training program as well as performance indicators of such programs.

It is essential for any training program to assess and evaluate the extent to which the program is meeting its objectives. Evaluations of management training programs have generally raised questions like “Do we get value for money?” (Harper & Finnigan 1998) “Why is the link between management training and small firm performance so weak?” (Westhead & Storey 1996) and “Are they cost effective?” (Bennett 1994).

As with most other training programs, the SIYB impact-assessment tool has been designed to evaluate the impact that training has had on the entrepreneurs and their enterprises. Methods and tools for data collection, as well as sample sizes, vary between SIYB operating regional areas. However, the systems for monitoring and evaluation (M&E) of impact have been standardized for ease of comparison of results (Samuelsen 2003). The most important performance indicators of SIYB which are used globally are: quality of training, business start-up, business improvement and contribution to job creation (International Labour Organisation-SIYB Bulletin 2004).

Monitoring and Evaluation (M&E) is part and parcel of SIYB training process, and it has been in practice since the inception of the program (International Labour Organization-SIYB Bulletin 2003). According to the (International Labour Organization-SIYB Bulletin 2003), M&E is a management tool for monitoring progress, and an evaluation system for

measuring results. Whereas monitoring ensures that inputs lead to and produce outputs, evaluation assesses to what extent outputs help achieve objectives (International Labour Organization-SIYB Bulletin 2003)

The monitoring system operates at different levels. It moves from the project office down to the field office, and the process utilises different monitoring tools at different levels of the program.

#### **4.6.2 Impact evaluation of SIYB in Vietnam**

Very little formal evaluation of SIYB has been performed anywhere in the world, Vietnam and southern Africa (i.e., Zimbabwe, Zambia, and Uganda) warrant special mention. This section deals with the Vietnamese case, the next section treats southern Africa, and then both are critiqued.

The SIYB project started in Vietnam in 1998, and by 2001, a total of 7000 entrepreneurs had been trained. The impact evaluation was carried out by conducting interviews based on questionnaires developed at the regional office; the Vietnamese questionnaires were based on questionnaires used in Papua New Guinea. A total population of 4,186 SIYB former participants/trainees was surveyed, with the useable figures of 1,242, comprising 648 SYB and 594 IYB. The purpose of the survey was to measure the impact of the program after its three years of operation and to provide feedback and the strategy planning for improvement as well as to give feedback to the stakeholders.

One limitation of the study was that the data from the management information system at the program office did not always correspond with the actual numbers of trained SIYB participants. Another major limitation had to do with the missing data (International Labour Organization-SIYB Bulletin 2001). The results of the evaluation are as follows:

**Outreach:** According to the Vietnamese SIYB project report, 4,615 entrepreneurs had been trained by 2001, and this effort reflected a larger outreach than had been anticipated at the beginning of the project (International Labour Organization-SIYB Bulletin 2001).

**Satisfaction with training:** The report states that out of the 3,592 SYB respondents, 71 percent reported to have been satisfied with training and out of the 594 IYB respondents, 60 percent were satisfied with training. Concerning the quality of SYB, 71 percent of the respondents rated it “good and/or excellent,” and 29 percent rated it “acceptable” (International Labour Organization-SIYB Bulletin 2003)

**Follow-up / after-training support:** The report states that after-training support was found to be one of the most difficult aspects of the SIYB implementation. The results indicated that 40 percent of the SYB participants had been followed up. With regard to IYB, only 30 percent had been followed up. In both cases, both methods of Individual Counselling (IC) and Business Improvement Groups (BIG) had been used.

**Business and Action Plans, Business start-ups:** The ILO (2001) report states that the “vast majority of SYB participants completed their business plans after the workshop while for IYB a lower percentage completed action plans for the different modules taught. Profit and sales increased for more than 55 percent of the enterprises. Of the surveyed 648 participants 348 (54 percent) did not have a business at the time of the training. Of these 348 people, 47 (14 percent) started a business after the training

**Effects on Employment:** According to the report, about 1,300 new jobs were created after participants had been through the SYB program.

Evidence from the above evaluation results would suggest that the program is actually highly effective.

### **4.6.3 Impact evaluation of SIYB program in Southern Africa**

In southern Africa, the impact assessment concerned entrepreneurs trained in three countries from June 2001- August 2003. The evaluation was organized at the end of 2003 by the Start and Improve Your Business (SIYB) regional office in Zimbabwe; it was conducted in Uganda, Zimbabwe, and Zambia. The purpose of the evaluation was to assess how the training related to entrepreneurs' performances in starting and running viable businesses (SIYB Bulletin No. 46). Although the assessment mainly focused on classic SIYB indicators, namely: satisfaction with SIYB training, business start-up, business improvement, and employment effects, it also assessed other indicators such as: working conditions of employees employed by entrepreneurs who had undertaken training, cost recovery, SIYB outreach, and follow-up activities (SIYB Bulletin No.46).

The report does not clearly state evaluation methods employed. However, it reveals that the countries' master trainers were engaged in the evaluation, and they conducted surveys based on terms of reference. The survey was conducted on a total population of 5,781, out of 3,707 SYB and 2,074 IYB former participants in Uganda, Zimbabwe, and Zambia. (SIYB Bulletin No.46) The results were as follows:

**Outreach:** The SIYB outreach results indicate that 10,500 people were trained between July 2001 and August 2003. However, due to improper reporting in the region, it was estimated that about fifty percent of the trained entrepreneurs were not reported. Hence, it was estimated that the total number of trained entrepreneurs from that period was 20,000.

**Satisfaction with SIYB training:** Satisfaction with SIYB training is regarded by the SIYB officials as one of the most important performance indicators of achievement. Satisfaction levels are assessed by how participants describe the relevance of the training contents, the delivery mechanisms, the trainer, and some general logistics (International Labour Organization-SIYB Bulletin 2004). It is indicated that 91 percent of the respondents were satisfied with the trainers' skills, 83 percent indicated that SIB met their needs, and 66

percent stated that seminars were well organized (International Labour Organization-SIYB Bulletin 2004).

**Follow-up:** SIYB follow-up activities comprise individual follow-ups, refresher course, and business visits. The results indicate that 42 percent of the respondents received follow-up services after participating in SIYB training interventions, and 76 percent indicated that they did not receive any follow-up. Although follow-up is considered by the SIYB officials to be the most important aspect of the program, it remains, globally, one of the least-performed services (International Labour Organization-SIYB Bulletin 2003).

**Business plan completion and usage and business start-up:** Responding to the question on the use of business planning skills acquired during the course, 75 percent of the respondents stated that they completed their business plans, with 40 percent of those having been verified. Of the verified ones, 30 percent were submitted to the bank, and 50 percent of those were approved. Also, 67 percent of the SYB participants were reported to have started their businesses after the course and 65 percent were reported to have been started out of the business plan developed (International Labour Organization-SIYB Bulletin 2004)

**Effects on employment:** Existing businesses experienced job change after SIYB training, and some managed to expand and generate extra jobs, while others remained stable, and some reduced activities. The report indicates a total of 637 new jobs which were generated in the enterprises owned by people with SIYB-training, while 190 jobs were lost due to decreased business activities. Those changes created a net job gain of 447 jobs in 678 enterprises.

**Business improvement:** Almost all respondents reported to have benefited from training: 78 percent of them reported increase in sales, and 47 percent reported increase in assets. On average, 60 percent could describe concepts learnt, such as costing, record-keeping and marketing (International Labour Organization-SIYB Bulletin 2004)

#### **4.6.4 Critique of the SIYB evaluation**

The results of the above evaluation suggest that the Southern African program is effective. However, there seem to be some inadequacies in the approach used for evaluating the SIYB programs, so both the Vietnamese and Southern African results are questionable. The results reports from Africa and Vietnam above indicate that the program uses variety of monitoring tools which assure the implementation process of the SIYB program. For instance, registration forms, workshop assessment forms, and performance monitoring cards are some of the monitoring tools used. These forms are excellent ways of tracking program activities. However, despite the nicely laid out monitoring procedures, the reports did not reveal the quality of monitoring data except to state that follow-up activities were not implemented successfully.

The reviewed reports (Southern African and Vietnamese) indicate that approaches of evaluating SIYB performance have focused primarily on assessment of client-satisfaction effects on employment; outreach; and business improvements based on client's increased sales and assets. Both the Vietnamese and southern African studies reported that a majority of SIYB clients felt that the assistance provided was useful, and the program was rated good to excellent, and that start-ups began due to the intervention. Graduates of the program were found to be more effective in terms of sales, profitability, and employment et cetera after the program than before training (refer to sections 4.6.2 and 4.6.3).

In both reviewed reports, no quantitative measures were utilized to assess growth in sales, employment, profit et cetera of the assisted businesses. The Vietnamese evaluation reported some methodological limitations, but the southern African did not report any. Although these reports present favourable results, the fact that that these results are based on subjective measures limits the amount of confidence one can place in them. There is need for objective, systematic, quantitative evaluation of SIYB program worldwide, and in Botswana in particular.

Superficially, the current monitoring system of the SIYB program *seems* to be rigorous. There are a lot of forms to be completed at every stage of the program but results from the Vietnamese and Southern African reports show that the impact evaluation, which is part of the Monitoring and Evaluation system, is more tedious than rigorous. The results of both reviewed studies indicate that there have been no truly genuine attempts to quantify the stated benefits, nor has there been any attempt to compare these benefits with a control group or similar businesses who have not received SIYB services. The examined reports indicate that a number of jobs were created after participants had been through the course, but nowhere is it indicated that causal studies had been undertaken to validate that finding.

The examined report from the Southern African region indicates that in Zambia, Zimbabwe, and Uganda, master trainers were engaged in collecting data for the impact evaluation. However, for an evaluation of that nature, data collection should be performed by people who are not in the implementing team, as there is a danger of being led to given finding/ success stories. As pointed out by Smith and Wise (2002), independence from the implementer is imperative to impact analysis, as the implementers will “typically like to showcase the ‘champions’ of the program” (Smith & Wise 2002: 7)

#### ***4.7 Extant evaluation of the SIYB program in Botswana***

Chapter 2 contained substantial descriptive detail on the context and contents of the SIYB program in Botswana. This section will detail and critique the evaluation of what has happened in Botswana to date regarding the SIYB training.

Information about the evaluation of SIYB in Botswana was gathered from the SIYB Achievement and Experiences Worldwide (AEW) report. That report states that the first SIYB evaluation in Botswana was in 1993, ten years after the introduction of the program. The report further indicates that there has not been another impact evaluation thereafter (Samuelsen 2003). Information from the AEW report reveals results of three evaluation questions regarding SIYB Botswana, as follow:

### **1. What did the participants think of the courses?**

According to the report, IYB participants in Botswana appreciated the program. Only 5 percent expressed dissatisfaction with teachers.

### **2. What did the participants learn from the courses?**

Limitations were identified in terms of actual learnt business management skills. It was revealed that only half of the participants learned about 50 percent of the contents of the program, and the remaining half learned much less, and 30 percent were judged to have left the course without having gained new insights.

### **3. Do participants apply the new skills on the job?**

The results reveal that those who learn the IYB message often apply their knowledge.

Source: Samuelsen 2003

These responses may very superficially seem to suggest that there has been rigorous monitoring and evaluation, but the current SIYB evaluation process in Botswana does not remotely comply with current world's best practice evaluation strategies and techniques. Best practice demands the use of quantitative statistical methods together with qualitative methods (Fayolle 2007). Further, it seems SIYB mainly utilises the first three levels of Kirkpatrick's model (see section 4.4.1 above) which do not actually measure the impact of the program at the "results" level. The fact that the SIYB Botswana evaluation uses questions regarding: (1) what the participants thought about the course (2) whether the participants applied what they learnt, and (3) whether the participants learnt from the course proves that the Botswana SIYB evaluation did not meet the best- practice standards; it focused mainly on client satisfaction.



These inadequacies show a need for proper evaluation of the SIYB globally and in Botswana. The next section provides some suggestions for proper evaluation theory and methods for SIYB in Botswana.

#### ***4.8 Going forward: theoretical underpinnings for appropriate evaluation of SIYB in Botswana***

The question of how to evaluate training activities is scarcely a new one (Pierre 1996). It became a matter of significant concern for trainers, managers, and researchers worldwide in the 1950s (Bramley 1998; Dionne 1996; Alliger & Janak 1989). Evaluation is now viewed as the most important factor in the design and implementation of training programs, and evaluation models aim to assess whether specific development interventions meet the stated objectives and/or whether the curriculum design is appropriate (Megirr & Blackman 2005). Evaluation therefore constitutes a very important part of curriculum development, going beyond the traditional assessment of students, to determine how well the teachers and course performed.

The above review of the evaluation of the SIYB program globally and in Botswana indicates some inadequacies in the evaluation approaches used. This inadequacy indicates the need for objective, systematic, quantitative evaluation of SIYB program globally and in Botswana particularly. Entrepreneurship evaluation scholars, e.g. Fayolle et al. (2007: 252) argue that evaluation should comprise both quantitative and qualitative elements. However, the evaluation of SIYB program is mainly qualitative. Storey (2000) suggests comparison of a group exposed to the policy (treatment group) with a non-exposed group matched on a range of appropriate variables with the treatment group, but none of the evaluated reports for the evaluation of SIYB has used this method. Fayolle et al. (2007: 251) emphasizes the importance of controlling for confounding variables which could obscure the relationships between the variables of interest, such as entrepreneurship training and the performance of entrepreneurs, but this control has not been used in any SIYB training evaluation.

This section depends on two areas for guidance as it synthesizes the theories of evaluation. The two areas are: generic theoretical models of approach to evaluations, such as that of Kirkpatrick; and the specific literature on the evaluation of entrepreneurship training programs, specifically seminal works of Lang and Golden (International Labour Organization-SIYB Bulletin 2003) (1989), McMullan et al. (2001), Storey (2000), and Fayolle et al. (2006). This section relates how the current study has adopted these theories and measurement approaches. This study owes a good deal of theoretical knowledge to Kirkpatrick's models, but that has been enhanced by the work of other theorists.

The evaluation model used for the evaluation in this study used Kirkpatrick (1999) levels 2, 3, and 4. The evaluation procedures in this study would assess the impact of the SIYB on behaviors, attitudes, and skills of the entrepreneurs and the impact of those behaviors, attitudes, and skills on their enterprises, that is, it measures “results”. Level 4 assessment was specifically used in the evaluation of business performance in terms of sales, employment, and profit, while levels 2 and 3 were used in assessing the effectiveness of training in terms of motivation, opportunity evaluation, self-efficacy, problem-solving skills, managerial innovation, product innovation, skills in competition, negotiation skills, ability to reconcile business and family, and ability to adapt to business. The “training design and needs analysis” aspects of evaluation were adopted from the Brinkerhoff (1988) evaluation model, essential elements of evaluation which were neglected by Kirkpatrick.

In regard to evaluation measurements, Storey (2000) suggests comparing a group exposed to the policy (treatment group) with a comparable non-exposed group. This study has adopted this method as the evaluation undertaken in this study was conducted by a quantitative method. The study targeted business people who had participated in the SIYB training program in Botswana and those who had not gone through it. This procedure is in line with Storey's (2000) recommendation. Support for this approach is also expressed by

other entrepreneurship evaluation scholars, e.g. Fayolle et al. (2006); McMullan et al. (2001); Lang and Golden (1989).

This section has summarised the theories and approaches of evaluation and indicated how they have been used in the current study. The current study has adopted recommended theories and measurement models in order to cater for the limitations depicted in the current SIYB program evaluation.

#### ***4.9 Chapter summary***

In this chapter the following have been presented and discussed:

- general program evaluation literature which is not entrepreneurial;
- program evaluation approaches, leading to specific selection of the Kirkpatrick model;
- literature on the evaluation of entrepreneurship programs and literature on the evaluation of the SIYB program ;
- a broad comparative overview of the evaluations of other entrepreneurship education programs and that of the SIYB program. The results of the comparison indicate that evaluation of SIYB does not comport strongly with the best-practice principles articulated in the entrepreneurship education literature.

The comparison between the currently conducted evaluation procedures applied to the SIYB program and those of other programs facilitated the design of a rigorous, detailed, quantitative program evaluation of SIYB. Chapter 5 will now present the details of the research methodology used in the study.

# Chapter Five: Research design and methodology of the empirical study

## ***5.1 Chapter abstract***

Chapters 3 and 4 provided a review of relevant literature that formed the basis of several hypotheses. This chapter provides those hypotheses and outlines the research methodology used to test them.

Sections are arranged as follows. In section 5.2, the overall research design is presented; in section 5.3, the operationalization of the theoretical constructs, and the research materials (e.g., questionnaires) as well as the hypotheses are presented. Section 5.4 presents data collection issues, including a discussion of the participants and the sampling procedures. Section 5.5 gives a detailed description of the analysis techniques used to determine the reliability and validity of the constructs. A chapter summary is provided in section 5.6

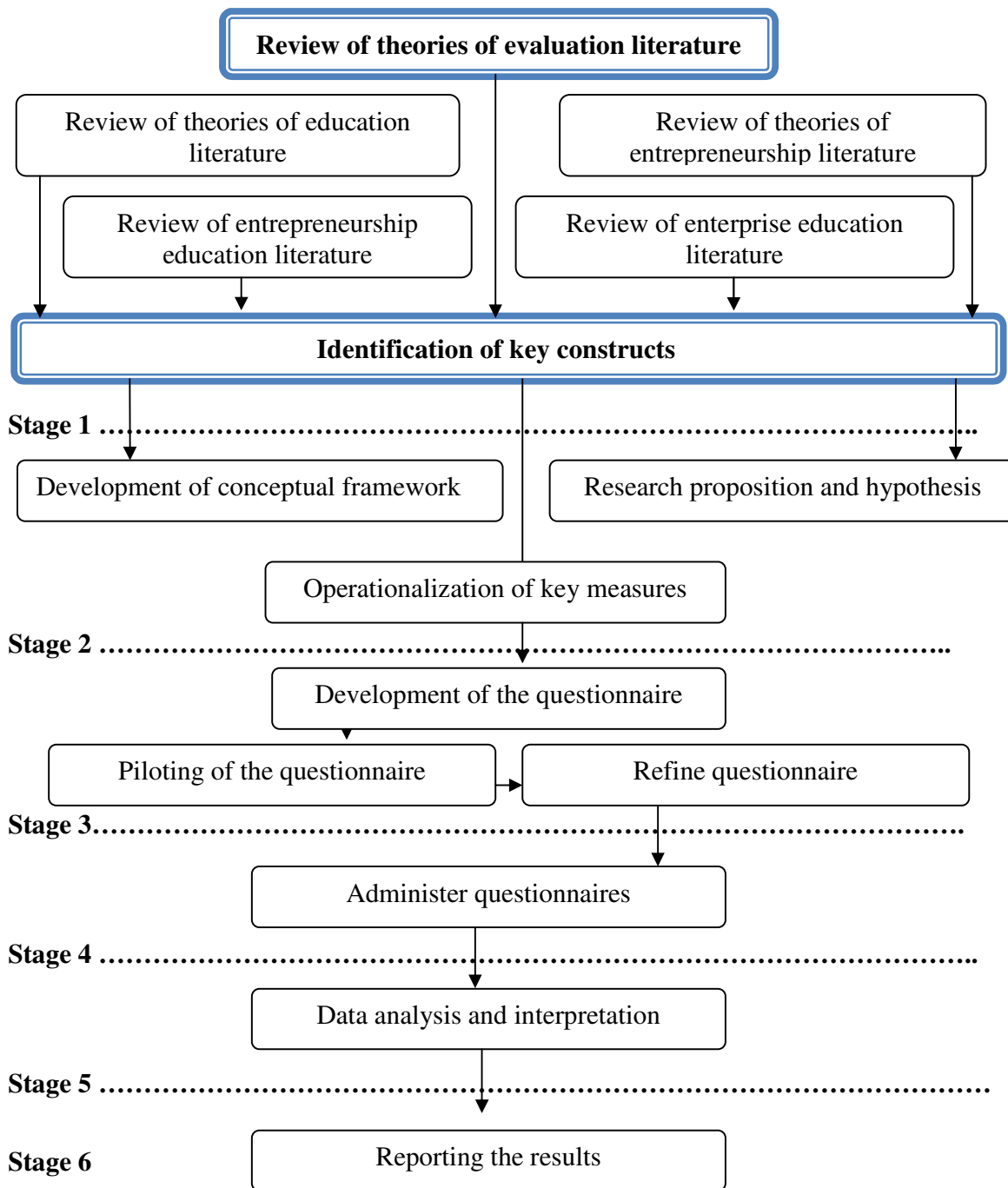
## ***5.2 Overall research design***

Cooper & Emory (1995) assert that a research design is initially required to provide a detailed plan for the selection of information that will be used to answer research questions. Malhotra (1999) classifies different research designs in into two main categories: exploratory and conclusive. The objective of exploratory research is to provide preliminary insights into the subject matter, whereas conclusive research aims to test specific hypotheses and examine the relationships between the investigated factors Malhotra (1999).

In the current study, data were collected from two groups of respondents: (1) those who had undertaken the Start and Improve Your Business (SIYB) training courses from Integrated

Field Services (IFS); and (2) a comparison group that had not gone through IFS courses. A diagram depicting the research process is shown in Figure 5.1.

**Figure 5.1: Steps in the research process**



As can be seen in Figure 5.1, the research proceeded in 5 stages. In stage 1, a conceptual foundation for this study was developed from a review of the literature, including theories of entrepreneurship, education, entrepreneurship education, enterprise education, and evaluation.

Stage 2 of the research took the form of operationalizing the key constructs.

Stage 3 began with the development of the questionnaire, based on the reviewed literature. These questionnaires were the primary research tool and evaluated through administration to 20 people during a pre-testing phase of the research. The pre-testing group consisted of businesspeople who had undergone SIYB training, those who had not, as well as entrepreneurship educators and trainers. Based on the findings and feedback from the pre-testing phase of the research, refinements were made to the questionnaire.

In Stage 4, questionnaires were distributed to the main study participants. Two subgroups were identified for participation. The first group consisted of the Integrated Field Services (IFS) -assisted entrepreneurs, who were indigenous Batswana and had been through SIYB programs. These entrepreneurs were recruited with the assistance of IFS officers.

As stated in chapter 2 of this thesis, IFS is a government department responsible for organising and running SIYB programs. The list of IFS-registered clients constituted the sampling frame, and the sample was formed by distributing as many questionnaires as possible. Questionnaires for IFS-assisted entrepreneurs were distributed and collected with the help of IFS officers. While in Botswana for data collection, I approached the director of IFS to brief him on the PhD project and ask for help regarding data collection and any other assistance they could offer. He was cooperative and offered to help. He then wrote a memo to his staff notifying them of the project and requesting them to assist.

The second sample group consisted of non-IFS-assisted or independent small- and medium-sized business entrepreneurs in Botswana. These were indigenous Batswana who owned

small and medium enterprises and had never undertaken SIYB courses. Initially, the sample group was sought from a list of licensed and registered entrepreneurs in Molepolole, which was obtained from the Kweneng District Council's licensing department. On arrival to Molepolole, the research area, I approached the Kweneng District Council officers at the licencing department to request for assistance in relation to my research. They agreed to supply the list of entrepreneurs in their district. Although this list indicated that there were about 1000 small- and medium-scale businesses in Molepolole, most of the businesses had either closed or moved to different locations. Initially, postal services were used to contact the businesspeople; however, because so few entrepreneurs responded, (just 42 out of 1000), the researcher visited the entrepreneurs in their business premises to find out which businesses still existed. During these visits, the researcher identified 400 independent entrepreneurs.

Ultimately, due to financial and time constraints, only 200 (50 percent) of the total identified independent entrepreneurs were asked to participate. For these participants, the researcher distributed and collected the questionnaires. Telephone calls were made to arrange for the collection of completed questionnaires, and those who were not willing to participate or had not completed the questionnaires were identified and were not revisited for the collection of questionnaires. The questionnaire package also included self-addressed, stamped envelopes for the respondents' convenience in returning questionnaires if they wished to use mail. Out of the 200 sampled entrepreneurs, 112 completed questionnaires were returned, constituting 55 percent of the total sample and 25 percent of the total identified population. Of these returned questionnaires, 42 were sent by post, while the researcher collected 70 after conducting two follow-ups at two- to four-week intervals. This suggests that the follow-up visits encouraged non-respondents to complete questionnaires and return them.

In summary, Stage 1 of the research consisted of a review of literature on entrepreneurship, education, and program evaluation. The review guided the formulation of the conceptual framework in Stage 2, which led to the research propositions and hypotheses. In Stage 3, a pilot questionnaire was designed. This questionnaire was piloted with a sample of 20 participants that comprised business people who had undergone training and those who had not, as well as entrepreneurship educators and trainers. The pilot groups included males and females, people from different educational backgrounds, people from different kinds of businesses, as well as owners of businesses and employees.

The main study seeks to evaluate the effectiveness of the entrepreneurial training program in Botswana. It does so by comparing two groups, the group that has been through the program and the one that has not gone through the program.

### ***5.3 Implementing the theoretical model***

This section presents the operationalization of the theoretical constructs, and the research materials (e.g., questionnaires) as well as the hypotheses. Further, the synthesis of the empirical study is provided.

#### ***5.3.1 From concept to measurement: the model to be tested***

This section is on construct measurement, that is, the operationalization of measures used in the study. It describes how the concepts used in this study were implemented.

Much debate has taken place over the development and use of measures and scales in testing and measuring constructs, with the primary concern being how to attain reliability and validity. Several entrepreneurship publications have informed the operationalization of constructs in this study. Hubbard and Vetter's (1996) extensive examination of the accounting, finance, economics, management, and marketing literature highlights the paucity of replication research and demonstrates the benefits of replication and extension studies. These replications and extensions include the reduction of type 1 errors and



development of more robust measures and empirical generalizability of results. Researchers (Hubbard & Armstrong 1994; Lindsay & Ehrenburg 1993) have pointed out that unreplicated research findings do not provide a strong foundation for the development of business theory and practice. While this study is not a full replication of one particular study, some components of the model have been measured previously using existing scales. This method is consistent with Hubbard and Vetter's (1996) definition of a "replication with extension" where:

*... the intention is not to alter the conceptual relationship analysed in the original study, but to test them differently by modifying certain aspects of its initial design. Examples would be making changes to the manipulated or measured variables, but not both, investigating the influence of additional variables, repeating the study using different populations, contexts , geographical areas, time periods, or using any combination of the afore mentioned changes. (Hubbard & Vetter 1996:157)*

While every attempt was made to use existing scales, some scales had to be modified. This modification was done in accordance with Churchill and Peter's (1984) recommendation that measures may need to be redesigned for different populations. Where this redesign was done, considerable effort was made to ensure that each new measurement item was consistent with the original meaning. Such consistency is particularly important in ensuring validity. In a few instances in this study, these modifications had to be done on a large scale, mostly because the existing items (items used to evaluate the SIYB in Botswana for this study) had been used in qualitative SIYB studies by SIYB officials. After generating a number of items, construct purity was performed using exploratory factor analysis, validity as well as reliability tests.

Measurement items used are described below. On average, each construct was measured using six items, a number considered acceptable in business and marketing research practices (Peter 1979). While more items per construct can more fully capture the underlying factors, the issues of respondent boredom and fatigue are important

considerations (Peter 1979). It is argued that fewer items in a scale reduce the 'stray' loading and may strengthen the discriminant validity, particularly for a narrowly defined measure (Ferratt et al.1981). The following discussion of the constructs used for the study is based on the sequence that they are presented in the conceptual framework.

### ***5.3.2 Measurement scales***

This section describes the five elements of the questionnaire used in this study.

#### **1. Entrepreneurial cognition**

Entrepreneurial cognition is measured in five parts of a scale. Part 1 is on motivation, part 2 on self-efficacy, part 3 on problem-solving and initiative, part 4 on opportunity-seeking and part 5 on innovations, which include both managerial innovation and product innovation. Most of the measurements in this section 5.5.2 were based on the SIYB training materials except for a Self-efficacy measure (in part 2) which was adopted from a published document by Jerusalem and Schwarzer (1992).

#### **2. Enabling business environment**

Enabling environment was operationalized by support from the family as well as support from institutions, including government and financial institutions. Competitiveness was also included as a measure of the business environment. The rest of the measurements were adapted from the SIYB training materials.

As (Posavac 1975) suggests, an evaluative measuring instrument must measure the behaviors that the programme was designed to change. They are:

#### **3. Starting a business**

This measurement was operationalized by using questions related to the initial capital used to start the business as well as by questions pertaining to respondents' preparation prior to starting the business.

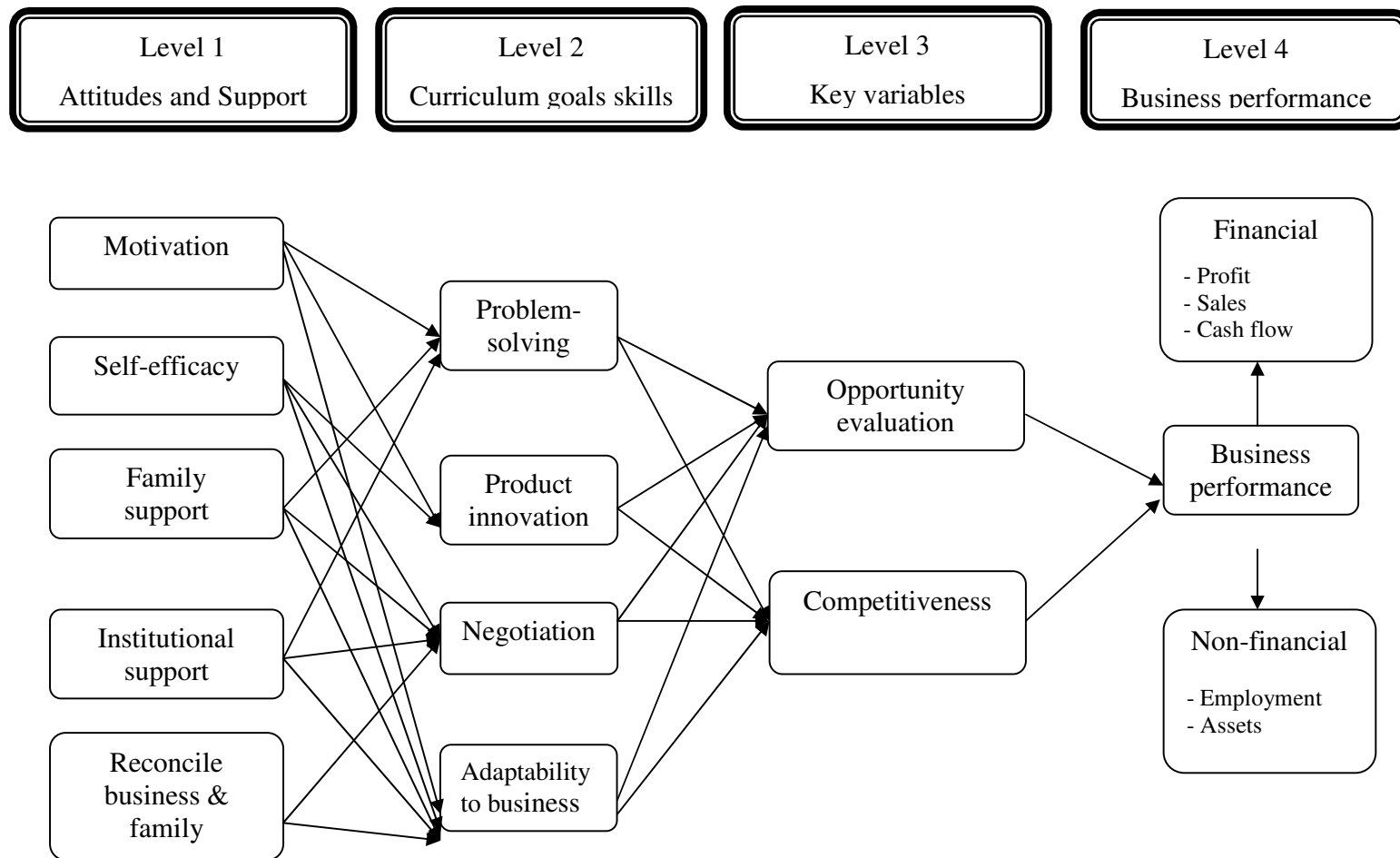
#### **4. Improving the business**

This measure was operationalized by asking questions related to the way respondents' reconciled business, family and culture. The way they adapted to family needs as well as their business management skills and their negotiation skills.

#### **5. Business performance**

Performance measure was operationalized by asking questions related to both financial performance and non-financial performance of businesses. Financial performance was measured in terms of cash flow, sales, and costs. Non-financial performance was measured in terms of employment and assets.

**Figure 5.3 Hypothesis for empirical study**



### **5.3.3 Measurement issues, unit(s) of analysis and the survey instrument**

Unit of analysis refers to the thing under study. Typically, the unit of analysis in the field of entrepreneurial study for a survey is a person. Although the focus in this study is on the impact of the SIYB on the performance of businesses, units of analysis for this study are entrepreneurs who participated in the SIYB program and those who did not participate in the program.

Data was collected using a self-report questionnaire package (see Appendix A). This package included questionnaires and a cover letter which outlined the objectives of the research and its potential importance. The covering letter also informed participants of their right to withdraw from the research without negative consequences. The letter further assured respondents that any information they provided would be kept confidential, and it would be reported anonymously and only in aggregate. There was also a short, self-introductory letter from the researcher. The design of the questionnaire was informed by reviews of the entrepreneurship literature e.g., Chrisman & McMullan, 1990; McMullan, Chrisman & Vesper, 2001; Vesper, McMullan & Sullivan, 1989) as well as the SIYB training materials.

The questionnaire consisted of six main sections. Section 1 addressed 5 dimensions of entrepreneurial cognition, including: motivation; self-efficacy; Problem-solving and initiative; opportunity seeking; and innovations (i.e., managerial innovation; product innovation). Section 2 contained questions addressing the enabling business environment. This section included measures of: support from the family; support from the government; support from the bank; and competition. Section 3 measured processes relating to starting a business, and included measures of initial capital and respondents' preparation prior to starting the business. Section 4 measured the way respondents reconciled business, family and culture; and participants' adaptability to family needs as well as their business management skills and their negotiation skills. In Section 5 respondents were asked about key demographic variables: age, gender, educational background, and ownership status. Finally, Section 6 asked about business success,

including changes in sales, cash flow, assets, employment, and costs. These questions relating to entrepreneurs' financial matters were regarded as sensitive; hence they were reserved for the end of the questionnaire. Each of these constructs and measures will now be discussed in greater detail.

### ***Motivation***

Motivation is the condition that makes individual to undertake, or at least desire to undertake, certain courses of action. It was conceived as a unidimensional measure, and 6 items were used to capture the construct. Each was scored on a 6-point Likert scale (1 = strongly disagree; 6 = strongly agree). These items were taken from existing SIYB training materials where they were used in the strength weaknesses opportunities and threats (SWOT) analysis for the prospective participants to assess their skills and entrepreneurial characteristics. Example items were "I started a business as I did not have any source of income," and "I like to serve my community and make some money out of it."

### ***Self-efficacy***

Self-efficacy was measured using the 9-item scale developed by Jerusalem and Schwarzer (1992). Participants rated themselves on their levels of self-efficacy on how to handle personal and business situations using 4-point Likert scale where 1 represents 'not at all true', 2 'barely true', 3 'moderately true' and 4, exactly true. Evidence supporting the reliability of the Jerusalem and Schwarzer self-efficacy scale comes from a number of studies, including that of Chen (1999), which demonstrated internal consistency reliability of .90. The scale correlated well with other measures in this study. Example items were: "I can always manage to solve difficult problems if I try hard enough," and "I can remain calm when facing difficulties because I can rely on my coping abilities."

### ***Problem-solving***

Problem-solving was conceived as a unidimensional measure. Participants were assessed on how they handled and solved their personal and business problems using 8-items from the SIYB training programs. For each item, participants rated themselves using a 6-point Likert scale where 1 represents 'strongly agree' and 6, 'strongly disagree'. Example items were: "I usually think of many ways to solve a problem," and "I seek suggestions from experienced friends when faced with unusual problems." These items were taken from existing SIYB training materials where they were used in the SWOT analysis for the prospective participants to assess their skills and entrepreneurial characteristics

### ***Opportunity***

Participants were assessed on the ability to seize opportunities using a 5-item scale. This scale was taken from the entrepreneurship literature. It was conceived as a unidimensional measure. Each item was scored using a 6-point Likert scale where 1 represents 'strongly agree' and 6, 'strongly disagree'. Example items were: "I will take an opportunity even if it appears risky," and "I always view problems as potential opportunities."

### ***Innovation***

Two types of innovation were used in the current study: (1) Managerial innovation; and (2) Product innovation. These dimensions of innovation were measured using a 9-item scale-adaptation method. The scale was developed by Vazquez et al. (2001). The scale was taken from the entrepreneurship literature. The report did not indicate details of reliability and validity. All items were scored using a 6-point Likert scale ranging from 1 'not at all' to 6 'very extensively'. Examples of managerial innovation items were "Management constantly seeks to develop new ideas," and "People are encouraged to perceive innovation as an opportunity." Examples of product innovation items included "Our business is prepared to do things that are totally new in our industry," and "We constantly modify our product to better serve our customers"

### ***Institutional Support (from the government and/or the bank)***

Participants' perceptions of the enabling environment were measured using 9 items (see the self-report questionnaire in Appendix A). Each scored on a 6-point Likert scale ranging from 1 'strongly agree' to 6 'strongly disagree'. These items were taken from the entrepreneurship literature. Example items were: "The government of Botswana continues to support enterprises financially," and "Entrepreneurs do not find it difficult to borrow money from commercial banks."

### ***Family Support***

Participants' perceptions of support from family were measured using five items, each scored on a 6-point Likert scale (1 = strongly agree; 6 = strongly disagree). These items were taken from existing SIYB training materials where they were used in the SWOT analysis for the prospective participants to assess their skills and entrepreneurial characteristics.

Example items were: "I involve my family in most business decisions which may affect them," and "My family understands my inability to pay enough attention to them because of my business commitments."

### ***Competitiveness***

Competitiveness was measured using 5 items, each scored on a 6-point Likert scale, ranging from 1 = strongly agree to 6 = strongly disagree. These items were taken from the SIYB material.

Example items were: "Our competitors always cut down their prices," and "Our competitors are large and have economies of scale."



### ***Negotiation skills***

Negotiation skills were measured using 5 items, each scored on a 6-point Likert scale (1 = strongly agree; 6 = strongly disagree).

Example items were: "I am able to negotiate every aspect of business," and "Before starting negotiations, I evaluate my, as well as the other persons' positions of advantages and disadvantages." These items were taken from existing SIYB training materials where they were used in the SWOT analysis for the prospective participants to assess their skills and entrepreneurial characteristics. No evidence for reliability and validity indicated.

### ***Adaptability to family needs and business needs***

Adaptability to family/business needs was measured by the Likert Scale with 1 representing 'strongly agree' to 6, representing 'strongly disagree'.

Example items were: "I will produce only those goods and services which I enjoy producing," and "If customers want cheaper product they can go elsewhere." These items were taken from existing SIYB training materials where they were used in the SWOT analysis for the prospective participants to assess their skills and entrepreneurial characteristics.

### ***Reconciling business, family and culture***

Participants' ability to reconcile family, culture and business was measured by the Likert Scale with 1 representing 'strongly agree' to 6, representing 'strongly disagree'.

Example items were: "I will need to take from my business whatever money my family needs," and "If members of my family are in financial difficulties, I will have to help them even though it may cost my business." These items were taken from existing SIYB training materials where they were used in the SWOT analysis for the prospective participants to assess their skills and entrepreneurial characteristics.

### ***Business performance***

Business performance was measured in terms of cash flow, sales, profit, and employment. These were measured on a 6-point Likert scale; participants were asked to evaluate the percentage increase or decrease in business performance with 1 representing 'decrease of more than 20 percent' to 6 'increase of more than 20 percent.'

#### ***5.3.4. Synthesis: the four tasks of the empirical study***

The task of the empirical study was to screen the data, test the viability of variables and constructs, test demographic variables using descriptive analysis and chi-square tests, and confirm viability of main research variables. The empirical study also assessed construct compatibility by testing the measurement items' independence and relationships. In this study, groups were compared using MANOVAs. The efficacy of the integrated model was tested by determining patterns of correlation, and testing some specific hypotheses as indicated in chapter 6. An integrated picture was provided through generic model estimation as shown in chapter 6.

#### ***5.3.5 Specific hypotheses***

The main hypothesis postulates that entrepreneurship training contributes positively to business performance. A subsequent hypothesis postulates that enterprises of people who have participated in entrepreneurial training programs perform better than those of non-participants. These hypotheses were tested by using individual hypotheses as indicated below:

##### **Motivation is associated with**

- H1: Problem-solving
- H2: Innovation
- H3: Adaptability
- H4: Opportunity
- H5: Competitiveness

##### **Self -Efficacy is associated with**

- H6: Innovation
- H7: Negotiation
- H8: Adaptability
- H9: Opportunity
- H10: Competitiveness

##### **Family support is associated with**

- H11: Problem solving
- H12: Negotiation

H13: Adaptability  
H14: Opportunity  
H15: Competitiveness

**Institutional support is associated with**

H16: Negotiation  
H17: Adaptability  
H18: Problem- solving  
H19: Opportunity  
H20: Competitiveness

**Reconcile business and family is associated with**

H21: Negotiation  
H22: Adaptability  
H23: Opportunity  
H24: Competitiveness

**Problem-solving is associated with**

H25: Competitiveness  
H26: Opportunity

**Innovation is associated with**

H27: Competitiveness  
H28: Opportunity

**Negotiation is associated with**

H29: Competitiveness  
H30: Opportunity

**Adaptability is associated with**

H31: Competitiveness  
H32: Opportunity

The results of these hypotheses are presented in chapter 6.

## ***5.4 Data collection***

In this section, data collection issues, including a discussion of the participants and the sampling procedures are presented.

### ***5.4.1 Population, sampling and participant selection***

In this study, the participants included businesspeople in Botswana. Specifically, two subgroups were targeted for participation in the study. The first group consisted of the Integrated Field Services (IFS) - assisted entrepreneurs, who were indigenous Batswana who had been through SIYB programs. The second group consisted of non-IFS assisted or independent entrepreneurs in Botswana. These people were indigenous to Batswana

and owned enterprises that were not registered with IFS. Furthermore, this group had never undertaken an SIYB course. These groups are discussed in more detail below.

The IFS-assisted entrepreneur group consisted of 86 participants from a total of 150 who were approached to participate. Personal measures reviewed in this research include educational background, age, gender, type of business activity and its legal form, ownership structure, as well as number of employees in the establishment. Thirty-two percent of the IFS sample had an education qualification equivalent to primary school completion; 40 percent were educated up to a Junior Certificate level (the third year of high school); while 28 percent were educated up to Form 5 and above, which is last year of high school. Forty-four percent of the IFS sample was aged between 18 and 34, while 56 percent were of 35 years or above. In regards to gender, 42 percent were males while 58 percent were females. The type of businesses owned by these participants were categorised in two groups: (a) sole proprietorship (73 percent); and (b) others (27 percent), which comprised mainly partnerships. Sixty-three percent of the respondents had been in business for less than 5 years, while 37 percent had been in business for 5 years or more. Eighty-four percent of these businesses employed between 1 and 5 people, while 16 percent employed 5 or more people.

The non-IFS group consisted of 111 participants, including: 37 percent with an education qualification equivalent of primary school completion; 34 percent educated at Junior Certificate level; and 29 percent educated up to Form 5 and above. Fifty-four percent of the non-IFS sample was aged between 18 and 34, whilst 46 percent were of 35 years or above. Thirty-nine percent were male, whilst 61 percent were female. Seventy-one percent of the IFS respondents were sole proprietors, whilst 29 percent owned other types of businesses. Fifty-five percent of these respondents had been in business for less than 5 years, while 45 percent had been in business for 5 years or more. Eighty percent of these participants employed between 1 and 5 people, while 20 percent employed 5 or more people.

## **5.5 Data analysis**

This gives a detailed description of the analysis techniques used to determine the reliability and validity of the constructs. It describes the statistical techniques used to analyze the data in the current study. The stages of analysis included: (a) testing the reliability and validity of the measurement scales; (b) evaluating differences between study groups on a range of outcome variables; and (c) examining structural relationships among these variables. The data analytic procedures used in the course of these stages included Cronbach's alpha, factor analysis (exploratory and confirmatory), MANOVA, and SEM.

### **5.5.1 Establishing reliability and validity of constructs**

Reliability and validity are conditions that characterise good measurement instruments (Cooper & Emory 1995; Cooper & Schindler 2001). There are a number of important reasons for evaluating the reliability and validity of measurement scales prior to other stages of data analysis (Cooper & Schindler 2001). For example, one primary reason is that any relationship between an observed variable (e.g., a measured scale score) and a 'true' score on a construct of interest can only be inferred. Furthermore, the basis of this inference comes from the demonstrated reliability and validity of the scale (Churchill 1979). As such, establishing reliability and validity is a necessary prerequisite for making valid inferences about the nature of the 'true' score based on participant responses on the observed measure. Given the importance of establishing reliability and validity, all of the scales used in the current study were evaluated to determine whether they measured what they were intended to measure (i.e., were valid), and did so consistently (i.e., were reliable). This section describes the analysis procedures adopted to establish the reliability and validity of measures.

#### ***Reliability***

Peter (1979: 6) defines reliability as "the degree to which measures are free from error and therefore yield consistent results." As such, reliability indicates whether a construct is being consistently measured. Achieving reliability is a prerequisite to establishing

validity, but is also central to the interpretation and development of theory (Churchill 1979; Jacoby 1978). Various methods can be used to assess the reliability of multi-item measurement scales, including coefficient alpha or Cronbach's alpha (Churchill 1979), test-retest reliability, and alternative forms reliability (Malhotra et al. 2002; Peter 1979; Zikmund 2000). Churchill recommends that Cronbach's alpha should be calculated first when assessing instrument reliability, and the current study used this estimate of internal consistency as the primary index of reliability

Cronbach's alpha determines the internal consistency of a multi-item measure (Cronbach 1951a). However, the appropriate use of this index requires a single dimension underlying the scale items (Churchill 1979). Hattie (1985: 175) defined unidimensionality as "the existence of one latent trait underlying the data" As such; establishing unidimensionality within scale items was a necessary prerequisite to evaluating reliability in the current study. Ahire and Devaraj (2001) provide techniques for establishing unidimensionality, including principal component analysis (PCA) and confirmatory factor analysis (Hattie 1985). Although Gerbing and Anderson (1988) also advocate the use of exploratory factor analysis (including PCA) for assessment of unidimensionality as a preliminary investigation technique, they advise that confirmatory factor analysis (CFA) provides a more rigorous evaluation of unidimensionality (due to the specification of a CFA model prior to data analysis). Given these advantages over PCA, a CFA approach was used to test the data for unidimensionality. Further discussion of the distinctions between EFA and CFA are provided below in table 5.1.

Once dimensionality has been examined, Cronbach's alpha can be calculated. A high alpha value indicates a high inter-correlation among items that are presumed to measure a specific construct (Cronbach 1951b). Although Nunally (1994) suggests that coefficients between 0.5 and 0.7 are acceptable values, de Vaus (1995) argues that alpha should be at least 0.7. If scale internal consistency is below this level, items that do not exhibit a strong correlation with the total measure can be deleted as a way of increasing the reliability of a measurement (Churchill 1979; Nunally 1967).

### ***Validity: content, construct, criterion, and discriminant validity***

Once reliability has been established, issues of validity can be considered. The validity of a measure refers to the extent that differences in measured scores indicate true differences among individuals on the characteristics that are being measured (Zikmund 2000; Malhotra 1999). The validity of a scale indicates whether the measurements used in the questionnaire are actually measuring what they are intended to measure (Peters 1979). The types of measurement validity that can be assessed are content, construct, and criterion validity (Malhotra et al. 2002). This section will be discussing these assessments in greater detail.

'Content validity' is concerned with the adequacy and representativeness of measures estimating the presumed underlying construct (Churchill 1979). It refers to the subjective agreement among professionals that the scale logically appears to be accurate and to capture all relevant dimensions of a particular theoretical concept (Malhotra et al. 2002). Frequently, evaluating content validity involves experts' judging the relevancy and adequacy of the constructs (Zikmund 2003). Alternatively, content validity can be increased by using scales from established empirical studies (Narver & Slater 1990; Jaworski & Kohli 1993) or by pre-testing. To ensure content validity in the current study, the following steps were taken (a) the measures were based on a thorough review of literature; (b) where possible, published questionnaires were used; and (c) where published scales were not available, items were developed from the SIYB training materials and refined through pre-testing.

'Construct validity' according to Cavana, Delahaye and Sekaran (2000: 213) 'testifies to how well the results obtained from the use of the measure fit theories around which the test is designed'. To establish construct validity, Churchill (1979: 70) argues for the evaluation of '(1) the extent to which the measure correlates with other measures designed to measure the same thing, and (2) whether the measure behaves as expected'. This first condition is captured under the notions of convergent and discriminant validity. The second condition is related to the direction of the relationships between a variable of interest and other relevant constructs. A measure is said to behave as expected if it correlates with other variables in the theoretically expected direction.

'Convergent validity' refers to the extent to which a measurement instrument correlates with other measures of similar constructs (O'Leary-Kelly & Vorkurka 1998).

Confirmatory factor analysis is an appropriate technique for evaluating convergent validity (Fornell & Larcker 1981; Steenkamp & van Trijp 1991). Coefficients should be at least 0.50 (Hildebrandt 1987). If the coefficient is less than .5, it means that less than 25 percent of the variance is explained, so high coefficient is preferred.

'Discriminant validity,' in contrast, assesses whether a construct correlates highly with a measure that is expected to be theoretically and empirically distinct (Churchill 1999; Fornell & Larcker 1981). Fornell and Larcker (1981) describe two constructs as different when the average variance in an indicator accounted for by a latent construct is greater than the variance that the latent construct shares with another construct (i.e., shared variance). This imbalance suggests that the construct has more in common with its indicators than with other constructs (Hulland 1999). For discriminant validity to be established the average loadings between the measurement items and the latent construct should be greater than the covariance of the latent factors and the overall fit of the model should be acceptable (Schumacker & Lomax 1996; Kline 1998; Byrne 2001; Maruyama 1997).

Providing evidence for measurement scale validity is often done through the use of factor analysis. Factor analysis can either be confirmatory or exploratory in nature (Schumacker & Lomax 1996), and there are arguments both for and against these different techniques (i.e., exploratory and confirmatory) for establishing validity (Gerbing & Anderson, 1988; Hurley et al.1997). Table 5.1 underlines the differences the two methods. A more thorough discussion of these differences is provided below.



**Table 5.1 Exploratory and confirmatory factor analysis**

<b>Exploratory Factor Analysis</b>	<b>Confirmatory Factor Analysis</b>
A tool for theory building. Performed in the early stages of research, for consolidating variables and for generating hypotheses about the underlying processes	A tool for theory testing. A sophisticated technique used in advanced stages of research process to test a theory about a latent variable
To describe and summarise data by grouping together variables that are correlated [a set of smaller common factor with zero cross-loadings]	Allows researcher to impose a particular factor model on the data and then see how well that model explains responses to the set of measures
A posteriori – One lets the observed data determine the underlying factor model (reasoning inductively to infer a model from the observed data)	A priori – One derives a factor model or models (reasoning deductively to hypothesise a structure beforehand)

**Sources: Adapted from Grimm & Yarnold 1995 and Tabachnick & Fidell 1996.**

As shown in Table 5.1, exploratory factor analysis (EFA) is suited for initial data exploration in order to generate hypotheses. This technique allows researchers to determine the structure of factors to be examined. EFA is a method of discovering the number and nature of the latent variables that explain the variation and covariation in a set of measured variables (Preacher & MacCallum 2003). While there are multiple ways to extract factors in EFA, the most common extraction methods are maximum likelihood (ML), principal axis factoring (PAF) and alpha factoring (AF) (Tabachnick & Fidell 2001). The choice of extraction method may not be so critical in EFA as compared to CFA (see below, in this section), given that the methods seem to converge on very similar solutions once the sample size is approximately 300 or greater (Gerbing & Hamilton, 1996).

Despite these strengths, EFA can be a problematic methodology for the accurate assessment of factor structure, and thus for evaluating validity. The main criticism of EFA is that it is statistically, rather than theoretically, driven. Armstrong (1967) criticises researchers who claim to derive new theories based on factor analysis of unplanned selected sets variables (i.e., EFA). He argues that researchers should rely on existing theoretical knowledge to select variables to be analysed so that sense can be made of the results. To this end, confirmatory factor analysis (CFA) may be preferred because it emphasizes *a priori* model testing (Bartko, Carpenter & McGlashan 1998). It is important to note that EFA may suggest a single factor even if the item combination

may not make sense; this is because EFA is exploratory and data-driven, whereas CFA must be theory-driven.

### **Confirmatory Factor Analysis**

Confirmatory Factor Analysis (CFA) facilitates examination of the relationship between latent (unmeasured) and observed (measured) variables. It provides factor loadings of items on constructs, which indicate the strength of the relationship between the indicator and the latent variable. In contrast to EFA, CFA generally requires a theoretical or empirical foundation to specify a factor structure in advance (Stevens 1996). As such, CFA is suited to testing validity when the researcher has a rationale for specifying the number and nature of factors underlying the data (Henson & Roberts 2000). From an analytic perspective, CFA has a number of additional advantages over EFA. Firstly, CFA procedures produce estimates of multiple model parameters, including: the factor loadings, factor variances and covariances, and residual error variances associated with observed variables (Kline 1998; Schumacker et al. 1996). Secondly, various indices of the fit are generated to assess whether the model itself provides a good representation of the data. Long (1983: 12) argues that CFA models also allow the researcher to impose constraints on model parameters in order to identify “(1) which pairs of common factors are correlated, (2) which observed variables are affected by which common factors (3) which observed variable are affected by a unique factor, and which pairs of unique factors are correlated.” As such, CFA is useful for assessing unidimensionality, as it enables the estimation of convergent and discriminant validity (Bagozzi et al. 1991; Fornell & Larcker 1981b; Steenkamp & van Trijp 1991), and so CFA was chosen as the technique used to assess validity of the measurement scales in the current study.

### ***5.5.2 Comparison of outcome variables by groups***

Once evidence was obtained for the validity of the measurement scales, between-group differences were evaluated. Multivariate analysis of variance (MANOVA) is a commonly used multivariate technique that assesses the differences of a set of two or more dependent variables and across values of a range of categorical independent

variables (Cooper & Schindler 2001: 581). In MANOVA analysis, four groups of dependent variables were used. The groups of variables were:

1. internal resources — related to motivation and self-efficacy;
2. enabling environment — related to support from government and banks, support from family and competition;
3. SYB skills achievement —related to the ability to reconcile family and business and ability to adapt to business needs; and
4. IYB skills achievement — related to problem-solving, opportunity-seeking, innovation and negotiation skills.

As such, a one-way, between-group MANOVA, with training group as the between-subjects variables, was conducted in the current study.

As described above, the training group was the between-subjects variable in the MANOVA. To facilitate conducting MANOVAs, respondents were divided into four groups based on their training history. The four groups were: (1) participants who did not take part in any training; (2) participants who did other training; (3) participants who did SIYB and other training; and (4) participants who did both SYB and IYB but no other training. The total number of respondents from the “no training group” was 63. The number of respondents in the other 3 groups ranged from 22 to 24. Thirty-five participants were randomly selected from the original 63 respondents in the ‘no training’ group, in order to make the cell sizes roughly equivalent across groups. This is in line with the MANOVA assumption that the size of the compared groups should be equal and not lower than 20 (Pallant 2005).

### ***5.5.3 Structural relationships among outcome variables***

Finally, the current study investigated the structural relationships amongst a number of outcome variables. Although multiple regression is a useful analytic tool for examining of direct relationships between independent and dependent variables, regression is limited because it facilitates examination only of a single dependent variable (Hair et al. 2002). Structural equation modelling (SEM), in contrast, has the ability to accommodate simultaneous analysis of multiple dependent variables; it is superior to multiple

regression in this respect. Furthermore, structural equation modelling can be used to examine the nature and magnitude of postulated dependence relationships and, at the same time, assess the direct and indirect effects of these variables on the model (Schumacker & Lomax 1996). SEM has the following additional advantages over traditional regression-based techniques: (a) it makes the researcher's theory explicit; (b) it enhances precision due to the requirement of clear definitions of constructs and operationalization; (c) it more easily represents complex theoretical models; and (d) it provides a formal basis for developing and testing both measures and theories (Hulland et al. 1996). SEM techniques also permit the statistical control of measurement error. As such, structural relationships in this study were investigated using structural equation modelling.

### ***Overview of SEM***

Structural Equation Modelling or SEM is a general statistical modelling technique which is widely used in research. It can be viewed as a combination of factor analysis and regression or path analysis. The use of SEM is often on theoretical constructs, which are normally represented by latent factors. The relationships in between the theoretical constructs are represented by regression or path coefficients between the observed variables.

SEMs are normally represented in a set of matrix equations. SEM provides a general, convenient framework for statistical analysis that includes several traditional multivariate procedures such as factor analysis, regression analysis, discriminant analysis, and others. The strength of SEM is that it may specify and estimate complicated path models, with intervening variables between the independent and dependent variables as well as with latent factors.

In this study, the expectation-maximisation (EM) algorithm was used to input missing values for all quantitative constructs, except for the BP measure (Kline 1998). The EM method is an iterative process in which all other variables are used in a regression analysis to predict the values of the missing variables (Cunningham 2001). In a series of Monte Carlo experiments, Graham, Hofer, Donaldson, MacKinnon, and Schafer (1997)

found that the EM method of data imputation was more consistent and accurate in predicting parameter estimates than methods such as list-wise deletion, which was highly variable, and mean substitution, which consistently underestimated values.

### ***Assumption testing***

Univariate outliers on composite score variables were tested. The Mahalanobis distance statistic available in AMOS 7 was also used to screen for possible multivariate outliers (Tabachnick & Fidell, 1996). Should outliers be evident, decisions about retaining or excluding such cases/elements should be based on comparing analyses in which outliers were retained versus analyses in which these cases were excluded (Kline 1998). Frequency analyses were conducted for each variable to screen for out-of-range values.

Homoscedasticity (homogeneity of variance) refers to the spread of scores from different populations that should have homogeneous variances (Coakes & Steed, 2001; Shavelson 1996). These assumptions were assessed using scatter plots of standardised residuals versus standardised predicted values. Univariate normality was examined through SPSS. The skewness value provides an indication of the symmetry of the distribution. Skewness values in the range of -1 to +1 are considered acceptable values for approximating normality (Zikmund 2003). Kurtosis provides information about the peak of the distribution. For skewness, absolute values less than 2 are deemed acceptable (Tabachnick & Fidell 1996). Furthermore, in SEM analyses, corrections to the  $\chi^2$  statistics that account for the degree of multivariate non-normality in the data can be employed if required (further discussion and the results are provided in chapter 6).

### ***Sample-size issues***

SEM techniques (including CFA analyses) generally require large sample sizes in order to obtain reasonable stability in the parameter estimates (Cunningham 2001; Kline 1998). As a general rule, sample sizes in excess of 200 have been recommended for SEM analyses (Kline 1998). However, sample-size requirements differ, depending on issues such as the normality of the data and model complexity. For example, Kline

(1998) proposed that an optimal ratio of number of participants to number of parameters to be estimated be in order of 20: 1, but acknowledge that a 10:1 ratio might be a more realistic target. However, Bentler (1995) suggests that a 5:1 ratio is an allowable minimum. The overall sample size for this study was 91 IFS clients and 110 non-IFS clients respectively, and the parameter estimate is 43. Therefore the number of parameter is approximately 5.1, which is sufficient to produce analysis.

### ***Stages in an SEM analysis***

Structural equation modelling (SEM) approaches involve developing measurement models to define latent variables, and then establishing relationships or structural relations among these latent variables (Baumgartner & Homberg 1996; Bollen & Long, 1993; Kline 1998; Byrne 2001; Maruyama 1997). The six steps that characterise typical SEM applications are (1) Model specification; (2) Model identification, (3) Data collection, (4) Parameter estimation (5) Evaluating model fit; and (6) Model re-specification (Schumacker & Lomax, 1996; Kline 1998).

1. Model Specification: Stage 1 involves specifying a model. Structural equation modelling and path analysis require that the model be specified prior to analysis, based on theoretical reasoning or literature research (Hair et al. 2002; Schumacker & Lomax 1996; Kline 1998; Byrne 2001; Maruyama 1997). If the relationships within the structural model lack a theoretical basis, the results might be misleading (Hair et al. 2002). As a result, models used in this study based on an extensive literature review of entrepreneurship education and evaluations.

2. Model identification: The second stage involves checking whether the parameters of the model can be derived from the observable set of variances and covariances. A necessary condition is the use of possible over-identified models where the degree of freedom is greater than zero ( $d.f.>0$ ). The degrees of freedom are calculated by subtracting the number of parameters from the total number of variances and covariances in the model.

3. Data collection: The third stage involves collecting data. Data on all observable variables defined in the model must be collected from the population or populations

where the suggested model is to be tested. An adequate sampling strategy must be designed in order to draw appropriate conclusions.

4. Parameter estimation: The fourth stage estimates the value of the unknown parameters, such as the standardised path coefficients, in such a way that the observed variance-covariance matrix is optimally adjusted to the predicted moment matrix. Several estimation methods are available such as Unweighted Least Squares (ULS), Generalised Least Squares (GLS), Maximum Likelihood (ML) and many others. The most frequently used is ML.

5. Evaluating model fit: The fifth stage evaluates the fit of the model. The adequacy of the model is evaluated according to implied variances and covariances to account for the variances and covariances observed within the sample data. A well-fitting model is one that comprehensively explains the variances and covariances observed in the data. As recommended by a number of researchers (e.g., Bentler 1990; Byrne 1998; Kline 1998; Marsh, Balla & McDonald 1988) multiple criteria were used to assess goodness-of-fit in the present study. These included the estimated likelihood chi-square statistic, the normed chi-square, the Root Mean Square Error of Approximation (RMSE), the Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI).

The chi-square index (and associated degrees of freedom) is a commonly used index of 'exact' model fit, for which a non-significant finding indicates a model that is a good fit. However, due to the sensitivity of the chi-square statistic to sample size (the chi-square tends to inappropriately reject models with larger samples), relying on the chi-square statistic alone is not recommended (Bollen 1989). However, the ratio of chi-square to its degrees of freedom provides another index of the amount of misfit per degree of freedom.

Furthermore, other indices of 'close' fit can be used to evaluate goodness-of-fit. For example, the Comparative Fit Index (CFI) compares the specified model to an alternative model (typically an independent model), and provides values theoretically ranging from 0 (poor fit) to 1 (perfect fit) (Bentler 1990). The Tucker-Lewis Index

(TLI) also compares an absolute null model with the theoretical model of interest and its acceptable value should be close to 1.0. For the TLI, values greater than .90 reflect a good fit (Bentler 1990).

The RMSEA, in contrast, is a residual-based fit statistic that assesses how poorly the model fits the data. RMSEA values up to about 0.08 indicate a reasonable fit of the model (Widaman & Reisse 1997). RMSEA, CFI and TLI were chosen based on computer simulation studies which have shown them to out-perform alternative indices on a range of measures (Marshall et al. 1988; Widaman & Reisse, 1997). TLI was specifically used as it is designed for small samples. Table 5.2 summarises the commonly used goodness-of-fit indices; the results of the fit indices for this study are shown in chapter 6.



**Table 5.2: Summary of fit indices**

Type	Name	Abbre v.	Accepted level	Comments
Exact fit	Chi-square	$\chi^2$ (df,p)	p>0.05at a = 0.05	p>0.05 reflects acceptable fit; to get a non-significant $\chi^2$ with an association to degree of freedom (meaning that data fit the model) significant has to be p>0.05
Absolute Fit and Model Parsimony	Normed Chi-square	$\chi^2/df$	1.0< $\chi^2/df<3.0$	Values close to 1 indicate good fit, but values less than 1 may indicate overfit.
Residual based	Root Mean-Square Error of Approximation	RMSEA	RMSEA< 0.05	Value between 0.05 – 0.08 may also indicate satisfactory fit.
Incremental/Comparative Fit	Tucker-Lewis Index	TLI	TLI > 0.95	Values between 0.90 – 0.95 may also indicate satisfactory fit. Values greater than 1 may indicate overfit.
Incremental/Comparative Fit	Comparative Fit Index	CFI	CFI > 0.95	Values between 0.90 – 0.95 may also indicate satisfactory fit. Values close to 0 indicate poor fit. CFI = 1 indicates perfect fit.

*Source: Adapted from Schumacker and Lomax, 1996; Rex B. Kline, 1998; and Holmes-Smith, 2000*

6. Model Re-specification: The sixth stage involves a process of retrospectively identifying ways of improving the model fit by amending estimated parameters from the original model (Hair et al. 2002; Kline 1998; Byrne 2001; Maruyama 1997). Model re-specification should take place only when it is based on theoretical justification (Maruyama 1997) or: when theoretical considerations require and justify it. Schumacker and Lomax (1996) recommend a re-specification search process by initially assessing empirical indicators (e.g., t-values) that identify parameter estimates with little explanatory power. Parameters with non-significant t-values can be deleted from the model. More specifically, a t-value less than 1.96 indicates that the parameter is not significantly different from zero at the 5 percent significance level (Maruyama 1997). Furthermore, the modification indices measure the predicted decrease in the chi-square

statistics from adding a particular relationship to a model. However, any modification to the model must be theoretically justified; otherwise the process becomes data-driven and relies on chance (see Hair et al. 2002; Kline 1998; Byrne 2001 and Maruyama 1997).

## **5.6 Chapter summary**

This chapter provided the following:

- a description of the intervention research process that was adopted in the current study;
- details about the participants, instruments, and methods used to carry out the research;
- details on data collection procedures as well as measuring scales and detailed information on the statistical analysis techniques to be used.

Chapter 6 reports the findings of the study.

# Chapter Six: Results

## **6.1 Chapter abstract**

The previous chapter provided the research methodology and explained the methods selected for collecting data and testing the proposed hypotheses. In this chapter, the findings or the empirical component of the study (performed according to chapter five's methodology) are reported. Accordingly, this chapter describes the data-screening process, as well as participant descriptive statistics. In this chapter, measurement models (using one-factor congeneric models) were developed and tested for each of the study constructs, to find out if the measures employed in this research are relevant for this study. The models developed in this chapter were appropriate for use with a sample from Botswana. This chapter also reports the process and results of group comparisons using a series of Multivariate Analysis of Variances (MANOVAs). To produce MANOVA, respondents were divided into four groups; a detailed description of how the groups were formed is presented. Finally, structural equation modelling (SEM) analyses are reported. All analyses were conducted using either SPSS 14 (Statistical Package for the Social Sciences) or Amos 7.

The primary focus of this study was to investigate whether pre-existing variables — variables related to the enabling environment and entrepreneurial skills and creativity — were associated with Business Performance outcomes. It was hypothesised that predictors of Opportunity Evaluation and Competitiveness would be: (a) pre-existing variables, as measured by the constructs of Motivation, Self-efficacy and Problem-solving initiative and (b) entrepreneurial curriculum skills and creativity, as measured by constructs of Negotiation skills, ability to Adapt to business needs, and ability to Reconcile family, culture and business and Managerial and Product Innovation. These variables were then hypothesised to be predictors of Business Performance. The chapter is presented in the following sections. Section 6.2 presents data screening information, and section 6.3 presents variables and tests for construct validity. Section 6.4 gives group comparison data using MANOVA. Section 6.5 examines the efficacy of the integral model, which includes, hypotheses testing and section correlation results.

## ***6. 2 Hypotheses testing***

Table 6.1 presents a summary of the direct, indirect, and total effects of the model exogenous variables on model endogenous variables. It indicates the direct, indirect, and total effects of all the variables used to form the hypotheses tested in this study, which are: Motivation, Self-efficacy, Family support, Institutional support, Reconciling business and family, Problem-solving, Managerial innovation and Product innovation, Negotiation and Adaptability. The results indicate that out of 32 tested hypotheses, 24 were supported while only 8 were not supported. These results are discussed in chapter 7.

**Table 6.1 Direct, indirect and total effects for the path model testing internal factors, skills & behavior factors, key entrepreneurial factors, and performance factors.**

Hypothesis	Direction +/-	Direct regression coefficients	Indirect regression coefficients	Total effects	Supported or not supported
<b>Motivation is associated with</b>					
H1: Problem solving	+	.134/.083		.134/.083	No
H2: Innovation	+	.246*/.100		.246*/.100	Yes
H3: Adaptation	+	-.245*/.098		-.245*/.098	Yes
H4: Opportunity	+		.120/.086	.120/.086	Yes
H5: Competitiveness	+		.014/.061	.014/.061	Yes
<b>Self Efficacy is associated with</b>					
H6: Innovation	+	.232*/.098		.232*/.098	Yes
H7: Negotiation	+	-.008/.076		-.008/.076	No
H8: Adaptation	+	.148/.095		.148*/.095	No
H9: Opportunity	+		-.032/.037	-.032/.037	Yes
H10: Competitiveness	+		-.036/.051	-.036/.051	Yes
<b>Family support is associated with</b>					
H11: Problem solving	+	.280*/.084		.280*/.084	Yes
H12: Negotiation	+	.500*/.081		.500*/.081	Yes
H13: Adaptation	+	.120*/.086		.120*/.086	No
H14: Opportunity	+		.353*/.094	.353*/.094	Yes
H15: Competitiveness	+		.272*/.065	.272*/.065	Yes
<b>Government and bank support is associated with</b>					
H16: Negotiation	+	.293*/.083		.293*/.083	Yes
H17: Adaptation	+	.230*/.091		.230*/.091	Yes
H18: Problem solving	+	.414*/.089		.414*/.089	Yes
H19: Opportunity	+		.404*/.11	.404*/.11	Yes
H20: Competitiveness	+		.253*/.069	.253*/.069	Yes
<b>Reconcile business and family is associated with</b>					
H21: Negotiation	+	-.370*/.085		-.370*/.085	Yes
H22: Adaptation	+	.586*/.096		.586*/.096	Yes
H23: Opportunity	+		-.152*/.068	-.152*/.068	Yes
H24: Competitiveness	+		-.124*/.067	-.124*/.067	Yes
<b>Problem solving is associated with</b>					
H25: Competitiveness		.353*/.098		.353*/.098	Yes
H26: Opportunity	+	.769*/.079		.769*/.079	Yes
<b>Innovation is associated with</b>					
H27: Competitiveness	+	-.138/.083		-.138/.083	No
H28: Opportunity	+	-.060/.063		-.060/.063	No
<b>Negotiation is associated with</b>					
H29: Competitiveness	+	.321*/.101		.321*/.101	Yes
H30: Opportunity	+	.227*/.078		.227*/.078	Yes
<b>Adaptation is associated with</b>					
H31: Competition	+	-.090/.064		-.090/.064	No
H32: Opportunity	+	.001/.084		.001/.084	No

**Note: This figure depicts the regression coefficients and the standard errors**

### **6. 3 Data screening**

There are several assumptions underlying the use of common data analytic techniques (e.g., MANOVA, SEM) that should be assessed prior to data analysis (Pallant 2001). Such assumptions typically involve the ratio of independent cases to number of parameters estimated, the absence of outliers, co-linearity, homogeneity of variance, and independence of error terms. All assumptions were tested using the computer packages SPSS Version 14 or Amos version 7. More specifically, data were screened for missing values, out-of-range values, possible response sets, outliers (both univariate and multivariate), and normality, as recommended by Tabachnick and Fidell (1996). These tests will now be described.

#### ***Missing data***

In terms of missing data, Cohen and Cohen (1983) suggested that missing data of up to 10 per cent is not large and is unlikely to be problematic in the interpretation of the results. More recently, simulation studies have shown that missing data of up to 25 percent is not problematic (Cohen & Cohen 1983). Hence, participants' responses were excluded from analyses when missing data exceeded 25 percent of any given questionnaire. However, prior to this stage, patterns of missing data were examined via the missing value analysis in SPSS 14.

Analysis of missing data across the 200 cases and 79 Likert-type response questions showed that 78 participants had no missing values; 75 had less than 10 percent missing data; 19 had more than 10 percent but less than 25 percent missing data; and 3 participants had more than 25 percent missing values. The 3 cases with more than 25 percent missing values were removed from further analyses. However, examination of the Business Performance (BP) measure specifically indicated that 137 cases had no missing values; 9 had 1 missing value; 2 cases had 2 missing values; 2 cases had 5 missing values; while 50 cases had 6 missing values. This examination indicated more missing data than other measures, suggesting that the data on this variable was systematically missing. This omission is not surprising given that the measure of BP deals with sensitive issues of entrepreneurship (e.g., cash-flow, profit) which people might be reluctant to disclose. Because of the systematic nature of omissions for the BP

construct, it is not appropriate to use Missing value analyses (MVA) for missing data on the BP measure.

The expectation-maximization (EM) algorithm was used to input missing values for all remaining quantitative constructs, except for the BP measure (Kline 1998), and for all respondents who had less than 25 percent missing data. The EM method is an iterative process in which all other variables are used in a regression analysis to predict the values on the missing variables (Cunningham 2001). In a series of Monte Carlo experiments, Graham, Hofer, Donaldson, MacKinnon, and Schafer (1997) found that the EM method of data imputation was more consistent and accurate in predicting parameter estimates than methods such as list-wise deletion, which was highly variable, and mean substitution, which consistently underestimated values.

One case from the non-IFS group recorded missing data of more than 25 percent, and 2 cases from the IFS group recorded missing data of more than 25 percent. These three cases were completely excluded from analyses, leaving a sample of 197 cases, comprising 111 non-IFS and 86 IFS participants. As indicated above, Business Performance was not included at this stage because of its systematically missing data. As such, there were 137 cases available for analysis.

### ***Assumption testing***

Once issues relating to missing data were addressed, Univariate outliers on composite score variables were detected in SPSS using the criterion of z-score values exceeding a magnitude of 3.29 ( $p < .001$ ). While a single univariate outlier was found for Self-efficacy ( $Z = -3.69$ ), this case was not considered to be influential and, in order to maximise the available sample size, was retained in further analysis. No other evidence of other univariate outliers was found. The Mahalanobis distance statistic available in AMOS 7 was also used to screen for possible multivariate outliers (Tabachnick & Fidell 1996), and it suggested that there were two such outliers ( $p > .001$ ) found in the data.

When outliers are evident, decisions about retaining or excluding cases should be based on comparing analyses in which outliers were retained versus analyses in which these cases were excluded (Kline 1998). Based on this recommendation, regression analyses with and without these cases suggested that they were not influential and, as such, they were also retained in further analyses.

Frequency analyses were conducted for each variable to screen for out-of-range values, and none were found. A random 10 percent of the questionnaires were then checked against their original manuscripts for potential data entry errors. This procedure did not find any data entry errors. No evidence of response bias was found when questionnaires were screened for patterns and/or endorsement of the same category for whole questionnaires.

Homoscedasticity (homogeneity of variance) refers to the spread of scores from different populations that are expected to have homogeneous variances (Coakes & Steed 2001; Shavelson 1996). These assumptions were assessed using scatter plots of standardised residuals versus standardised predicted values. The scatter plots for all regression equations in this study were randomly distributed throughout the scatter plot, suggesting that there was no clear relationship between residuals and the predicted values, and thus no violation of the assumption.

Finally, univariate normality was examined through SPSS-generated indices for skewness and kurtosis and inspection of frequency distributions and normal distributed probability plots. Tables 6.4.1 to 6.4.4 below display the means and standard deviations for each item as well as skewness and kurtosis. The skewness value provides an indication of the symmetry of the distribution. Skewness values in the range of -1 to +1 are considered acceptable values for approximating normality (Zikmund 2003). Kurtosis provides information about the peak of the distribution. For skewness, absolute values less than 2 are deemed acceptable (Tabachnick & Fidell 1996). The results of the current study indicate that skewness values in all the constructs are acceptable, as the normality values assumption was not violated. However, Motivation and Negotiation values are slightly higher than the acceptable range of normality, though not seriously out of range. Kurtosis values of all the constructs have not violated the assumption.



Given that the maximum absolute magnitudes for skewness and/or kurtosis were relatively low (1.13 and .60) the composite variables were assumed to be univariate normal. Both MANOVA and SEM analyses are fairly robust to assumptions of multi-variate normality, especially when variables are uni-variate normal (Tabachnick & Fidell 1996). Furthermore, in SEM analyses, corrections to the  $\chi^2$  statistics that account for the degree of multivariate non-normality in the data can be employed if required (see further discussion in chapter 5). Hence, no further tests of multivariate normality were conducted.

## **6.4 Variable and construct tests**

In this section the variables that were used in the study are presented and tested for construct validity. Details of participants' descriptive statistics are provided.

### **6.4.1 Testing demographic variables using descriptive analysis and chi square tests**

Background data was collected from participants on a range of measures. These included education, age, gender, type of business activity and its legal form (e.g., whether a joint venture or sole proprietorship), ownership structure (e.g., whether the participants were owners or employees), as well as number of employees in the establishment. Before proceeding with the analysis, the background characteristics of the two samples used in this study (i.e., IFS and the non-IFS participants) were examined and compared. The results of these comparisons are shown in table 6.1.

As can be seen from table 6.1, chi-square analyses indicate few significant relationships between groups across the range of demographic variables. The only significant relationship was on respondents' position, which shows that there is a significant relationship between ownership status and group membership. More specifically, 87 percent of IFS group were owner-managers (people who are the owners as well as managers) compared to 69 percent owner-managers in the non-IFS group. Equally, a higher proportion of employees/relatives were found in the non-IFS group (31 percent) when compared to the IFS group (13 percent). Apart from this difference, however, the two groups appear to be statistically similar, suggesting that the sample was drawn from an otherwise similar population. This is an important condition to

satisfy given that for the purpose of evaluation, it is important to draw a sample for a control group from a population similar to that of the program participants on all relevant characterises (Leedy 2001).

**Table 6.1: Descriptive statistics of respondents**

<i>Characteristics</i>	<i>IFS</i> <i>% (n = 86)</i>	<i>Non-IFS</i> <i>% (n=111)</i>	$\chi^2$	<i>df</i>	<i>p-value</i>
<b>Sex</b>					
<i>Male</i>	41.9	38.7			
<i>Female</i>	58.1	61.3	0.197	1	.657
<b>Age group</b>					
<i>18-34</i>	44.2	54.1			
<i>35 and above</i>	55.8	45.9	1.89		.169
<b>Education</b>					
<i>Up to Standard 7</i>	31.8	36.9			
<i>Junior Certificate</i>	40.0	34.2			
<i>Form 5 and above</i>	28.2	28.8	0.813		.666
<b>Line of business</b>					
<i>Manufacturers</i>	53.5	39.6			
<i>Retailers / Service</i>	46.5	60.3	3.918		.141
<b>Legal type of business</b>					
<i>Sole proprietor</i>	73.3	71.2			
<i>Others</i>	26.7	28.8	0.105		.746
<b>Ownership status</b>					
<i>Owner/manager</i>	87.2	69.4	8		
<i>Employee/relative</i>	12.8	30.6	8.75		.003
<b>Length of operation</b>					
<i>1 year – 5 years</i>	62.8	55.0			
<i>More than 5 years</i>	37.2	45.0	1.224	1	.268
<b>Number of employees</b>					
<i>1 – 5</i>	83.5	80.2			
<i>More than 5</i>	16.5	19.8	0.360		.548

Once analyses were conducted to test whether groups were comparable on background and demographic characteristics, measurement models for the main research variables were tested using confirmatory factor analysis (CFA). Testing measurement models prior to structural analyses is important because it can reduce the errors associated with the measurement of each construct. Furthermore, these models allow for tests on the construct validity of each measurement instrument. In particular, one-factor congeneric measurement models were examined to determine whether item questions that were designed to measure particular constructs were one-dimensional and valid. A further reason to test one-factor congeneric models is to examine whether measures employed for this research were appropriate for use with a sample of participants from Botswana.

When the results from one-factor congeneric models suggested the need for model modification, five pieces of empirical information were considered prior to making changes. These were: (a) the standardized residual covariance matrix (standardised residuals higher than 2.0 suggest a misfit); (b) the sample correlations for possible item redundancy (correlations greater than .85 suggest redundancy); (c) non-significant or low item loadings (lower than .30 is problematic); (d) eigenvalues (or scree plot) for dimensionality; and (e) modification indices. The section below discusses the consideration and its results. Model modifications were then made based on these empirical indices, but only when they were conceptually and theoretically justified. Once a well-fitting, unidimensional model was found, scores for the construct were formed by averaging the items (Baumgartner & Homburg 1996).

#### ***6.4.3 Construct compatibility: testing measurement item independence and relationships***

Prior to creating one-factor congeneric models for each of the constructs under consideration, it was necessary to examine a correlation matrix hypothesized to form particular constructs. This examination was important given that many items had not been previously used in the same manner as in this study. Furthermore, inspections of the correlation matrix would determine: (a) possible item redundancies due to high correlations (e.g. > 0.8); (b) the failure of items to be significantly correlated with other

items supposedly reflecting the hypothesized construct. Scree plots were also examined to determine whether a single underlying factor was appropriate for modelling items in a given item set.

Inspection of the correlation matrixes for items hypothetically reflecting Motivation, Problem-solving skills, and ability to Reconcile business and family indicated that one item in each respective set was not significantly correlated with other items. Scree plots indicated that the remaining items on each construct were unidimensional. An inspection of the correlation matrix and scree plot for 9 items hypothesised to measure support from government suggested a two-factor solution. In particular, items 4 and 5 were moderately correlated with each other ( $r = .43$ ) but not significantly correlated with other items in this set. Given that a two-item factor is not desirable (Tabachnick & Fidell 1996), these two items were removed.

The scree plot for the remaining items suggested a single underlying dimension. Scree plots for the remaining constructs indicated that all of their items sets were unidimensional. In addition, inspections of the correlation matrices did not indicate the need to remove any items. One-factor congeneric models were then conducted using CFA for each of the following constructs: (a) Motivation, (b) problem-solving, (c) Self-efficacy, (d) Opportunity, (e) management innovation, (f) product innovation, (g) ability to adapt to business, and (h) Negotiation skills. Results from these analyses will be discussed in more detail in this section.

Table 6.2 displays the results of the one-factor congeneric model for Motivation, as well as means, standard deviations, and internal consistency coefficients for the composite scores. As can be seen in table 6.2, the four-item Motivation latent variable demonstrated an excellent fit to the data, and the construct displayed adequate internal consistency reliability.

**Table 6.2 Final Fit Indices for the Entrepreneurship Education Model in developing countries**

<i>Measurements</i>	<i>No. of items</i>	$\chi^2$	<i>df</i>	<i>P</i>	<i>GFI</i>	<i>CFI</i>	<i>TLI</i>	<i>SRMR</i>	<i>RMSEA (CI)</i>	<i><math>\alpha</math></i>	<i>Mean</i>	<i>Std</i>
Motivation	4	.64	2	.17	1.00	1.00	1.03	.01	.00 (.000, .10)	.75	4.66	1.36
Self-efficacy	9	60.79	27	.05*	.94	.90	.87	.06	.08 (.053, .11)	.79	3.15	.58
Problem-solving	7	35.37	14	.04*	.95	.93	.90	.05	.09 (.052, .13)	.79	4.25	1.15
Opportunity evaluation	5	11.62	5	.04*	.98	.98	.96	.04	.08 (.016, .15)	.78	4.32	1.26
Management Innovation	5	9.29	5	1.00	.98	.98	.96	.03	.07 (.000, .13)	.75	3.94	1.26
Product Innovation	4	3.30	2	.19	.99	1.00	.99	.02	.06 (.000, .16)	.82	4.36	1.44
Institutional support	7	21.52	15	.09	.97	.97	.96	.04	.05 (.000, .09)	.76	3.68	1.17
Competitiveness	5	4.52	5	.48	.99	1.00	1.00	.03	.00(.000, .09)	.72	3.88	1.24
Reconcile business & family	4	4.13	2	.13	.99	.99	.97	.03	.07 (.000, .18)	.65	2.62	1.21
Adaptability	5	9.86	5	.08	.98	.94	.87	.04	.07 (.000, .14)	.85	2.98	1.14
Family support	5	13.04	5	.12*	.97	.98	.95	.04	.09 (.031, .15)	.80	4.08	1.39
Negotiation	5	15.91	5	.01*	.97	.97	.94	.04	.11 (.050, .17)	.75	4.29	1.22

The Problem-solving scale initially consisted of 8 items. However, after the inspection of the modification indices it was discovered that the model did not present an acceptable fit to the data ( $\chi^2$  (20) = 49.16,  $p < .001$ , GFI= .94, CFI= .91, TLI= .88, SRMR= .06, RMSEA =.09(.056, .117). Hence, item 5, ("I like to be my own boss") was omitted, resulting in a good fit for the data except for the p value (see table 6.2) for the  $\chi^2$  statistic.

Examination of the model testing the construct support from institutions (i.e., government and banks) also suggested poor fit. Initially, the model had 9 items. However, items 4 and 5 demonstrated low correlations with all other items the model. Furthermore, a scree plot indicated 2 factors underlying the item. However, given that two-item factors are not desirable, item 5 ("It is easy to be allocated commercial land for building business premises") was removed. This resulted in a good fit for the model ( $\chi^2$  (27) =93.22,  $p < .001$ , GFI= .90, CFI=.81, TLI=.74, SRMR=.09, RMSEA=.112(.088, .137).

The measure reflecting ability to Reconcile family, culture and business initially had 5 items. However, this model did not provide a good fit to the data ( $\chi^2$  (5) = 21.43,  $p < .001$ , GFI= .96, CFI= .93, TLI= .85, SRMR= .06, RMSEA =.129 (.076, .188). After inspection of the modification indices, item 5, "I can not say 'no' to my family and friends if they ask for credit knowing well that they will not pay back," was omitted, this substantially improved model fit. However, the scale still measures the same underlying construct, even with this item removed. This consistency could be because of solid family ties identified in the theoretical research. This will be followed up in chapter 7.

It should be noted that the model modification performed in all of the above was performed following the four criteria mentioned earlier, in section 6.2.

The remaining one-factor congeneric models for Self-efficacy, Opportunity, management innovation, product innovation, ability to adapt to business, and Negotiation skills were found to fit the data well; hence, their items were retained

without any modifications. The final fit statistics for all the models together with their Cronbach alphas and means and standard deviations are shown in table 6.2. Nunnally (1994) recommends a minimum Cronbach alpha value of 0.7. Based on this criterion, it was concluded that the reliability of the scales was adequate (i.e., internal consistency coefficients ranged from .65 to .82).

Business Performance (BP) was treated separately because it had systematically missing data. Sixty cases were removed leaving a N = 137 for analysis. The BP scale initially had 6 items; however, with these 6 items most of the results depicted poor fit to the data ( $\chi^2(6) = 23.98$ ,  $p = .09$ , GFI = .94, CFI = .94, TLI = .90, SRMR = .06, RMSEA = .11 [05, 16]). After the omission of items 4 and 6 (referring respectively to costs and assets) to improve the fit of the model, the version reflected an excellent fit to the data ( $\chi^2(4) = 1.58$ ,  $p = .45$ , GFI = .99, CFI = 1.0, TLI = 1.0, SRMR = .01, RMSEA = 00(000, 15). Means and Standard Deviations for BP were 3.74 and 1.05 respectively.

## **6.5 Group comparisons: MANOVA evaluation**

In this study, four groups were formed in order to facilitate analysis of the data. One-way between-groups multivariate analyses of variance (MANOVA) techniques were used to facilitate these comparisons. This section presents the process taken and reports findings from a series of MANOVAs

### **6.5.1 MANOVA procedure**

The general aim of the study was to establish if there was a relationship between participation in SIYB training programme and Business Performance. Various analyses were conducted in order to ascertain whether SIYB participants had better Business Performance outcomes than non-participants. This section reports findings from a series of one-way between-groups multivariate analyses of variance (MANOVAs).

In order to facilitate analysis of the data, participants were allocated to four groups. These groups were: (1) participants who did not take part in any training; (2) participants who did training *other* than SYB or IYB; (3) participants who did SYB and IYB as well as other training; and (4) participants who did both SYB and IYB but no



other training (i.e., SYB / IYB training only). Prior to the creation of the groups, the main study group consisted of Integrated Field Services (IFS)-assisted entrepreneurs who were indigenous to Botswana and had been through the IFS programs; Start Your Business (SYB) and Improve Your Business (IYB). Within this group, it was found that some participants had completed additional business development courses. It was considered potentially useful to distinguish the participants who had done the IFS programs from participants who had done IFS programs as well as additional training. The non-IFS participants consisted of those individuals who were not registered with IFS and had not done SYB and/or IYB but who may have done alternative training. Again, it was considered potentially useful to distinguish between those participants who had done some training and those participants who had done no training at all. There are other business training programs that are not associated with the SIYB which may have had impacts on the results if these groups were collapsed.

Using the criteria described above, the main analysis considered four different groups: (1) participants who did not take part in any training; (2) participants who did other training; (3) participants who did SYB and IYB as well as other training; and (4) participants who did both SYB and IYB but no other training. Based on these distinctions, it was found that the total number of respondents from the “no-training group” was 63, while that of other groups ranged from 22 to 35 (see table 6.3). As such, the ‘no training’ group included substantially more participants than any of the other groups. Given that MANOVA was used to analyse the data and presumes equal cell sizes, a smaller number of participants from the ‘no training group’ was randomly selected for analysis. This was done to make the number of participants across groups roughly equal. In order to do this, 35 respondents were randomly chosen from the ‘no training’ group. Because of the random sampling from the no- training group, the overall sample size for this stage of the analysis has been reduced to 116.

Prior to the main analyses, comparisons between groups were conducted on a range of background variables using between-groups MANOVA. The dependent variables studied included demographic variables (i.e., age, sex, education, line of business, legal type of business, ownership status, length of operation, and number of employees). Data

on these background variables, as well as MANOVA results and chi-square, are shown in table 6.3. As can be seen from table 6.3, demographic comparisons found no significant differences, suggesting little difference between the training groups. In particular, results from the chi-square analyses indicated no significant relationships between group and selected demographic variables, all with  $p > .05$ . However, other trends indicated that the no-training group was slightly younger than the other groups. This difference was not significant. Once group comparisons were made on background variables, a series of one-way between-groups Multivariate Analyses of Variance (MANOVAs) were conducted to assess for differences between the groups on the dependent variables of competitiveness and Opportunity evaluation. Results from these MANOVA analyses are provided in the next section.

**Table 6.3 Descriptive Statistics of Training Groups**

	Training Groups				$\chi^2$	df	p-value
	No training (%) n = 35	Other training only (%) n = 24	SIYB & others (%) n = 35	SIYB only (%) n = 22			
<b>Sex</b>							
<i>Male</i>	31	33	46	41	1.82	3	.609
<i>Female</i>	69	67	54	59			
<b>Age</b>							
<i>18 - 34</i>	69	46	46	46	5.14	3	.162
<i>35 and above</i>	31	54	54	54			
<b>Education</b>							
<i>Up to standard 7</i>	26	38	29	43	3.33	6	.766
<i>Junior Cert.</i>	40	42	46	38			
<i>Form 5 and &gt;</i>	34	21	26	19			
<b>Line of business</b>							
<i>Manufacturer</i>	46	46	63	55	2.6	3	.456
<i>Retailer &amp; serv.</i>	54	54	37	46			
<b>Legal type of business</b>							
<i>Sole proprietorship</i>	57	79	80	63	5.8	3	.123
<i>Others</i>	43	21	20	36			
<b>Ownership status</b>							
<i>Owner/manager</i>	74	79	83	96	4.24	3	.237
<i>Employee/relative</i>	26	21	17	5			
<b>Length of operation</b>							
<i>1 year – 5 years</i>	66	58	66	50	1.85	3	.605
<i>More than 5 years</i>	34	42	34	50			
<b>Number of employees</b>							
<i>1 - 5</i>	80	83	74	82	1.02	3	.798
<i>More than 5</i>	20	17	27	18			

### 6.5.2 MANOVA results

The previous section describes how the groups were formed. This section presents the results of the MANOVAs. MANOVA is a commonly used multivariate technique that assesses the differences in means between groups on a set of dependent variables (Cooper & Schindler 2001). In this study, four groups of dependent variables were studied. The groups are (with individual variables listed in parentheses): (1) internal resources (Motivation, Self-efficacy); (2) Enabling environment (support from institutions, support from Family Support and Competitiveness); (3) Skills achievement (ability to Reconcile family and business, ability to Adaptation to business needs); and (4) Skills achievement and creativity (Problem solving, Opportunity seeking, Managerial and Product Innovation, Negotiation skills). MANOVA analyses for each of these dependent variable sets will now be discussed.

A one-way between-groups multivariate analysis of variance (MANOVA) was performed to investigate differences in “internal pre-conditions” measured by Motivation and Self-efficacy. MANOVA was used to investigate the level of Motivation in members of different groups as well as differences in the level of Self-efficacy among the groups. Table 6.4.1 displays the means and standard deviations for the measures of Motivation and Self-efficacy for each training group.

**Table 6.4.1 Means and standard deviations for internal resource measures**

	No training		Only others		SIYB and others		SIYB no others	
	<i>n</i> = 35		<i>n</i> = 24		<i>n</i> = 35		<i>n</i> = 22	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Motivation	4.51	1.38	5.10	0.92	4.56	1.34	4.87	1.39
Self-efficacy	3.11	0.53	3.06	0.59	3.27	0.54	3.44	0.56

As can be seen from table 6.4.1 above, the ‘only others’ group demonstrated the highest average levels of Motivation and the least variability across all groups. This group also had the lowest scores on Self-efficacy. However, MANOVA indicated there was no significant difference in either Motivation or Self-efficacy between the different training

groups (*Wilk's Lambda* = .898,  $F(6,222) = 2.45$ ,  $p = 6.06$ ,  $\eta^2 = .05$ ).

The next MANOVA tested differences among groups in terms “enabling environment” which is measured by the constructs Family support, Institutional support, and Competitiveness. Table 6.4.2 displays the means and standard deviations for these measures across each training group.

**Table 6.4.2 Means and standard deviations for enabling environment measures**

	No training		Only others		SIYB and others		SIYB no others
	<i>n</i> =35		<i>n</i> =24		<i>n</i> =35		<i>n</i> =22
	M	SD	M	SD	M	SD	M
Family support	3.93	1.49	3.88	1.43	4.22	1.41	3.94
Institutional support	3.37	1.31	3.49	1.05	4.00	1.00	3.82
Competition	3.63	1.15	3.98	1.23	3.98	1.20	4.36

MANOVA indicates no statistical difference between all groups on any of these dependent variables (*Wilk's Lambda* = .910,  $F(9,267.86) = 1.18$ ,  $p = .31$ ,  $\eta^2 = .03$ ).

These results suggest that Family support from family, Institutional support, and Competitiveness did not differ according to whether participants had taken part in training or not. The next MANOVA investigates if there is any difference in curriculum skills between the groups; this difference was measured by the participants' ability to Reconcile family and business, and Ability to adapt to business needs. Table 6.4.3 displays the means and standard deviations for the measures of SYB skills achievement for each training group.

**Table 6 .4.3 Means and standard deviation for SYB skills achievement measures**

	No training		Only others		SIYB and others		SIYB no others	
	<i>n</i> =35		<i>n</i> =24		<i>n</i> =35		<i>n</i> =22	
	M	SD	M	SD	M	SD	M	SD
Ability to adapt to business needs	3.19	1.18	2.85	1.64	2.97	1.26	3.27	1.17
Ability to reconcile business / family needs	3.06	1.06	2.30	1.22	2.29	1.12	2.77	1.49

MANOVA analysis comparing groups on the two variables in the skills achievement group (Ability to adapt to business, and ability to Reconcile family and business) indicate no significant differences (*Wilks' Lambda* = .917,  $F(6,222) = 1.66$ ,  $p = .14$ ,  $\eta^2 = .04$ ). These results suggest that people who have undergone training and those who have not were demonstrating similar levels of ability in Adaptation to business and in Reconciliation of family and business.

The next MANOVA tested group differences in curriculum skills achievement, as reflected in Problem-solving, Opportunity-seeking, and Innovation and Negotiation skills. Table 6.4.4 displays the means and standard deviations for the measures of IYB skills achievement for each training group.

MANOVA revealed a significant difference in skills achievement (Problem-solving skills, Opportunity-seeking skills, Management innovation skills and Product innovation skills) between the groups (*Wilk's Lambda* = .785,  $F(15,298.54) = 1.83$ ,  $p = .03$ ,  $\eta^2 = .08$ ). Follow-up univariate tests showed a significant difference in the mean for Problem-solving skills ( $F(3,112) = 3.74$ ,  $p = .01$ ,  $\eta^2 = .09$ ) and in the mean level of Opportunity-seeking ( $F(3,112) = 3.77$ ,  $p = .01$ ,  $\eta^2 = .09$ ) for participants in different

training groups. There were no statistical differences between groups in Managerial innovation, Product innovation and Negotiation skills.

**Table 6.4.4 Means and standard deviation for IYB skills achievement measures**

	No training <i>n</i> =35		Only others <i>n</i> =24		SIYB and others <i>n</i> =35		SIYB no others <i>n</i> =22	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Problem-solving skills	3.99	1.28	3.80	1.16	4.44	1.06	4.78	1.01
Opportunity evaluation	3.74	1.44	4.26	1.26	4.51	1.13	4.77	1.07
Management innovation	3.89	1.27	3.78	1.10	4.18	1.14	3.64	1.69
Product innovation	3.44	1.38	4.37	1.32	4.68	1.16	3.95	1.86
Negotiation skills	3.70	1.38	4.35	1.37	4.43	1.19	4.45	1.21

Because the MANOVA results suggested differences between groups in Problem-solving skills and Opportunity evaluation skills, follow-up tests were conducted to examine the nature of these differences. Specifically, planned contrasts were conducted on these variables (Problem-solving and Opportunity evaluation) for the SIYB training group and the non-SIYB training group. The results of planned contrasts revealed that, as expected, participants who did not do training reported significantly a lower level of Opportunity-evaluation skills than those who did SIYB training ( $t(112) = 3.06, p = .003$ ). These results indicate that people who had done SIYB training have exhibited more Opportunity-evaluating skills than those who did not do SIYB training. However, contrary to expectations, participants who did some other training did not significantly display higher score in Problem-solving skills than those who did not do training ( $t(112) = 1.48, p = .14$ ). These results suggest that people who did other training did not have any more Problem-solving skills than those who did not do training.

## **6.6 Efficacy of the integrated model**

The purpose of this section was to test a structural model of business performance – the EPP.

### **6.6.1 Correlation test results**

Given the small numbers in each of the groups and the stipulation that structural equation modelling and/or regression analyses require at least sample sizes in excess of 100, it was not possible to examine separate models for each of the groups.

Furthermore, the results of the MANOVA analyses indicated that there were only minor differences on a range of background variables and outcomes across the different groups. As such, these groups were combined in this stage of analysis. Table 6.5 displays the inter-correlations among the main research constructs. Also shown in figure 6.5 are the means, standard deviations, skewness and kurtosis, and discriminant validity statistics are shown in the diagonal.

Discriminant validity is the degree to which measures of different latent variables are unique (O’Leary-Kelley & Vokurka 1998: 399). In order to establish discriminant validity, the procedure suggested by Fornell and Larcker (1981) and employed by Sarkar et al. (2001) was adopted. According to Fornell and Larcker (1981), two constructs are distinct if the average variance extracted (AVE) is larger than the shared variance between constructs. This would suggest that the construct has more in common with its indicators than with other constructs (Hulland 1999). The AVE statistics for this study are shown in this chapter.



**Table 6.5: Inter-correlations, means, standard deviation, skewness and kurtosis and discriminant validity of main constructs**  
*Means, standard deviations, skewness and kurtosis values for the main continuous variables in the study (n = 197)*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Motivation	0.653												
2. Self-efficacy	0.333**	0.543											
3.Problem-solving	0.034	0.006	0.589										
4.Opportunity	0.030	0.073	0.669**	0.655									
5. Management innovation	0.257**	0.288**	-.120	-.135	0.623								
6. Product innovation	0.274**	0.277**	-.066	-.080	0.689**	0.731							
7.Institutional support	-.153*	-.061	0.343**	0.364**	-.167*	0.045	0.558						
8.Competition	0.074	-.005	0.372**	0.357**	-.208**	-.126	0.295**	0.724					
9.Reconcile family and business	-.039	-.032	-.080	-.191**	0.023	-.004	-.097	0.121	0.645				
10. Adaptability	-.186**	0.023	0.044	-.048	-.123	-.080	0.190**	0.005	0.366**	0.465			
11.Family support	-.052	0.078	0.312**	0.317**	0.074	0.027	0.225**	0.210**	-.067	0.155*	0.674		
12.Negotiation skills	-.025	0.023	0.356**	0.434**	-.010	-.057	0.364**	0.352**	-.269**	-.144*	0.485**	0.642	
Mean	4.66	3.15	4.25	4.32	3.94	4.36	3.68	3.88	2.62	2.98	4.08	4.29	3.57
Standard deviation	1.36	0.58	1.15	1.26	1.26	1.44	1.17	1.24	1.21	1.14	1.39	1.22	1.24
Skewness	-1.128	-0.639	-0.801	-0.935	-0.348	-0.774	-.418	-.251	.644	.334	-.526	-10.65	-.127
Kurtosis	0.312	0.275	0.409	.336	-.554	-.396	-.476	-.605	.014	-.260	-.525	.664	-.774

### **6.6.1 Patterns of correlation**

Prior to testing the structural model of Business Performance, correlations were calculated amongst the study variables. As can be seen from table 6.5, Business Performance was not found to correlate significantly with any other variable. These correlations ranged from a lowest value of .007 (Business Performance with Reconciliation of business and family) to a highest value of .051 (Business Performance and Competitiveness). Given that these correlations were not significant, Business Performance was not considered in the subsequent structural model.

Further analyses of these correlations indicated that Motivation was significantly associated with Self-efficacy ( $p < .001$ ). The correlations between Motivation ( $r = .26$ ) and managerial and Product innovation ( $r = .27$ ) were both significant at  $p < .001$ . Surprisingly, Motivation was negatively associated with Institutional support ( $r = -.153$ ,  $p = .032$ ). This means that in Botswana, support from institutions (e.g., government and banks) does not necessarily motivate entrepreneurs. Motivation was not significantly related to Competitiveness, Reconciliation of business and family, Adaptation to business, Family support, Negotiation, or Business Performance. Self-efficacy was positively associated with both Managerial innovation and Product innovation. However, the associations were small ( $r = .29$  and  $r = .28$  respectively). Self-efficacy did not correlate with any other measuring constructs.

As expected, Problem-solving skills were highly correlated with Opportunity evaluation ( $r = .67$ ,  $p < .001$ ). Problem-solving skills were also moderately associated with Institutional support ( $r = .34$ ), Competitiveness ( $r = .37$ ), Family support ( $r = .31$ ), and Negotiation skills ( $r = .36$ ). Opportunity had significant associations with Institutional support ( $r = .36$ ), Competitiveness ( $r = .36$ ), Family support ( $r = .32$ ), and Negotiation skills ( $r = .43$ ).

It is perhaps not surprising that Managerial innovation had a strong association with Product innovation ( $r = .69$ ). The high correlation between Managerial innovation and

Product innovation suggests that these factors are empirically distinguishable because for Product innovation to be realised, Managerial innovation should exist. The results indicate that Managerial innovation is negatively associated with Institutional support ( $r = -.17$ ) and Competitiveness ( $r = -.21$ ).

The correlation results further show that Institutional support indicated small and moderate positive association with Adaptation to business ( $r = .19$ )  $p < .001$ , Family support ( $r = .23$ )  $p < .001$ , Competitiveness ( $r = .30$ )  $p < .001$  and Negotiation skills ( $r = .43$ )  $p < .001$ , while Competitiveness had only two positive small and moderate association with Family support ( $r = .21$ )  $p < .001$  and Negotiation skills ( $r = .35$ )  $p < .001$ . The results of Reconciliation of business and family indicate a small negative association with Negotiation skills ( $r = -.27$ )  $p < .001$  and a positive moderate association with Adaptation to business ( $r = .37$ )  $p < .001$ . Adaptation to business has a significant association with Family support; however, the association was only at the lowest figure of ( $r = .16$ )  $p < .001$ . This variable was also negatively associated with Negotiation skills ( $r = -.14$ )  $p < .001$ . Family support was moderately positively associated with Negotiation ( $r = .49$ )  $p < .001$ , while Negotiation had no association with any variable.

Structural equation modelling (including path analysis) is an analytic technique that is designed to test conceptual models that parsimoniously fit sample data and can explain relationships amongst variables. All types of SEM (i.e., CFA, path analysis; full SEM) share necessary construction steps. These include (1) specification, involving translating the theoretical model into mathematical statements (or equations) about the data that can be tested; and (2) re-specification, by deleting, modifying or adding paths in the models in a way to improve the fit of the model (re-specification must be guided by theory; otherwise the model become data-driven). As discussed in chapter 5, a combination of absolute fit, parsimonious, and incremental fit indices were used to examine the model fit in this study. Table 5.5 explains in detail the characteristics of the goodness-of-fit measures used.

A criticism of regression and path analytic models is their failure to account for measurement error inherent in the constructs under consideration Munck (1979). In path analysis, constructs are frequently modeled as composite variables derived by summing items in the construct domain. However, it is possible to build structural equation models which examine relationships amongst the latent variables underlying these composite scales, provided that the internal consistency reliabilities (e.g., Cronbach alphas) of the composite variables are known. In particular, Cronbach alpha internal consistency coefficients may be used to generate estimates of the random measurement error associated with each construct. These estimates are then specified as fixed parameters in the models, thus controlling for the effects of measurement error. Munck (1979) described the process for specifying single indicator latent variable models. She showed that it is possible to specify values for both the regression coefficients and the measurement error variances associated with each composite variable. Munck's formulae are as follows, where  $\alpha$  is the internal consistency reliability estimate of the composite variable:

$$\text{Regression coefficient } (\lambda) = SD \sqrt{\alpha}$$

$$\text{Measurement error variance} = SD^2 (1 - \alpha)$$

In other words, estimates of the random measurement error variance for each of our constructs can be calculated by simply multiplying the variance (i.e.,  $SD^2$ ) by one minus Cronbach's alpha. The loading that associates the measured variable with its latent construct is calculated as the square root of Cronbach's alpha multiplied by the standard deviation of the composite variable. These values were calculated for each of the constructs of interest, and were specified as part of the model drawing in Amos. Table 6.6 shows values of fixed path and error coefficients for use in structural model.

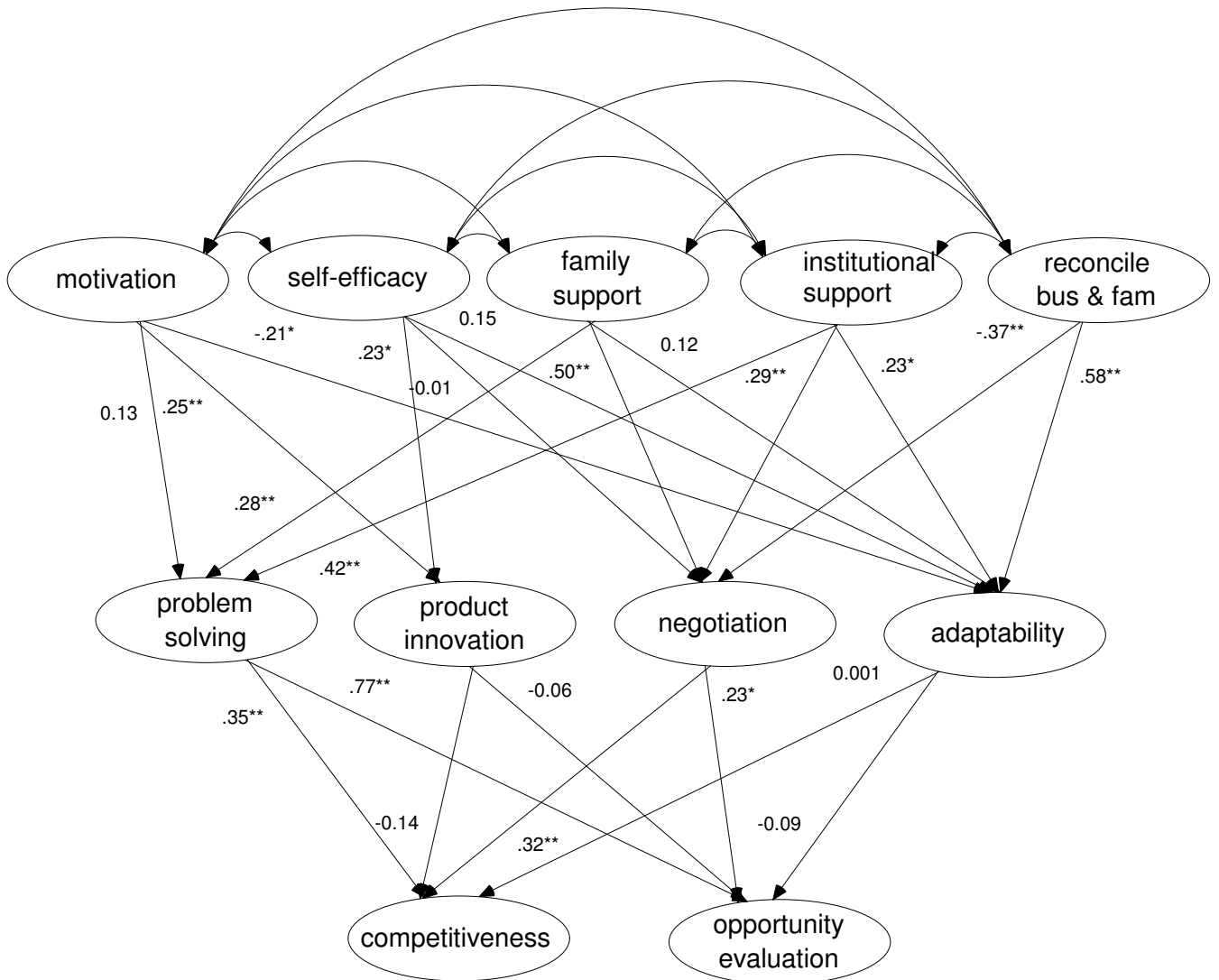
**Table 6.6: Fixed Path and error coefficients for use in structural model**

Statistic	Path Coefficient	Error Coefficient
Motivation	1.18	0.46
Self-efficacy	0.52	0.07
Problem-solving	1.03	0.28
Opportunity	1.11	0.35
Product innovation	1.3	0.37
Institutional support	1.02	0.33
Competitiveness	1.05	0.43
Reconcile business and family	0.97	0.51
Adaptability	1.05	0.20
Family support	1.24	0.38
Negotiation skills	1.06	0.20

### **6.6.2 The integrated picture: Entrepreneurship performance process (EPP) model estimation**

Once the fixed parameters were calculated to identify the single-indicator latent variables, a SEM analysis testing the structural pathways amongst these latent variables was tested. Structural equation modelling permits the analysis of multiple independent and dependent variables simultaneously (Hair et al. 1995; Schumacker & Lomax 1996). Estimation of structural equation modelling was conducted using AMOS version 7. Figure 6.1 presents standardised parameter estimates of the model. This model provides an excellent fit to the data,  $\chi^2 (23) = 28.32$ ,  $p=.20$ , GFI = .98, CFI = .99, TLI = .97, RMSEA = 0.03(000, .07), SRMR = 0.03.

**Figure 6.1 Standardised parameter estimates of entrepreneurship performance process model of evaluation: \* p<0.05, \*\* p<0.01**



The model shown in Figure 6.1 accounted for 33 percent of the variance in competitiveness, 78 percent of the variance in Opportunity evaluation, and 31 percent of the variance in Problem-solving skills, 16 percent of the variance in Product and Managerial innovation, 62 percent of the variance in Negotiation skills, and 43 percent of the variance in Adaptation to business. As can also be seen from Figure 6.1, the majority of predicted paths were found to be significant.

## **6.7 Chapter summary**

This chapter has provided the following:

- a description of the data screening process. The examination indicated more missing data for the measure of ‘Business Performance’ than in other measures;
- a discussion of the procedures undertaken for assumption testing as well as how the measurement models (using one-factor congeneric models) were developed and tested for each of the study constructs;
- a report on the process and results of group comparisons using a series of Multivariate Analysis of Variances (MANOVAs) which indicated that there were only minor differences on a range of variables between the groups; and
- the results of SEM analyses which indicated that Business Performance did not correlate significantly with any of the variables in the study. A further discussion on this can be seen in chapter 7.

Implications of the results from this chapter will be discussed in chapter 7.



# Chapter Seven: Summary and implications of the study

## **7.1 Chapter abstract**

This chapter discusses the key findings of the study as summarized in section 6.7 above. The discussion of theoretical and practical implications of these findings, as they relate to entrepreneurship education in Botswana is provided. This is followed by considerations of the contributions of the study beyond Botswana's borders. The chapter concludes by outlining the limitations of the current research and making recommendations for the direction of future research. The chapter is organized as follows. Section 7.2 introduces the chapter. Section 7.3 details the testing of the entrepreneurial process and performance (EPP) model. Section 7.4 is the 'punch line' of the empirical study, and it presents the aggregate program effects. Section 7.5 presents the limitations of the study and suggestions for the future. Section 7.6 presents implications for theory and practice, and Section 7.7 provides conclusions and reflections in a summary

## **7.2 Broad answers to the study's major questions**

To meet the objectives of this dissertation, six questions (introduced in the first chapter) were addressed. The two fundamental questions are:

- (1) What constitutes an appropriate theory of entrepreneurship education relevant to the context of developing (as distinct from developed) countries?
- (2) How efficacious (in both theory and practice) is education provided by the largest and most widespread entrepreneurship education program currently running in developing countries the SIYB program?).

The more specific questions are:

- (3) Can I posit an 'ideal curriculum model' (ICM discussed in section 7.2.1) for entrepreneurship education in the developing context?
- (4) What is the best way of evaluating the efficacy of an entrepreneurship education program?

(5) Can I fit the core elements of entrepreneurial education (in an ICM) into a broader model of entrepreneurial process suitable for evaluation of a representative entrepreneurial education program current in many developing countries?

(6) Is there a currently well-established entrepreneurship education program, operating in several developing countries, which could benefit from scrutiny using the knowledge formulated in answering questions 1 to 3 above, and whose evaluation could both test the constructs so far developed in the thesis and potentially add to creation of enhanced constructs and understanding?

As indicated in the research map (figure 1.1 in chapter 1), a number of research methods were employed to find answers to these questions. The following sections provide answers.

### **7.2.1 An appropriate theory?**

**Question 1:** What constitutes an appropriate theory of entrepreneurship education relevant to the context of developing (as distinct from developed) countries?

To address this question, an extensive entrepreneurship literature review was conducted which culminated in the development of the ideal curriculum model (ICM) for posing the generic attributes of a contextually relevant entrepreneurship education. This led to the development of an assessable entrepreneurship process and performance (EPP) model embracing ICM elements and other relevant performance variables.

### **7.2.2 The efficacy of SIYB**

**Question 2:** How efficacious (in both theory and practice) is the education provided by the largest and most widespread entrepreneurship education program currently running in developing countries: the SIYB program?

This question is the core of the thesis. It was answered by conducting a rigorous program evaluation of the Start and Improve Your Business (SIYB), the largest, most expensive and/or extensive entrepreneurship education program operating in the developing world. The evaluation took the form of a formal empirical quantitative

program evaluation study. The general purpose of the empirical component — testing the efficacy of SIYB — of this study was to screen the data, test the viability of variables and constructs, test demographic variables using descriptive analysis and chi-square tests, and confirm viability of main research variables. It also assessed construct compatibility by testing measurement items' independence and relationships. Group comparison was conducted using Multivariate Analysis of the Variance (MANOVAs). The efficacy of the integrated model was tested by determining patterns of correlation to test some specific hypotheses.

The dominant specific aim of the study was to establish if there was a relationship between participation in SIYB training program and business performance. Accordingly, the most important single statement that can be made about my research is that SIYB emerges as a failed program in this study.

At the broadest but most critical level of assessment of its efficacy, the study revealed that there were no significant differences on a composite measure of business performance between people who did the SIYB training and people who did not. There is scarcely any support for any efficacy of any part of the SIYB education program. The correlation figures indicate that business performance was not correlated with any of the variables in the model. This lack of any significant correlation suggests that none of the variables measured in this study significantly influence or predict the measure of business performance in Botswana. Overall, these results suggest, powerfully, that SIYB is an ineffective program in Botswana, and thus it is likely that the program is of limited appropriateness or relevance anywhere in the developing world. Later in the chapter are my comments on the implications of this finding, for the relevance of all Western-style models of entrepreneurship education.

As chapter 6 has discussed at length, the results of the analyses in my empirical study indicate some small (non-significant) differences between the groups and only two areas of any significant difference. The group who participated in the SIYB program scored significantly higher than those who did not attend the course on the measures of 'problem-solving skills' and 'opportunity evaluation skills.'

This result indicated a need for follow-up tests. Follow-up tests were conducted to examine the nature of these differences between groups. More specifically, planned contrasts were conducted on these variables (problem-solving and opportunity evaluation) for the SIYB training group and the non-SIYB training group. The results of planned contrasts revealed that, as originally indicated, participants who had not done training reported significantly a lower level of opportunity evaluation skills than those who had done training. This result indicated that people who had done training exhibited more opportunity evaluating skills than those who did not do training.

The study revealed one big mystery, which is a clear indication of the need for further focused research. It is unknown why, if SIYB participants can evaluate opportunity better than non-participants, they cannot perform better in the actual construction and operation of their businesses. The short answer may be that SIYB participants brought superior problem-solving and opportunity- evaluation skills with them before they even started on the SIYB training. An alternate explanation may be that the findings are simply statistical artefacts. The size of the differences in means is not large and hence this difference might be sample specific. This is recognized as a potential limitation to the study and requires further research.

### ***7.2.3 The four specific research questions***

The four specific questions helped to clarify if an ideal entrepreneurship curriculum model could be developed and modified for developing country context. In other words, whether there were better ways of evaluating the efficacy of the SIYB entrepreneurship education program rather than the current way of its evaluation.

#### **An Ideal Curriculum Model**

**Question 3:** Can I posit an ‘ideal curriculum model’ (ICM) for entrepreneurship education in the developing context? The ICM was needed as a preliminary to the empirical study and as a conceptual model for it.

This question was answered by conducting a thorough entrepreneurship literature review, extracting key entrepreneurship variables from seminal works in order to form an Ideal Curriculum Model (ICM). I developed the 'ideal' entrepreneurship curriculum model for teaching entrepreneurship in developing-country contexts, by identifying variables from the literature review, which were deemed essential for an entrepreneurship curriculum.

### **An appropriate evaluation method**

**Question 4:** What is the best way of evaluating the efficacy of an entrepreneurship education program?

To answer this question, I searched the relevant literature for concepts relevant to evaluating the outcomes of training. These concepts included: evaluation, program evaluation, and training evaluation. Some generic theoretical models of approach to evaluations, such as Kirkpatrick's evaluation theory, were identified and used. Further, quantitative program evaluation techniques were selected and used.

In answering this question, the main hypothesis was formulated. The main hypothesis postulates that entrepreneurship training contributes positively to business performance. A subsequent hypothesis postulates that enterprises of people who have participated in entrepreneurial training programs perform better than those of non-participants. These hypotheses were tested by using individual hypotheses as indicated in chapter 5. More details of the testing of this research can be found in chapters 3 and 4.

### **A broader model of entrepreneurial process and performance suited to the study**

**Question 5:** Can I fit the core elements of entrepreneurial education (in an ICM model) into a broader model of entrepreneurial process suitable for evaluation of a representative entrepreneurial education program current in many developing countries?

To answer this question, I undertook a literature review and theory evaluation to develop an 'EPP' model (discussed in section 7.3): a model of entrepreneurship process

and performance. This EPP model articulates the relationships between an entrepreneurship education construct (as per the ICM) and other key elements of entrepreneurial performance. The background to these models can be found in chapters 3 and 4. The EPP variables were grouped in four categories:

- Level 1— Attitudes and support systems: This level includes both internal and external categories. The internal category consists of motivation and self-efficacy, while the external category consists of family support, institutional support (government and financial institutions) and ability to reconcile business and family.
- Level 2 — Curriculum goals: This level consists of problem-solving, innovation, negotiation, and adapting to business needs.
- Level 3 — Key entrepreneurship variables: This level consists of opportunity evaluation and competitiveness.
- Level 4 — Business performance. This level is measured in both financial (profit, cash-flow, sales) and non-financial (employment) terms.

More details pertaining to this question appear in chapter 3.

### **SIYB as a suitable candidate for testing**

**Question 6:** Is there a currently well-established entrepreneurship education program, operating in several developing countries, which could benefit from scrutiny using the knowledge formulated in answering questions 3 to 5, above, and whose evaluation could both test the constructs so far developed in the thesis and potentially add to creation of enhanced constructs and understanding?

To answer this question, I identified a suitable program in Botswana, the Start and Improve Your Business (SIYB). SIYB is described in full in chapter 2. The program has been evaluated via the operationalization of the EPP model using selected statistical evaluation techniques, including factor analysis, t-test, structural equation modelling, and MANOVA. Additional information pertaining to this question can be found in chapters 2, 4, 5 and 6.

### ***7.3 Detailed discussion of the testing of the entrepreneurial process and performance (EPP)***

In this section, a discussion of the results is presented according to the levels posited in the EPP model. The section further presents discussions of some of the variables in the model.

The results indicate that the only significant variable in level 1 to be associated with Innovation and Self-efficacy was Motivation. Motivation also influenced adaptability to business needs but not in the expected direction as it depicts a negative association. Contrary to expectation, Motivation was not associated with problem-solving skills and Self-efficacy did not influence Negotiation skills and Adaptability to business needs.

In level 2 of the model, the results indicate that Family support and Government/ institutional and financial support were both significant predictors of Problem-solving skills. Family support and Government/ institutional and financial support were all significantly associated with Negotiation skills and Adaptability to business needs. However, contrary to expectation, Reconciliation of business and family was negatively associated with support from family the ability to adapt to business and family.

In level 3 of the model, it was hypothesised that Competitiveness and Opportunity evaluation would be significantly associated with business performance; however, this hypothesis was not supported.

Finally, as expected, problem-solving skills and negotiation skills (level 2 variables) significantly influenced Competitiveness and Opportunity evaluation (level 3 variables). Contrary to expectations, Innovation and Adaptability to business needs were not significant predictors of these level 3 variables.

### **7.3.1 Motivation**

As stated above, it was hypothesised that individuals who are highly motivated would be able to solve business problems. This hypothesis was not supported by the results. Surprisingly, the model indicates that Motivation does not predict Problem-solving skills in this case.

It was further hypothesised that motivated entrepreneurs would be highly innovative. The term 'innovation' is used to embrace a broad range of thoughts and activities. Some organizations need to emphasise certain aspects of innovation, while others need to emphasise very different aspects. This results in a difference between the ways various organizations define innovation.

In this study, 'innovation' covers the process of bringing a new product or service into existence. The results indicate that Motivation has positive and significant direct effects on Product innovation; these results support hypothesis 2. The results suggest that motivated entrepreneurs are highly innovative. The motivation for an entrepreneur to innovate, maybe stems from the belief that improving the aspects of business that are defined by innovation will lead to a more profitable and higher-achieving organization.

Literature has clearly indicated the association between Motivation and Innovation; hence, they are both at the heart of entrepreneurship. The strong association between motivation and innovation corresponds with the findings of McClelland (1961), and McClelland and Winter (1969).

Related to motivation, it was hypothesised that motivated entrepreneurs would adapt better and well to business. The results indicate that Motivation has negative and significant influence on Adaptability to business. The results indicate that people who are highly motivated will have low Adaptability to business.

However, literature holds that entrepreneurs who come out of a training environment adapt easily to the business needs (Clarysse & Moray 2000: 55). Additionally, in practice, people who are motivated would be able to adapt easily to business needs;



hence, it is surprising that these results indicate negative and significant association. Perhaps the sample of this study differs from those of the previous studies — for example, Clarysse and Moray’s 2000 study was on “high-tech start-ups” or new, technology-based firms. Possibly the results could differ from those of previous studies because of the difference in the contexts; perhaps different cultures may determine the direction of results. Although the hypothesis (that when one is highly motivated one is easily adaptable) seems sensible, it could be that the hypothesis was not formulated in sufficient detail (in this study and, by extension, in many others). Furthermore, if motivation *is* a personality trait, or highly dependent on ingrained personality traits, it could be that people who are highly motivated are innately overconfident, and thus training may not necessarily change their personality characteristics.

Finally, perhaps the reason why the sample from Botswana differs is that most respondents are not all entrepreneurial and do not *wish* to be innovative; perhaps they merely require an income stream. Further, it could be that when people are overconfident, they don’t spend enough time in learning the appropriate skills that assist with solving business problems, adaptability, and negotiation. All these possibilities indicate the need for further focused research. In this study, the Motivation variable indicates the level of motivation of participants and, as discussed above, the results indicate that the higher the measured degree of a person’s motivation, the greater the willingness to engage in innovation and adapting to the needs of the business. Thus highly motivated managers or owners, appear to seek opportunities to extend their business. They also engage in more competitive behavior than their less-motivated counterparts.

According to the integrated model, motivation seems to be closely related to many desirable outcomes; therefore, in designing training packages one of the important goals should be to raise the levels of motivation of the trainees. Most of the businesses investigated in this study are recently established, are very small, and may be seen as just family enterprises not entirely motivated by profit. Therefore, training in motivation should focus managers and owners to concentrate on aspirational entrepreneurship and

move them away from more traditional, complacent habits of a ‘just-making-do’ management philosophy.

### **7.3.2 Self-efficacy**

General-self-efficacy (GSE) refers to individuals’ conscious belief in their own ability to bring about desired results in the performance of a particular task (Bandura 1997). Self-efficacy is an important determinant of human behavior. Individuals tend to avoid tasks about which they have low self-efficacy, and conversely they are drawn toward tasks about which they have high self-efficacy. In addition, persons with high self-efficacy tend to perform better on tasks about which they hold those beliefs and less well on tasks about which they believe they have low self-efficacy.

Entrepreneurial self-efficacy (ESE) refers to the strength of a person’s belief that he or she is capable of successfully performing the various roles and tasks of entrepreneurship (Chen et al, 1998). Some of these entrepreneurial tasks include “developing new products or market opportunities”, “building an innovative environment”, “initiating investor relationships”, “defining core business purpose”, “coping with unexpected challenges and developing critical human resources” (DeNoble, 1999). Research suggests that entrepreneurial self-efficacy is positively related to business performance (Chandler & Jansen 1999; Forbes, 2005; Lindsay & Balan, 2005). ESE affects performance in a number of ways; for example Poon et al (2006) found that the greater the level of self-efficacy of the entrepreneur, the greater the likelihood that the business led by the entrepreneur adopts an “entrepreneurial orientation”, and business with an “entrepreneurial orientation” have been shown to perform better than non-entrepreneurial business (Wiklund & Shepherd, 2005). ESE may be elevated through training and education; thus potentially improving the rate of entrepreneurial activities (McGee, Peterson, Mueller and Sequeira 2009).

While the ESE construct has been alluded to by the above scholars, it remains empirically underdeveloped and many scholars have called for further refinement of the construct (e.g., Forbes, 2005; Kolvereid & Isaksen, 2006). Three issues, in particular,

appear to warrant further investigation and serve as the reason why this study did not adopt an ESE measure. First, there remains some debate on whether an ESE construct is even necessary. Several scholars (see Chen, Gully, & Eden, 2004) advocate the use of a general measure of self-efficacy instead of a domain-specific ESE construct. Second, the dimensionality of the construct has yet to be fully established (McGee et al., 2009). Finally, most of the initial studies of ESE relied on samples of university students (Chen, Green, & Crick, 1998; De Noble, Jung, & Ehrlich 1999). Researchers advocate the use of a measure of GSE because entrepreneurs require a diverse set of roles and skill sets; therefore, they believe it would simply be too difficult to identify a comprehensive, yet parsimonious, list of specific tasks explicitly associated with entrepreneurial activities (Markman, Balkin, & Baron, 2002). From a pragmatic perspective, it is much easier to measure GSE than to explicitly capture the nuances of ESE (McGee et al., 2009). Further, a total or composite measure of ESE fails to provide insight into what specific areas of self-efficacy are most influential (McGee et al., 2009). Due to the above limitations of ESE, DeNoble's ESE scale was not chosen for this study, hence, the use of Jerusalem and Swarsnigger GSE, which has been used and validated across many countries.

In this study, the hypothesis related to self-efficacy assumes that people who believe in themselves are highly innovative. The hypothesis has been supported. A similar observation has been made by several entrepreneurship scholars (Chen et al. 1998; Krueger & Brazeal 1994; Forbes 2005; Tams 2006).

It was also hypothesised that self-efficacy is associated with negotiation. The results indicate that self-efficacy did not predict possession of negotiation skills. This result conflicts with established belief. It has been argued that an individual's self-efficacy would enhance his/her negotiation skills. As discussed earlier, self-efficacy refers to a person's belief that she/he has the capability to accomplish a certain level of performance or desired outcome (Bandura 1986). Boyd and Vozikis (1994) refer to it as entrepreneurship self-efficacy and they assert that this is an individual's belief that he/she is capable of performing the roles and tasks commonly exercised by an entrepreneur. Thus, it can be argued that for entrepreneurs to perform well in their

businesses, they should possess strong self-efficacy beliefs which will in turn stimulate their negotiation skills.

This supposition is supported by literature which holds that self-efficacy is associated with negotiation skills. For example, Chen et al. (1998) developed the construct of entrepreneurship self-efficacy as a means of capturing the degree to which individuals believe that they are capable of performing the tasks associated with new venture management. The researchers identified a list of tasks which were associated positively with high self-efficacy. The list included tasks related to various aspects of entrepreneurship, including marketing, financial management, innovation, risk-taking and negotiation skills. The results of their research indicated that self-efficacy was positively related to negotiation skills.

It is possible that the reason this hypothesis was not supported in this study is because negotiation is a social process that is embedded in a much larger context and is a highly complicated process (English 2002).

It was further hypothesised that self-efficacy would be associated with adaptability to business needs. This hypothesis predicts that people with high self-efficacy adapt well to business needs. It is based on the commonsense idea that self-efficacy is important for entrepreneurship because, for an entrepreneur to be successful he/she needs high degree of self-confidence and the power to judge his own personal qualities as compared to those of others such as competitors, suppliers, customers, and employees. The hypothesis has not been supported.

The results are surprising, as there is a deeply ingrained belief in many cultures that people who really believe in themselves are capable of achieving whatever they set out to do. Therefore, one might think adaptability to business needs would be easier for such people. This is another area where my study indicates the need for further and deeper research and challenges some quite fundamental and well-established beliefs about relationships among components of the entrepreneurial process.

### **7.3.3 Family support**

It was hypothesized that family support would be associated with problem-solving skills. This hypothesis assumes that people who are supported by family are more capable of solving problems than those who are not. The results indicate that indeed support from family is positively associated with problem-solving skills. Family support has been associated with problem-solving skills in previous research (Walter et al. 1997; Robertson 2004). Further, it was hypothesized that family support is associated with negotiation skills. The hypothesis assumes that people who are supported by their family are good negotiators. The results have shown a significant association, supporting the hypothesis.

The above results do concur with established wisdom in the literature reviewed in this study, which suggests that social conditioning is very influential in developing entrepreneurship. The fact that entrepreneurs tend to come from families with entrepreneurial parents has been validated in many studies (Hisrich 1989). A study conducted in Botswana by Briscoe (1994) indicates the significant influence of family support in entrepreneurs. Similarly, Bewayo (2000) conducted a study in Uganda and found that growing up around a family business was the reason why his respondents were in business. Literature indicates that family support plays a vital role in multiple aspects of the entrepreneurial process, from the acquisition of both human and financial resources, through the motivations for business ownership and start-up, to the measures of success. Literature also indicates that most entrepreneurs acquired entrepreneurial skills from their parents or relatives. This passing-on of skills is prevalent in Botswana, where entrepreneurs rely mostly on their family for business start-up capital.

Family members are also a constant source of moral support and encouragement to entrepreneurs. Family members frequently contribute free labor to the operations of businesses, especially at the start-up phase. While entrepreneurs from developed countries rely mostly on professional networks (Baron & Shane 2005; Saxon 2003), entrepreneurs in developing countries depend on their family members for main network affiliations.

The invaluable services the family renders to entrepreneurs can be classified into three principal categories. First, there is support that is directly or indirectly of a financial nature. Second, there are contributions of service and loyalty that help the entrepreneurs' operations. Third, there is the psychological satisfaction that stems from the prestige earned through the wealth and success, and from being respected by the family. Botswana has predominantly a strong family culture, and being a socially oriented country, every phenomenon, including entrepreneurship, revolves around the family.

This research therefore confirms the findings of many other studies throughout the world, that entrepreneurship can best be understood as a social process. Many people will be unsurprised by this conclusion, especially those who come from an African context. Throughout Africa there is a growing body of evidence that some ethnic groups and some enclaves are more successful than others in encouraging entrepreneurship. Within certain communities virtually every family is involved in running a business. Children may help in their parents' businesses; spouses may provide assistance, be it financial, moral or otherwise. Other relatives (of the immediate or extended family) may also provide support in terms of such things as transportation for stock, free labor, and other services. The family is recognized as having the potential to contribute to entrepreneurial behavior through the provision of inter-generational role models, and as providers of tangible and intangible support. My study thus may contribute to the growing body of research on family entrepreneurship, not least by its indication that the importance of family to entrepreneurial process may be better studied in the developing world than in the developed world, where non-family resources are so much more abundant.

#### **7.3.4 Institutional support**

It was hypothesised that institutional support (support from government and banks) would be associated with negotiation. The hypothesis assumes that people who get institutional support are good negotiators. The results indicate that this hypothesis is

supported, as the relationship between construct of support from government and financial institutions significantly predicted negotiation skills.

A similar observation has been made by Chambers & Lake (2006) who found that participants of Youth Business International who were assisted by governments and financial institutions in developing countries developed entrepreneurial talent among young people. The results of their study indicated that participants who were supported by government and financial institutions negotiated better than others.

Further, it was hypothesised that institutional support is associated with adaptability to business needs. This hypothesis assumes that people who are supported by government and financial institutions would adapt easily to business needs. The results support the hypothesis, indicating that institutional support significantly predicted adaptability to business.

It was also hypothesised that institutional support would be associated with problem-solving skills. The assumption was that people who obtain support from government and financial institutions have good problem-solving skills. The results support this hypothesis and comport with a study conducted by Briscoe (1994). It reveals that, in comparison with other African countries, Botswana has been quite successful in providing finance for the development of entrepreneurship; perhaps this provision explains the above association as when people are confident that they have sufficient funds, they would have clear minds and hence would be able to solve problems related to their businesses.

However, according to the present study, there appears to be a particular potent and urgent need to provide a quality curriculum for entrepreneurs in Botswana. This study has identified key entrepreneurship variables (opportunity evaluation and competitiveness) which should be regarded as essential ingredients of a quality curriculum and are not part of the current SIYB curriculum in Botswana. As stated elsewhere in this thesis, financial assistance is not enough to build a sound entrepreneurial nation, more is needed.

### **7.3.5 Reconciling business and family**

It was hypothesised that ‘reconciling business and family demands’ would be associated with negotiation skills. The hypothesis assumes that people who are able to balance a dual commitment to business and family roles are good negotiators. The results indicate that the ability to reconcile business and family negatively predicted negotiation skills. Put another way, this means that, if a person has high ability to reconcile business and family demands, he or she evidences low negotiation skills. It was further assumed that reconciling business and family was associated with adaptability to business needs. Here, the hypothesis assumes that people who are able to reconcile family and business adapt easily to business needs. The results indicate positive association and hence, support the hypothesis.

The upshot of these findings seems clear. If the needs of the business and the needs of the family are in conflict, it is good neither for family nor business, as this conflict may limit the entrepreneur’s ability to negotiate or prioritize. Hence, it is important for entrepreneurs to clearly set their relative priorities and act accordingly.

### **7.3.6 Problem-solving skills**

It was hypothesised that problem-solving skills would be associated with competitiveness. The hypothesis assumes that people who have good problem-solving skills are able to address competitive challenges. The results indicate that problem-solving skills had direct, significant effects on competitiveness, thus supporting the hypothesis.

It was further hypothesised that problem-solving skills would be associated with opportunity evaluation. Here, the hypothesis assumes that people who have excellent problem-solving skills are appropriately competent at opportunity evaluation. The results indicate that problem-solving skills highly predicted opportunity evaluation, thus supporting the hypothesis.



With these hypotheses unsurprisingly supported, this study lends its weight to the established belief that entrepreneurship educators should include courses in their curriculum which enhance problem-solving skills and people's analytical ability – especially with regard to opportunity evaluation. Entrepreneurs should be able to acquire skills which will help them to solve problems. These skills could be related to solving financial problems, budgeting problems, and customer service problems, among many other challenges.

### **7.3.7 Product innovation**

It was hypothesized that product innovation is associated with competitiveness. The hypothesis is that people who are innovative would be competitive. The results indicate that product innovation was not associated with competitiveness. So the hypothesis was not supported. These findings are surprising, as they contradict literature (Mole & Worrall 2001; Kay 1993) which documents the importance of product innovation especially for entrepreneurs. Mole and Worrall (2001: 4) specifically state that innovation and new product development are crucial sources of competitive advantage.

The hypothesis further states that product innovation would be associated with opportunity evaluation. This hypothesis assumes that people who innovate are good opportunity evaluators. The results indicate that this hypothesis has not been supported. The lack of significance is contrary to Fo and Lee's (2005) findings that entrepreneurial attributes, including innovativeness, positively relate to how entrepreneurs evaluate business opportunities. The reason for the contrast between this study's findings and established wisdom may be that most of the participating businesses in this study are in the service sector (retail), where product innovation may not be a critical attribute to their operations. Nevertheless, the findings in this area indicate a clear need for deeper research. Given the findings, the guiding hypothesis may indeed be that the importance of opportunity evaluation skills varies with the nature of the opportunity. Speculation beyond this point at this stage is risky. The result is very surprising.

### **7.3.8 Negotiation skills**

It was hypothesised that negotiation skills would be associated with competitiveness. This hypothesis assumes that people who are effective negotiators are able to face competitive situations confidently. The results indicate that effective negotiation had a positive direct association with competitiveness; thus, people who have effective negotiating skills are better at the competitive process. The hypothesis is supported.

It was further hypothesised that negotiation was associated with opportunity evaluation. This hypothesis assumes that people who have effective negotiation skills would be effective at evaluating opportunities. The results indicate that negotiation had a positive direct effect on opportunity evaluation, thus supporting the hypothesis. Negotiation is unavoidable in any business situation. It is even more so in entrepreneurship situations. Entrepreneurs must negotiate with all the stakeholders of their enterprises. This study supports existing wisdom by indicating that effective negotiators are better competitors and more effective at evaluating opportunities.

### **7.3.9 Adaptability to business needs**

It was hypothesised that adapting to business needs would be positively associated with competitiveness — that is, people who have adapted well to businesses will be competitive. The results indicate that adaptability to business is not associated with competitiveness. Thus, the hypothesis is not supported. It was further hypothesised that adaptability to business needs would be associated with opportunity evaluation. This hypothesis assumes that people who have adapted to business needs are good at evaluating opportunities. The results show that adaptability to business needs had no association with opportunity evaluation. The hypothesis was not supported.

The lack of positive relationship between adaptability to business needs and competitiveness could be due to the fact that adaptability involves a number of both external and internal environments, and therefore adaptability is difficult to predict, since environmental conditions dictate the adjustments that need to be made.

It is important for entrepreneurs to learn about the environmental factors that influence their enterprises, as this knowledge will assist in the adaptability process. Business needs evolve, and customer needs may change radically. The ability to adjust is critical in such issues as timing of ordering, equating quantities with customer demands, and coping with seasonal variations. Adapting both cash-flow outlays and labor planning are important means of adapting to business needs.

### **7.3.10 Competitiveness**

Established scholars have nominated the ability to impart ‘competitiveness’ as one of the essential ingredients of a quality entrepreneurial curriculum, as discussed in section 3.7.6 of chapter 3. However, assessment of the data using the EPP model did not find a correlation between competitiveness capacity and business performance. This surprising result points more toward potential weakness of the measures used in this study to delineate the competitiveness attributes of respondents than to any need to re-think established wisdom. The ambitions of this study were very high and, inevitably, the strength of measurements and the data itself, as in every study, was not as high in some areas as in others. Here is another area where intense and focused research is urgently needed to overcome an inability to explain a surprising result.

### **7.3.11 Opportunity evaluation**

As with competitiveness, opportunity evaluation is viewed by entrepreneurship scholars as essential to an entrepreneurial curriculum (see section 3.7.6). However, the model did not find a correlation between competitiveness and opportunity evaluation. The comments just made apply equally to the nexus between opportunity evaluation and competitiveness.

## **7.4 The ‘punch line’ of the empirical study: aggregate program effects**

Surprisingly, the correlation figures indicate that business performance was not correlated with any of the variables in the model. This lack of any significant correlation, *prima facie*, might suggest a crude and superficial conclusion that none of the variables measured in this study significantly influences or predicts business performance in Botswana.

Interpretation of this finding can result in two poles of thought. At one extreme, it might be argued that these results clearly indicate that the Western models of entrepreneurship training and measuring business performance may not be *in any way* appropriate in Botswana and thus, by extension, in any developing country. At the other extreme, it might be argued that the study reported in this thesis is so flawed that its results are not a valid indicator of the real situation. I will deal with the limitations of the study in the next section. Here I will argue a middle-ground case.

This empirical study, in common with every piece of social research ever conducted, or that ever will be conducted, is far from perfect; inferences to be drawn from it must be drawn with caution. However, though it was conducted under difficult circumstances with imperfect data, this was a carefully, professionally executed program evaluation. We can conclusively say that what might be called the “grand underlying assumption of the thesis” — that SIYB is an efficacious program — has been completely destroyed. This is no mean finding. As will be discussed in the implications sections, below [section 7.6] the clearest implication of this study is that the massive amounts of money being spent on SIYB, in Botswana and world-wide, should cease being wasted on a program now demonstrated to be inefficacious and should be redirected to developing a viable, context-sensitive curriculum and teaching system. The lesson of this thesis is: stop wasting money on a failed program, and develop something that works.

As can be seen from the study, entrepreneurship is not solely the result of human action; it is also affected by external factors (e.g., the status of the economy, the availability of venture capital, the actions of competitors, and government regulations). However, environmental factors being equal, human motivation plays a critical and central role in the entrepreneurial process. To this end, it is suggested that context-sensitive teaching to develop the skills of motivation, self-efficacy, and opportunity evaluation, among others, should become key ingredients of a completely redesigned entrepreneurial training program curriculum for Botswana and the developing world. SIYB is worse than useless, it may actually be detrimental. This point will be expanded in the ‘implications’ section, below.

### ***7.5 Limitations of the study and suggestions for future research***

This study was subject to several limitations.

Extant literature concerning ‘entrepreneurship education’ is predominantly about entrepreneurship education in universities. There is very little research on entrepreneurship education outside universities and schools, and most of that work takes place in and assumes the background of an advanced Western democracy as the economic milieu. Since much of the extant literature on entrepreneurship has its roots in Europe and America, there was doubt, right from the earliest stages of this project, about the relevance to the Developing world of concepts and theories developed in Western world. The paucity of literature on entrepreneurship education in developing countries is a major limiting factor. Since clear guidelines for pursuing an academic enquiry in this area did not exist, this thesis is in some senses a pioneering work. More particularly, there is only a very small amount of extant literature on the subject of entrepreneurship in Botswana. To date studies undertaken in this field have not been rigorous. The levels of literacy of potential respondents to questionnaires in Botswana and the developing world generally — and their lack of experience in research traditions — is a severe complicating factor for survey-based data collection. This complication further complicates the study of phenomena in developing countries using Western lenses. More traditionally, the study suffers from the perennial and universal limitations imposed by a sample size smaller than the researcher would have liked to obtain.

In summary, the lack of precedents *for* my work constitutes an important limitation of my work.

The study posited an ‘ideal curriculum’ and was able to test the SIYB program. It remains for future teachers and scholars to develop a teachable and testable version of the ideal curriculum model. Even though a broad generic ideal curriculum model was developed in this study, the study has not been used to establish its efficacy. Although I tested some aspects of the ideal curriculum model (ICM) within the boundaries of the broader EPP model, but I was unable to test whether a program developed fully-based on the ICM would achieve the desired outcomes in business performance when compared to a program which is not based in these principles. Hence, there is need for future research to incorporate the ideal curriculum model and evaluate the efficacy of programs aligned with it.

This study emphasizes the importance of entrepreneurship education for business performance, but it does not evaluate the pedagogical approach of the program which was empirically tested. Future research could identify the antecedents of learning and teaching and assess how they impact entrepreneurship education and how such teaching and learning might produce superior business performance. For example, the analysis of learning and teaching could be a mediator between entrepreneurship education and business performance.

Research on business performance and entrepreneurial performance as they are affected by educational initiatives may require a longitudinal approach. The field will benefit when cross-sectional studies are augmented by scrutiny of the evolution of entrepreneurship education and business performance and entrepreneurial performance over time. Longitudinal data might also inform a more exhaustive study of the relationship between entrepreneurship education and superior performance over time, using an analysis of the relationship between financial performance and non-financial performance. The study reported in this thesis, due to its cross-sectional nature could not assess the effect of time lags on business performance. Information from

longitudinal data would provide a more accurate picture of the progress entrepreneurs have made over time. Also, such information would have made it possible to indicate more accurately the amount and kinds of impact that training assistance may have had on businesses operated by respondent entrepreneurs; further, it would have allowed for more accurate decision-making on the part of those responsible for entrepreneurship education in Botswana. Improved research will also mandate larger sample sizes than it was possible to obtain for this study, including a sufficiently large control group.

The sample used for this study was restricted to Botswana. Although this serves to control for extraneous sources of variation, the usual caution should be used in extrapolating the results to other contexts or even to the whole of Botswana. It may be thought by some to be desirable to conduct a similar study in different countries and even different regions of Botswana using larger samples. This would allow the results to be generalised across countries and enhance cross-cultural perspectives. This would obviously aid the formation of a model for designing a sound curriculum and a well developed systematic evaluation tool for any training programs envisaged as replacements for SIYB.

### ***7.6 High-level, generic implications***

The results of the analyses indicate that there is no evidence of beneficial effects ensuing from the SIYB program in Botswana. In a range of important outcomes, there were no major distinctively different effects between the different groups: those who undertook the SIYB program and those who did not. In particular, there were no significant differences on a composite measure of business performance. The results indicate only small differences between groups concerning the relationships between many important measures.

However, the group of those who participated in the SIYB program scored significantly higher than those who did not attend the course on the measure of Reconciliation (the measure of 'ability to reconcile family and businesses') and Adaptability (the measure of 'ability to adapt to business needs'). Given that there were so few significant differences between the groups, it was very difficult to develop a more general

structural set of implications, based on the analyzed evidence, for predicting the relationship between entrepreneurship education and business performance, but the results do raise many important questions about SIYB and all entrepreneurial education programs designed to operate in developing countries.

Two crucial, fundamental questions are:

- Can a training program designed in developed countries work in a developing country?
- Are Western measuring instruments appropriate tools for assessing a population in Botswana (or, more generally, a developing country)?

Other important questions abound. It would always be possible to address the questions raised in this study by calling for more detailed research of the SIYB program.

However, I think this would be a waste of time and resources. If this study has done nothing else it has shown that SIYB is a conspicuous failure as a program and it is a reasonable inference that its failure in Botswana is highly indicative of its failure in every other developing country where its implementation continues to waste scarce resources. So, simply put, a more courageous interpretation of results, the one I make, would pronounce the existing SIYB program a failure both in respect of its own objectives and in respect of a theoretically posited ideal developing country entrepreneurship curriculum framework derived from the entrepreneurship education and developing country literatures, as detailed in chapter 3 of this thesis.

### ***7.6.1 Implications for theory and further research***

This study sought to define and develop a unique model, ‘an ideal curriculum model’ (ICM) for entrepreneurship education. Since no similar or comparable model was found in the literature, this model contributes significantly to theory. Produced especially for use in developing countries, the ICM includes critical variables suitable for a variety of entrepreneurial training programs in developing countries. This application is another theoretical contribution which may impact entrepreneurship training programs positively. The wider EPP conceptual model (placing educational variables in the context of non-educational variables) — which was developed and empirically tested —



emphasizes the role of key educational variables from the ICM. It appears robust and insightful in identifying the drivers of entrepreneurial and business performance. This insight provides opportunities for future researchers to replicate, extend, and modify the model to suit their specific research contexts and circumstances. Both models are important especially for future research in entrepreneurship education in the developing world because they identify new entrepreneurial aspects of training that are not in the current SIYB curriculum. These variables include ‘competitiveness,’ ‘opportunity evaluation,’ and ‘innovation’ which are at the core of entrepreneurship.

One major academic contribution is the conceptualization of the training model. The model recognizes that participants in any training program bring background knowledge and predispositions which may impact the effectiveness of the training. It further recognizes the nature of the current training and its goals. Finally, it highlights the intended benefits of training and their relationship to entrepreneurial success and business performance. This is a holistic approach which future researchers may examine further and extend.

This study proceeded from a rigorous program evaluation of an entrepreneurial training program using established program-evaluation techniques. The study demonstrated (via demonstration of SIYB failure, as can be seen in chapters 4 and 6) that a more theoretically derived and contextually focused curriculum would potentially be an improvement. It concluded by pointing directions for future research that will be useful to educators in developing meaningful, ‘fit for purpose’ entrepreneurship programs.

### ***7.6.2 Implications for SIYB and the future practice of entrepreneurship education in the developing world***

As has been shown in the literature, the successful entrepreneur has a set of personal skills, attributes, and behaviors that go beyond the purely commercial aspects of entrepreneurship. These attributes, and this way of thinking and behaving, needs to be developed in entrepreneurs to enhance their entrepreneurial capabilities and equip them to meet the challenges of the entrepreneurial climate of today’s world. To reach this

goal, both the content of courses and the process of learning need to change. On the basis of the evidence and experience of conducting this study, I agree with Gibb (2004) that it is important to move away from the very prevalent, overly narrow paradigm for entrepreneurship that equates it with new-venture creation and the tools to start and run a business.

This study should sound the immediate death knell of the failed SIYB program. Because of the need to move away from the current paradigm in my view, the SIYB needs to be axed immediately and replaced, as soon as is feasible, by an entirely new program.

It is important for people at all levels of involvement with the current SIYB program to accept its demonstrated failure and to work now to develop a curriculum which contains and can impart important elements of entrepreneurship identified in this study including: innovation, opportunity identification and evaluation, competitiveness, motivation and self-efficacy. The successor program or programs to SIYB should move from merely imparting managerial skills, to including topics that are entrepreneurial in nature. This research has shown that such a program should include both managerial skills and entrepreneurial topics as depicted in the ideal model in chapter 3. This research has further shown that a focus on developing opportunity evaluation skills – the vital skills for assessing the viability of new and innovative initiatives - will be particularly important.

Further, the successors to the SIYB administration should bear in mind that an effective promotion program should be designed to meet the needs of a specific target group, for the simple reason that different groups have different needs. It is therefore necessary to compare the characteristics and needs of target groups in order to assess the number of regionally specific adaptations and variations which a SIYB successor program ought to adopt.

How much local variety is enough: how much is too much?

This issue is vital for future research, now that the research embodied in this thesis has demonstrated that the monolithic, undifferentiated SIYB approach is a glaring failure. Whatever the emphasis of the content, there must be a premium placed on developing truly effective and locally sensitive training materials. There is no point in blindly adopting training materials from environments that are unrepresentative of and unlike conditions prevailing in developing countries. Training materials must be relevant to the needs of those particular entrepreneurs whom one is seeking to assist and educate. Because in Botswana, as in any other country, entrepreneurs are diverse in terms of education, experience, markets, ambition and so on, an appropriately ‘tuned’ training course should take these factors into consideration, rather than over-generalizing and relying on standardized materials. SIYB is too supply-driven with impractical subject materials which are sometimes far removed from developing countries’ contextual realities and urgencies. Change, in my view based on this research, is not optional or postponable. It is mandatory and urgent.

Further, there is need for the successors of SIYB to develop better measures for evaluating both program and venture performance. Researchers, teachers, and managers should be able to better differentiate firms that are performing well from those that are performing poorly. Instead of assessing only program performance (as SIYB does) by a measure of participants’ satisfaction with course content, course usefulness, and instructor performance, the key questions should assess *what value is added by the program*. Evaluation should target the impact on the participant’s skills, attitudes, and behaviors, and expected outcomes should be clearly stated. Careful, measurable objectives should be set for the attainment of knowledge, skills, and attributes. The successor programs to SIYB should promote entrepreneurial behavior, not just managerial behavior.

Finally, there is a need to have any successor program evaluated independently. It would be better for the administrators replacing the SIYB program with a better one to engage people who are not in the implementation team to conduct the impact evaluation, as evaluation performed by the implementers possesses clear danger of

being biased and selective. This is the old problem of ‘putting Dracula in charge of the blood-bank’.

### **7.6.3 Implications for entrepreneurs**

The results of this study are particularly pertinent to the many native Batswana entrepreneurs who over the last few years have taken an increased interest in the status of entrepreneurship in Botswana and have eagerly wanted to succeed but did not know how to go about it. There is a need for entrepreneurs to:

- (a) contribute to curriculum development;
- (b) pre-study (that is, study before coming to the course) a range of pre-requisite materials focused on clarifying exactly what it is that they seek from their entrepreneurial training;
- (c) relate their training needs to practical business challenges they face and;
- (d) insist on a follow-up program to evaluate training effectiveness.

### **7.6.4 Implications for government**

Society will not only have to accommodate change, but also be capable of anticipating it and more importantly perhaps initiating it. The way to achieve this is through innovation. As Drucker (1997: 17) has recognized, innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity. Today more than ever; because of profound transformation in the economic and social environment, it should be Botswana’s (and developing world) priority to enhance and support the skills of men and women who can envision and develop value-adding innovations.

Currently, Botswana (in common with all developing countries) relies heavily on foreign imports for basic commodities. The government of Botswana (in common with all the governments of all developing countries should do more to encourage innovation, competitiveness and entrepreneurship. As a Motswana who is passionate about entrepreneurship education and the development of entrepreneurship in Botswana, I hoped in conducting this study that the results, whatever they might turn out to be, would contribute to the enhanced development of entrepreneurship education in my country in particular and the developing world in general. The study was conducted in

the hope that its results would and will be taken seriously by policy makers as well as practitioners in Botswana and elsewhere. These educational policy makers can no longer rely on the vagaries of good intentions and the weaknesses of inappropriate, imported programs. They need to be better informed when they make decisions regarding entrepreneurial education. I particularly hope the study interests government officials whose task it is to assist in the promotion of entrepreneurship in Botswana and every other developing country where the ineffectual SIYB program rolls on, expensively and ineffectually.

Here, again, is the key message. The SIYB program should be stopped immediately. It is now a demonstrated failure and therefore a great waste of money and resources. On the grounds of resource efficiency alone, it would be better to do nothing than to continue with SIYB. Why spend vast amounts for a negligible result when you can have your negligible result for nothing? It would be a severe case of inertia and negligence to continue with an inefficacious, inappropriate, culturally insensitive program without sound reasons.

This research has shown that SIYB is completely ineffectual. This is not a time for doing nothing; this is not a time for doing less than everything we can to promote entrepreneurial efforts: the developing world urgently needs excellent entrepreneurship education. Policy makers must have the energy and commitment to make the needed changes. Government has a responsibility to redeploy entrepreneurship education resources, and so do educational institutions and trainers who interact with entrepreneurs.

As can be seen from the literature review, entrepreneurial skills are a necessary and fundamental requirement of an enterprise economy. To this end, skills necessary for entrepreneurial actions and behaviors must be developed and encouraged in order that Botswana and other developing countries can be globally competitive.

Given the significant amount of state funding for economic development in Botswana, one might expect that state entrepreneurship education programs should be thoroughly

and professionally evaluated so that government might be fully apprised of their efficacy. It is reasonable for citizens — tax-paying citizens — and international aid agencies to expect governments to know whether programs accomplish what they are designed to accomplish. On the evidence of this research, the government of Botswana (in common with governments in other developing countries) should now give evaluation of such programs a top priority. One of the more striking motivations for this study was the fact that the SIYB program in Botswana was only evaluated once, 12 years ago (Samuelsen 2003). It is evident from the results of this study that Botswana entrepreneurs engage in businesses for personal goals and objectives. This area has not been considered in relation to the SIYB training, or its evaluation outcomes. There is need to cater for personal goals and objectives in any entrepreneurial training and evaluation.

The future success of entrepreneurship in Botswana (and other developing countries) as a development tool depends heavily on policy makers genuinely committing resources to the focused, nationally and regionally sensitive development of viable entrepreneurship programs which meet different needs of different entrepreneurs. Public policy makers need to understand the importance of *needs assessment* in program development. This would determine, in any focused curriculum, what must be developed, for whom, by whom and when and how it is to be evaluated.

The government owes its citizens nothing less.

In *Tears of the Giraffe*, the second of his heartfelt novels of Botswana, Alexander McCall Smith (Smith 2000:19) has his wonderful character, Mma Ramotswe, proprietor of the Number 1 Ladies Detective Agency, muse as follows:

*There was always some eager foreign organisation ready to say to Africans: this is what you do, this is how you should do things. The advice may be good, and it might work elsewhere, but Africa in general needed its own solutions.*

So does Botswana, in particular, and the developing world in general.

## **7.7 Conclusion and reflection**

Recent years have seen considerable debate about the impact of training interventions upon performance outcomes in entrepreneurial firms. While intuitively it might be presumed that investment in training would enhance the performance of entrepreneurial firms, there is very little empirical evidence to support that proposition. It is suggested that, because of the heterogeneity of the sector, there are substantial problems in ascertaining any causal link between performance and training. In this study, a business performance model was generated after detailed review of the theoretical literature pertaining to entrepreneurship education and its relevance to developing countries. The results of the analyses of the efficacy of the currently dominant and massively expensive SIYB program indicated that there was no evidence of program effects in a range of outcomes between the different groups; in particular, there were no significant differences on measures of business performance.

Kuratko (2004: 12) in his work, *Entrepreneurship Education in the 21<sup>st</sup> Century: From legitimization to Leadership*, made a personal call to entrepreneurship educators. He believes that renewed energy is needed to stimulate institutional reform and continue to establish entrepreneurship education legitimacy. He emphasizes need for entrepreneurship academics to attract and develop the next generation of entrepreneurship teachers. He advises entrepreneurship academics and educators that they must remember that ‘tomorrow belongs to those who have vision today’, that they possess one of the privileged positions; and have been given the opportunity to educate and lead (Kuratko 2004: 12). And finally, he states that ‘in the entrepreneurship educators’ hands ...are the future of their entrepreneurial world and the fulfillment of the qualities of their own spirit’ (Kuratko 2004: 12).

The study reported in this thesis has demonstrated clearly the dangers of assuming that training approaches for entrepreneurship in developing countries need merely make

minor adjustments to what is currently provided. Cummings (1995) asks a number of questions along these lines.

Colonialism is a failed system in every regard, yet, in Botswana and many other developing countries, we have let something as vital as the entrepreneurial education of our people — a prime engine in the drive for a better economic and social future — be colonised by inappropriate, untested and unviable regimes of instruction. The time has come for Botswana and the developing world to create our own entrepreneurship educational programs and to do so entrepreneurially.



## References

- Ahire, D. D. and S. Devaraj (2001). "An emperical comparison of statistical constructs validation approaches." IEEE Transactions on Engineering Management **48**(3): 319-29.
- Ajzen, I. (1991). "The theory of planned behaviour" Organisational Behaviour and Human Decision Processes **50**: 179-211.
- Ajzen, I. (2002). "Percieved behavioural control, self-efficacy, locus of control, and the theory of planned behaviour." Journal of Applied Psychology **32**: 1-20.
- Ajzen, I. and M. Fishbein (1980). Understanding attitudes and predicting social behaviour. Enlgewood Cliffs, Prentice-Hall.
- Alliger, G. M. and E. A. Janak (1989). "Kirkpatrick levels of training criteria: thirty years later." Persobnal psychology **42**: 331-342.
- Allinson, C. W., E. Chell, et al. (2000). "Intuition and entrepreneurial behaviour." European Journal of Work and Organisational Psychology **9**(1): 31-43.
- Amabila, T. M., Ed. (1999). How to kill creativity. Harvard Business Review on Breakthrough Thinking. Boston, MA, Harvard Business Review School Press.
- Anderson, J. C. and D. W. Gerbing (1982). "Some methods for respecifying measurement models to obtain unidimensional construct measurement." Journal of Marketing Research **19**: 453-60.
- Anderson, J. C. and D. W. Gerbing (1988). "Structural equation modelling in practice: a review and recommended two-step approach." Psychological Bulletin **13**(3): 411-23.
- Anderson, T. (2000). Policy design, implementation and evaluation - rationale, efficiency and systemic concerns. Forum on Public Plocies for SMEs in Europe. Lisbon.
- Antonites, A. J. and J. J. van Vuuren (2004). An action learning approach to entrepreneurial creativity, innovation and opportunity finding. 14th Annual IntEnt Conference. Naples.
- Armstrong, S. J. (1967). "Estimating non-response bias in mail survey." Journal of Marketing Reseach **14**(August): 396-402.
- Atuahene-Gima, K. (1996). "Market orientation and innovation." Journal of Business Reseach **35**: 93-103.
- Bagozzi, R., P, Y. Y, et al. (1991). "Assessing construct validity in organisational research." Administrative Science Quarterly **36**(3): 421-58.

- Bagozzi, R., P and Y. Yi (1991). "Multitrait-multimethod matrices in consumer research." Journal of Consumer Research **17**(17): 426-39.
- Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, Prentice-Hall.
- Bandura, A. (1987). "Self-efficacy mechanism in human agency." American Psychologist **37**: 122-147.
- Bandura, A. (1997). Self-efficacy: the exercise of control. New York, Freeman.
- Bandura, A. (2001). "Guide for constructing self-efficacy scales."
- Bao, S. (1982). An introduction to curriculum development in developing countries. London, MacMillian Publishers.
- Baron, R. and G. Markman (1999). The role of entrepreneur's behaviour in their financial success: evidence for the benefits of effective social skills. Babson Conference on Entrepreneurship. Babson Park, MA, Babson College.
- Baron, R. A. and S. Shane (2005). Entrepreneurship: a process perspective. Cincinnati, OH, Southwestern Thomson.
- Bartik, T. J. (1994). "Better evaluation is needed for economic development programs to thrive." Economic Development Quarterly **8**(2): 99-106.
- Bartko, J. and T. McGlashan (1998). "Statistical issues in long term follow up studies." Schizophrenia Bulletin **14**: 575-587.
- Batley, T. (1996). "Striving for better operations management practices in New Zealand and Australian manufacturing firms." Integrated Manufacturing Systems **7**(3): 33-37.
- Baum, J. R. and E. A. Locke (2004). "The relationship of entrepreneurial traits, skills and motivation to subsequent venture growth." Journal of Applied Psychology **89**: 587-598.
- Baumgartner, H. and C. Homburg (1996). "Applications of structural equation modeling in marketing." International Journal of Research in Marketing **13**: 139-61.
- Bechuanaland Protectorate (1963). Bechuanaland Protectorate Development Plan 1963-68. Mafikeng, Bechuanaland Protectorate
- Bechuanaland Protectorate (1963). Bechuanaland Protectorate development plan, 1963-68, Bechuanaland Protectorate Printers.
- Belson, W. A. (1986). Validity in survey research. Hants, UK, Grover Publishing.

- Bennett, R. J. (1994). "Are they cost-effective?" Management Development Review 7(5): 29-39.
- Bentler, P. M. (1990). "Comparative fit indexes in structural models" Quantitative Methods in Psychology 107(2): 238-46.
- Bentler, P. M. and Bonnet, D.G. (1980). "Significant tests and goodness of fit in the analysis of covariance structures." Psychology Bulletin 88(3): 588-606.
- Berg, B., L. (1989). Qualitative research methods for the social sciences. Massachusetts, Allyn and Bacon.
- Bernthal, P. R. (1995). "Evaluation that goes a distance." Training and Development Journal 49(9): 41-45.
- Bewayo, E. (2000). Will entrepreneurship lead to national development in Africa? Small Business Institute Directors' Association. Feb. 10-13. [Online] Retrieved 1 June, Brussels, Small Business Institute Directors' Association.
- Black, S. S. (1994). Redefining success in community development: a new approach for determining and measuring the impact of development. Lincoln Filene Center's Annual Management and Community Development Institute. Medford, MA, Lincoln Filene Center.
- Blackman, D. and K. Hindle, Eds. (2007). Would using psychological contract increase entrepreneurial business development potential? International Handbook of Entrepreneurship and Human Resources Management - Educational Psychology. Folkestone, Routledge.
- Blaikie, N. (2003). Analysing quantitative data. London, SAGE Publications.
- Blenker, P., P. Dreisler, et al. (2006). Chapter 2: Learning and teaching entrepreneurship: dilemmas, reflections and strategies. International Entrepreneurship Education. A. Fayolle and H. Klandt. Cheltenham, Edward Elgar.
- Block, Z. and S. S.A, Eds. (1992). Entrepreneurship education research: experience and challenge. The State of the art of entrepreneurship. Boston.
- Bollen, K. and S. Long, Eds. (1993). Testing structural equation models. London, Sage Publications.
- Bollen, K. A. (1989). Structural equation with latent variables. New York, Wiley and Sons.
- Botswana Development Corporation (1992). Botswana Development Corporation annual report. Gaborone, Botswana Development Corporation.

Botswana Institute for Development Policy Analysis (2000). Financial Assistance Policy fourth and final evaluation report. Gaborone, Ministry of Finance and Development Planning.

Bowen, J. and H. P (1974). Theories of education. Sydney, John Wiley and Sons Australasia Pty Ltd.

Bowie, J. (1997). "Firm resources and sustained competitive advantage." Journal of Business Research **17**: 99-120.

Bramley, P. (1998). "Evaluating effective management learning." Journal of European Industrial Training **23**(3): 145-153.

Breakwell, G. M. and L. Millward (1995). Basic Evaluation Methods: Analysing Performance, Practice and Procedure. Leicester, Sage.

Brinkeroff, R. O. (1988). "An integrated model for HRD." Training and Development (February).

Briscoe, A. (1995). The promotion of small and medium enterprises in Southern Africa. Gaborone, Southern African Development Community.

Briscoe, R. and N. Naisoro (1994). Intrim evaluation of Fiji SYB/IYB project. Fiji.

Brockhaus, R. H. and P. S. Horwitz, Eds. (1986). The psychology of the entrepreneur. The art of science of entrepreneurship. Cambridge.

Brockhous, R. H., G. E. Hill, et al. (2001). Entrepreneurship education: a global view. Ashgate, Aldershot.

Brown, K. and M. Gerhardt (2002). "Formative evaluation: an integrative practice model and case study." Personal psychology **55**(4): 951-953.

Bruyat, C. and P. A. Julien (2000). "Defining the field of research in entrepreneurship." Journal of business venturing **16**(2): 165-80.

Buckley, R. and J. Caple (1990). The Theory & Practice of Training. London, Kogan.

Burgess, R. (1993). In the Field: an introduction to field research. London, Routledge.

Business, I. C. f. S. (2003). Advancing entrepreneurship and small business. 48th World Conference, Belfast, Northern Ireland, ICSB - Harrogate.

Bygrave, W. D. (1989). The entrepreneurship paradigm (1) a philosophical look at Its research methodology. Wellesley, Center for Entrepreneurial Studies. Babson College.

- Bygrave, W. D. and C. W. Hofer (1991). "Theorizing about entrepreneurship." Entrepreneurship Theory and Practice **16**(2): 13-22.
- Byrne, B. M. (2001). Structural equation modeling with AMOS: basic concepts, applications, and programming. New Jersey, Lawrence Erlbaum Associates, Publishers.
- Calder, J. (1994). Programme evaluation and quality: a comprehensive guide to setting up an evaluation system. London, Kogan Page Limited.
- Campbell, D. and T. a. D. Fiske (1959). "Convergent and discriminant validation by the multitrait-multimethod matrix." Psychological Bulletin **56**: 81 -150.
- Cannon, T. (1991). Enterprise: creation, development and growth. U.K, Butterworth.
- Cantillon, R. (1931). Essai sur la nature du commerce en general (trans. 1931 by H. Higgs). London, Macmillan.
- Carland, J. C. and J. W. Carland (1993). Entrepreneurship curriculum design in developing and changing nations: problems in following the US model. 38th International Council for Small Business World Conference, Las Vegas.
- Carland, J. C., J. W. Carland, et al. (1996). "Seeing what's not there: the enigma of entrepreneurship." Journal of small business strategy **7**(1): 1-20.
- Carton, R. B. and C. W. Hofer (2006). Measuring organisational performance: metrics for entrepreneurship and strategic management research. Cheltenham, Edward Elgar.
- Casao, M. (1982). "Evaluation of Brucella for the diagnosis of human brucellosis." Journal of Infection **49**(2): 102-108.
- Cascio, M. (1982). Evaluating entrepreneurship programs. Aldershot, Edward Elgar.
- Cascio, W. F. (1991). Applied psychology in personnel management New Jersey, Prentice Hall.
- Casson, M. (1982). The entrepreneur: an economic theory. London, Barnes and Noble Books.
- Casson, M. (1990). Entrepreneurship. Cheltenham, Edward Elgar.
- Casson, M. (1992). Entrepreneur-an economic theory. Oxford, Martin Robertson.
- Casson, M. and N. Wadeson (2007). "Discovery of opportunity: extending the economic theory of the entrepreneur." Journal of Small Business Economics **28**(4).
- Catalanello, R. F. and D. L. Kirkpatrick (1967). "Evaluating training programs-the state of the art." Training and Development: 2-9.

- Cavana, R., B. Delahaye, et al. (2000). Applied business research: qualitative and quantitative methods. Melbourne, John Wiley and Sons.
- Chandler, G. N. and S. H. Hanks (1993). "Measuring the performance of emerging business: a validation study." Journal of business venturing **8**: 391-408.
- Chandler, G. N. and S. H. Hanks (1994). "Founder competence, the environment and venture performance." Entrepreneurship Theory and Practice **18**(3): 77-89.
- Chandler, G. N. and E. Jansen (1999). "The founder's self-efficacy and venture performance." Journal of Business Venturing **7**: 223-236.
- Chandler, N. and E. Jansen (1992). "The founders' self-assessed competence and venture performance." Journal of Business Venturing **7**: 223-236.
- Chell, E. (1991). "The entrepreneurial personality: a few ghosts laid to rest." International Small Business Journal **3**(3): 43-54.
- Chen, C. C., P. G. Greene, et al. (1998). "Does self-efficacy distinguish entrepreneurs from managers?" Journal of Business Venturing **13**: 295-316.
- Chen, G., M. S. Gully, et al. (2004). "General self-efficacy and self-esteem: towards theoretical and empirical distinction between correlated self-evaluations." Journal of Organizational Behavior **25**: 375-395.
- Chen, M. J. and D. Miller (1994). "Competitive attack, retaliation and performance: an expectancy-valence framework." Strategic Management Journal **15**: 85-102.
- Chrisman, J. J. (1999). "The influence of outsider-generated knowledge resources on venture creations." Journal of Small Business Management **37**(4): 42-58.
- Chrisman, J. J., F. Hoy, et al. (1987). "Evaluating the impact of SBDC consulting: a reply to Elstrott." Journal of small business Management **25**(1): 72-75.
- Chrisman, J. J. and W. E. McMullan (1996). "Static economic theory, empirical evidence, and the evaluation of small business assistance programs: a reply to Wood." Journal of small business Management **34**(2): 57-66.
- Chrisman, J. J. and W. E. McMullan (2000). "Outsider assistance as a knowledge resource for new venture survival." Journal of Small Business Management **42**(3): 229-44.
- Chrisman, J. J. and W. E. McMullan (2002). "Some editorial comments on the sources of measurement benefits of small business assistance programs." Journal of Small Business Management **40**(1): 43-50.

Chrisman, J. J., R. R. Nelson, et al. (1985). "The impact of SBDC consulting activities." Journal of small business Management **23**(3): 1-11.

Churchill, G. A. (1979). "A paradigm for developing better measures of marketing constructs." Journal of Marketing Research **16**(1): 64-73.

Churchill, G. A. (1999). Marketing research: methodological foundations. New York, Dryden Press.

Churchill, G. A. and P. J. Peters (1984). "Research design effects on the reliability of rating scales: a meta-analysis." Journal of Marketing Research **21**(4): 360-75.

Churchill, N. C. and V. L. Lewis, Eds. (1986). Entrepreneurship research: directions and methods. The Art and Science of Entrepreneurship. Cambridge.

Clark, R. (1984). "Towards a national policy for small business education and training." Management Forum **12**(2): 52-62.

Clarysse, B. and N. Moray (2004). "A process study of entrepreneurial team formation: the case of a research-based spin-off." Journal of Business Venturing **19**: 55-79

Coakes, S. L. and L. G. Steed (1999). SPSS for windows: analysis without anguish, version 11.5. New York, John Wiley and Sons.

Coakes, S. L. and L. G. Steed (2003). SPSS: Analysis without anguish: version 11 for Windows. Brisbane, John Wiley and Sons.

Coakes, S. L. and L. G. Steed (2004). SPSS: Analysis without anguish: version 12 for Windows. Brisbane, Jon Wiley and Sons.

Cohen, J. and P. Cohen (1983). Applied multiple regression/correlation analysis for behavioural sciences. New Jersey, Lawrence Erlbaum Associates.

Cohen, W. M. and D. A. Levinthal (1989). "Innovation and learning: the two faces of R & D." Economic Journal **99**: 569-596.

Colclough, C. and S. McCarthy (1970). The political economy of Botswana: a study of growth and distribution. London, Oxford University Press.

Colton, T. (1990). Enterprise education experience: a manual for school based inservice training. Kent, Kent Publishing.

Commission, T. E. (2003). "Stimulating youth entrepreneurship: barriers and incentives to enterprise start-ups by young people." International Business Leaders Forum (IBLF) Retrieved May, 2009, from <http://www.wbc-inco.net/object/document/3159.html>.

- Cook, T. D. and C. S. Reichardt (1997). Qualitative and quantitative methods in evaluation research. Beverly Hills, CA, Sage
- Cooper, D. R. and W. C. Emory (1995). Business reseach methods. Chicago, Irwin.
- Cooper, D. R. and P. S. Schindler (2001). Business research methods. Sydney.
- Cronbach, L. J. (1951a). "Coefficient alpha and the internal structure of tests." Psychometrika **16**: 297-334.
- Cronbach, L. J. (1951b). "Coefficient of alpha and the internal structure of tests." Psychometrika **16**(3): 297-334.
- Cronbach, L. J. (1982). Alpha and the internal structure of tests. New York, McRaw-Hill.
- Cronbach, L. J. (1987). "Statistical tests for moderator variable: flaws in analysis recently proposed." Psychological Bulletin **102**: 414-417.
- Crunch, J. and J. R. B. Richie (1999). "Tourism, competitivenes, and socilal prosperity." Journal of Business Reseach **44**: 137-152.
- Cunningham, E. G. (2001). Developing coping resources in early adolescence: evaluation of control-related mechanisms in a universal health promotion intervention. Faculty of Education. Melbourne, University of Melbourne. **Doctor of Philosophy**.
- Cunningham, J. B. and J. Lischeron (1991). "Defining entrepreneurshp." Journal of Management Psychology **1**: 45-61.
- Curran, J. (2000). "What is small business in the UK for? Evaluation and assessing small business policies." International Small Business Journal **18**(3): 36-50.
- Curran, J. and J. Stanworth (1989). "Education and training for enterprise: some problems of classification, evaluation and research." International Small Business Journal **7**(2): 11-22.
- Curran, J. and D. J. Storey (2002). "Small business policy in the United Kingdom: the inheritance of the smal business service and implications for its future effectiveness." Government and Policy **20**: 163-77.
- Cushion, N. (1996). Measuring the success of small business management training. 18th ISBA National Conference. Paisley, university of Paisley.
- Dainow, R. (1986). "Training and education of entrepreneurs: the current state of the literature." Journal of Small Business and Entrepreneuship **3**(4): 10-23.



- Dalley, J. and B. Hamilton (2000). "Knowledge, context and learning in small business." International small Business Journal **18**(3): 51-9.
- Dana, L. P. (1987). "Towards a skills model for entrepreneurship" Journal of Small Business and Entrepreneurship **5**(1): 27-31.
- Dana, L. P. (1992). "Entrepreneurial education in Europe." Journal of Education for Business **68**: 74-78.
- Dana, L. P. (1993). "An international survey of entrepreneurship education." Journal of Enterprising Culture **1**(1): 67-92.
- Dana, L. P. (2000). "Creating entrepreneurship in India." Journal of Small Business Management **38**(1): 86-91.
- Davidson, P., L. Lindmark, et al. (1994). "Entrepreneurship and economic development: the role of small firm formation and expansion for regional economic well-being." Journal of Enterprising Culture **1**(3&4): 347-366.
- Davidson, P., B. L. Murray, et al. (2001). "Low and MacMillan ten years on: achievements and future directions for entrepreneurship research." Entrepreneurship Theory and Practice **2**(4).
- Davidson, P. and J. Wiklund, Eds. (2000). Conceptual and empirical challenges in the study of firm growth. Handbook of entrepreneurship. Oxford, Blackwell.
- Davidson, P. and J. Wiklund (2000). "Levels of analysis in entrepreneurship research: current research practice and suggestions for the future." Entrepreneurship Theory and Practice **25**(4).
- Davidsson, P. (2004). "'The domain of entrepreneurship research: some suggestions,' in Katz, J. A and Shepherd, D, "Advantages in entrepreneurship, firm emergence and growth". " JAI Press: 315-372.
- Davidsson, P. and J. Wiklund (2001). "Levels of analysis in entrepreneurship research: current research practice and suggestions for the future." Entrepreneurship Theory and Practice (summer): 81-99.
- De Faiote, D., C. Hengry, et al. (2003). "Education and training for entrepreneurs: a consideration of initiatives in Ireland and the Netherlands " Education and Training **45**(8/9): 430-438.
- De Kok, J. (2002). "The impact of firm provided training on production: testing for firm size effects." International Small Business Journal **20**(27): 1.
- De Vaus, D. A. (1995). Surveys in social research. Crows Nest NSW, Allen and Unwin.

- De Vaus, D. A. (2001). Research design in social research. London, Sage Publishing.
- Delors, J. (1996). Report to UNESCO of the International Commission on Education for the Twenty First Century: Learning: the treasure within Paris, UNESCO.
- DeNoble, A. F., S. Ehrlich, et al. (2007). "Toward the Development of a Family Business Self-efficacy Scale: A Resource-Based Perspective." Family Business Review **XX**(2).
- DeNoble, A. F., D. Jung, et al., Eds. (1999). Entrepreneurial Self-efficacy: The development of a measure and its relationship to entrepreneurial action. Frontiers of entrepreneurship research. Waltham, M.A, P & R Publications Inc.
- Denzin, N. K. and Y. S. Lincoln (1994). the handbook of qualitative research. Thousand Oaks, Calif., Sage Publications.
- Denzin, N. K. and Y. S. Lincoln (2000). The handbook of qualitative research. Thousand Oaks, Calif., Sage Publications.
- Department of Industrial Affairs (1991). 1990/1991 annual report. Gaborone, Ministry of Commerce and Industry.
- Department of Industrial Affairs (1996). 1995/1996 annual report. Gaborone, Ministry of Commerce and Industry.
- Department of Industrial Affairs (1997). 1996/1997 annual report. Gaborone, Ministry of Commerce and Industry.
- Department of Industrial Affairs (1998). 1997/1998 annual report. Gaborone, Ministry of Commerce and Industry.
- Department of Industrial Affairs (1999). 1998/1999 annual report. Gaborone, Ministry of Commerce and Industry.
- Dess, G. and R. Robenson (1984). "Measuring organisational performance in the absence of objective measures." Strategic Management Research **3**(5): 265-73.
- DeVellis, R. F. (2003). Scale developemnt: theory and application. Newbury Park, Sage Publishing.
- Dickson, P. H., G. T. Solomon, et al. (2008). "Entrepreneurial selection and success: does education matter?" Joournal of Small Business and Enterprise Development **15**(2): 239-258.
- Dickson, P. R. (1992). "Towards a general theory of competitive rationality." Journal of Marketing **56**(January): 69-83.

- Dimock, C. (2000). "Developing comparative and international educational leadership and management: a cross-cultural model." School leadership and Management **20**(2): 143-160.
- Dionne, P. (1996). "The evaluation of training activities: a complex issue involving different stakes." Human Resource Development Quarterly **7**(3): 279-286.
- Dollinger, M. J. (1999). Entrepreneurship: strategies and resources. New Jersey, Prentice-Hall.
- Driscoll, M. (2000). Psychology of Learning for Instruction. Needham Heights, MA, Allyn & Bacon.
- Drucker, P. (1984). "Our entrepreneurial economy." Harvard Business Review **63**(1): 58-64.
- Drucker, P. (1985). Innovation and entrepreneurship: practice and principles. London, Butterworth.
- Dunn, C. (1996). Being enterprising. South Yarra, Victoria, MacMillan.
- Durham University Business School (1990). Enterprise education experience: a manual for school-based in-service training Durham, Durham University Business School.
- Easton, P. B., M. S. Sidikou, et al. (2003). Enhancing the contribution of adult and nonformal education to 'education for all and the achievement of millennium development goals'. The World Bank /human development network. W. Bank. Washington, D.C, the World Bank.
- Eckhardt, J. T. and S. S. Shane (2002). "Opportunities and entrepreneurship." Journal of Management **29**(3): 333-49.
- Economic Commission for Africa (1994). Entrepreneurial capacity in the private sector "a framework agenda for building and utilizing critical capacities in Africa Addis Ababa.
- Elkan, W. (1988). "Entrepreneurs and entrepreneurship in Africa" Finance and Development **25**(4): 41.
- Elloy, D. F. and C. R. Smith (2003). "Patterns of stress, work-family conflict, role conflict, role ambiguity and overload among dual-career and single-career couples: an Australian study." Cross Cultural Management **10**(1): 55-56.
- Elstrott, J. B. (1987). "Procedure for improving the evaluation of SBDC consulting activities." Journal of small business Management **25**(1): 67-71.

Erlich, C. (1973). "Building and caretaking: economic policy in British tropical Africa, 1890-1960." Historical Economic Review Vol 26(4): 649.

Eseryel, D. (2002). "Approaches to evaluation of training: theory and practice." Educational Technology & Society 5(2).

European-Commission (1999). Action plan to promote entrepreneurship and competitiveness Luxemburg, European-Commission

European-Commission (2003). Final report of the expert group "BEST procedure" project on education and training for entrepreneurship. E. Directorate-General. Brussels, European Commission

Evans, D. (1995). How to write a better thesis or report. Melbourne, Melbourne University Press.

Fairclough, N., Ed. (1991). What might we mean by enterprise discourse? Enterprise Culture. London, Routledge.

Falkan, W. and E. Alberti (2000). "Evaluation of educational programs." Industry and Higher Education 2(44): 101-108.

Fayolle, A. (1998). Teaching of entrepreneurship: outcomes from an innovative experience. Internationalizing Entrepreneurship Education and Training.

Fayolle, A. (2000). Setting up a favourable environmental framework to promote and develop entrepreneurship education. ICSB World Conference 2000.

Fayolle, A. (2005). "Evaluation of entrepreneurship education: behaviour performing or intention increasing?" International Journal of Entrepreneurship and Small Business 2(1): 89-98.

Fayolle, A. (2007). Handbook of research in entrepreneurship education, a general perspective  
Cheltenham, UK, Edward Elgar.

Fayolle, A. and B. Gaily (2004). Using the theory of planned behaviour to assess entrepreneurship teaching program: a first experimentation. IntEnt2004. Naples, Italy.

Ferrier, W. (1999). "The role of competitive action in market share erosion and industry dethronement: a study of industry leaders and challengers." Academy of Management Journal 42: 372-388.

Fiet, J. O. (2000a). "The theoretical side of teaching entrepreneurship." Journal of business venturing 16(1): 1-24.

- Fiet, J. O. (2000b). "The pedagogical side of entrepreneurship theory." Journal of business venturing **16**(2): 101-17.
- Fiet, J. O. (2002). The systematic search for entrepreneurial discoveries. . Westport, Quorum Books.
- Fillion, L. J. (1997). "Ten steps to entrepreneurial teaching." Journal of Small Business and Entrepreneurship **11**(3): 68-78.
- Fitz, G., M. Gibson, et al. (1987). Program evaluation. Oxford, Oxford University Press.
- Flamholtz, E. G. (2003). "Advances in entrepreneurship." International Journal of Entrepreneurship Education **1**(3): 297 - 320.
- Foley, A. and B. Griffith (1998). Education, training and the promotion of high quality entrepreneurs in the Republic Ireland. Educating Entrepreneurs for Wealth Creation. M. G. Scott, P. Rosa and H. Klandt. Ashgate, Aldershot.
- Foley, G. (1995). Understanding adult education training. London, Sage.
- Foley, G. (2004). Dimensions of adult learning: adult education and training in global era. Crows Nest. NSW, Allen and Unwin.
- Forbes, D. P. (2005). "Are some entrepreneurs more overconfident than others?" Journal of Business Venturing **20**: 623-640.
- Forbes, D. P. (2005). "The effects of strategic decision making on entrepreneurial self-efficacy." Entrepreneurship: Theory & Practice **29**(5): 599-626.
- Ford, K. J. (1997). Improving training effectiveness in work organizations. New Jersey, Lawrence Erlbaum Associates,.
- Fornell, C. and D. F. Larcker (1981a). "Evaluating structural equation models- unobservable variables and measurement error." Journal of Marketing Research **18**(1): 39-51.
- Fornell, C. and D. F. Larcker (1981b). "Evaluating structural equation models- unobservable variables and measurement error." Journal of Marketing Research **18**: 39-50.
- Frank, A. I. (2005). Developing entrepreneurship skills in the context of higher education. Build Environment Education Symposium: Building the Future, The Centre for Education in the Build Environment (CEBE).
- Franklin, J. L. and J. H. Thrasher (1976). An Introduction to program evaluation. Sydney.

- Frese, M., Ed. (2000). Success and failure of micro business owners in Africa: a psychological approach. Wesport, Quorum Books.
- Friedrich, C. and M. Frese (2004). Assessment of an entrepreneurial training. NCSB 2004-13th Nordic Conference on Small Business Research.
- Gabatshwane, S. M. (1960). Tshekedi Khama and Bechuanaland Mafikeng.
- Gabotlale, B. (2009). Unemployment Surges as Government Plans Fail to Take Off. Botswana Gazette. Gaborone, Botswana Gazette.
- Gaird, S. (1990). "Enterprise education: the need for differentiation." British Journal of Education and Work **4**(1): 45-57.
- Gaird, S. (1990). "What does it mean to be enterprising?" British Journal of Management **1**: 137-45.
- Gaird, S. (1991). "The enterprising tendency in occupational groups." International Small Business Journal **9**(4): 75-85.
- Gaird, S. (1991). "Testing enterprising tendency in occupational groups." British Journal of Management **2**: 177-186.
- Gaird, S. (1992). "Problems with the identification of enterprise competency and the implications for assessment and development." Management Education and Development **23**(Part 1): 6-17.
- Gaird, S. (1993). "What do psychologists tests suggest about entrepreneurs." Journal of Management Psychology **8**(3): 11-20.
- Garavan, T. N. and B. O'Conneide (1995). "Entrepreneurship education and training programmes: a review and evaluation (Part 2)." Journal of European Industrial Training **18**(11): 13-21.
- Gartner, W., K. Shaver, et al. (2004). Handbook of entrepreneurial dynamics - the process of business creation. London, SAGE Publications.
- Gartner, W. B. (1985). "A framework for describing and classifying the phenomenon of new venture creation." Academy of Management Review **10**(4): 696-706.
- Gartner, W. B. (1988). "Who is an entrepreneur is the wrong question." American Journal of Small Business **12**(4): 11-32.
- Gartner, W. B. (1990). "What are we talking about when we talk about entrepreneurship?" Journal of Business Venturing **5**(1): 15-28.

- Gartner, W. B. (1993). "Words lead to deeds: towards an organisational emergence vocabulary." Journal of Business Venturing **8**(3): 231-240.
- Gartner, W. B. (2001). "Is there an elephant in entrepreneurship? Blind assumption in theory development." Entrepreneurship Theory and Practice **25**(4).
- Gartner, W. B. and K. H. Vesper (1994). "Experiments in entrepreneurship education: successes and failures." Journal of Business Venturing **9**(2): 179-188.
- Gasse, Y. (1985). A Strategy for the promotion and identification of potential entrepreneurs at the secondary school level. Frontiers of Entrepreneurship Research. Wellesley, MA, Babson College: 538-559.
- Gerbing, D. W. and J. C. Anderson (1988). "An updated paradigm for scale development incorporating unidimensionality and its assessment." Journal of Marketing Research **15**: 186-92.
- Gerbing, D. W. and E. G. Hamilton (1996). "Exploratory factor analysis." Journal of Marketing Research (May): 150-160.
- Gibb, A. A., Ed. (1984). Factors fostering entrepreneurship: the role of education. Education for Enterprise. Cambridge, Career Research and Advisory Centre.
- Gibb, A. A. (1987). "Enterprise culture - its meaning and implications for education and training." Journal of European Industrial Training **11**(2): 2-38.
- Gibb, A. A. (1989). A study of the spirit of enterprise in Europe. Final Report of SME Task Force of the European Community. London, European Community.
- Gibb, A. A. (1993). Do we really teach (approach) small business in the way we should? IntEnt '93 Conference, Universitat Dortmund, Vienna.
- Gibb, A. A. (1993). "The enterprise culture and education - understanding enterprise education and its links with small business, entrepreneurship and wider educational goals." International Small Business Journal **11**(3): 11-34.
- Gibb, A. A. (1996). "Entrepreneurship and small business management: can we afford to neglect them in the twenty-first century business school?" British Journal of Management **7**(4): 309-21.
- Gibb, A. A. (1996). Small business, policy research and business school - a natural partnership. Small Business Association of Australia and New Zealand Annual Conference. Perth, Western Australia.
- Gibb, A. A. (2000). "SME policy, academic research and the growth of ignorance, mythical concepts, myths, assumptions, rituals and confusions." International Small Business Journal **18**(3): 13-35.

Gibb, A. A. (2001). Learning skills for all: the key to success in small business development. International Council for Small Business. Australia.

Gibb, A. A. (2002). "Creating conducive environments for learning and entrepreneurship: living with, dealing with, creating and enjoying uncertainty and complexity." Industry and Higher Education **16**(3): 135-148.

Gibb, A. A. (2002). "In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge." International Journal of Management Review **4**(3): 233-69.

Gibb, A. A. (2007). Chapter 4: Creating the entrepreneurial university: do we need a wholly different model of entrepreneurship? Handbook of Research in Entrepreneurship. A. Fayolle. Cheltenham, Edward Elgar **1**: 67-103.

Gibb, A. A. and J. Cotton (1998). Entrepreneurship in schools and college education – creating the leading edge. Department of Trade and Industry Conference Department of Trade and Industry Conference Centre, London.

Gillin, L. M. (1991). "Entrepreneurship education: the Australian perspective for the nineties." Journal of Small Business and Entrepreneurship **9**(1): 60-72.

Gillin, L. M. and M. Powe (1994). Added value from teaching entrepreneurship and innovation. Babson Entrepreneurship Conference. Boston.

Gillin, L. M., M. Powe, et al. (1996). An empirical assessment of the returns to investment in entrepreneurial education. 16th Annual Entrepreneurship Research Conference Babson College.

Goldstein, I. L. and K. K. Ford (2002). Training in organizations: needs assessment, development, and evaluation. Belmont, CA, Wadsworth.

Goldstein, P. (1986). Program evaluation. New York, Pergamon Press.

Gorman, G., D. Hanlon, et al. (1997). "Some research perspectives on entrepreneurship education, enterprise education and education for small business management: a ten-year literature review." International Small Business Journal **15**(3): 56-77.

Government of Botswana (1968). National Development Plan 1968-73. Gaborone, Government Printer.

Government of Botswana (1970). National Development Plan 1970-75 Gaborone, Government Printer.



- Government of Botswana (1973). National Development Plan 1973-78. Gaborone, Government Printer.
- Government of Botswana (1976). National Development Plan 1968 -73. Gaborone, Botswana Government.
- Government of Botswana (1979). National Development Plan 1979-85. Gaborone, Government Printer.
- Government of Botswana (1982). Statistical Bulletin Gaborone, Government Printers.
- Government of Botswana (1997). National Development Plan 1998-2003. Gaborone, Government Printers.
- Government of Botswana (1997). Vision 2016 -towards prosperity for all: a long term vision for Botswana. Gaborone, Botswana Government Printers.
- Government of Botswana (1998). Small, medium and micro enterprise task force report. Gaborone, Government Printer.
- Government of Botswana (1998). Statistics bulletin Gaborone, Government Printers.
- Government of Botswana (1999). Government white paper No. 1 : policy on small, medium and micro enterprises in Botswana. Gaborone, Government Printers.
- Government of Botswana (2002). Statistical bulletin, . Gaborone, Government Printers,.
- Government of Botswana (2003). National Deveopment Pans 2003/4, 2008/9. Gaboroe, Botswana Government Printer.
- Graham, J. W., S. M. Hofer, et al. (1997). Analysis with missing data in prevention research The Science of Prevention: Methododlogical advances from alcohol and substance abuse research. K. J. Bryant, M. Windle and S. G. West. Washington, DC, American Psychological Association: 325-366.
- Grebel, T. (2004). Entrepreneurship: a perspective. London, Routledge-Taylor and Francis Group.
- Green, F. J. (2005). Youth entrepreneurship: latent entrepreneurship, market failure and enterprise support. NCGE Discussion Forum. Birmingham.
- Green, F. J. and D. J. Storey (2004). "The value of outsider assistance in supporting new venture creation by young people." Entreprenuership and Regional Development **16**(2): 145-159.
- Green, P. G. and M. P. Rice (2007). Entrepreneurship education. Cheltenham, Edward Elga.

- Hailey, L. (1960). Basutoland, Bechuanaland Protectorate and Swaziland: report of economic survey mission. Mafikeng, Her Majesty's Stationery Office.
- Hailey, L. (1978). Native administration in the British African Territories, Part V., Mafikeng, Her Majesty's Stationery Office, 1953.
- Hair, J. F., R. E. Anderson, et al. (1995). Multivariate data analysis with readings. New Jersey, Prentice-Hall.
- Hall, M. and G. Lindzey (1985). Introduction to theories of personality. New York, John Wiley and Sons.
- Halligan, B. P. (1989). What is an entrepreneur? Small Enterprise Series Adelaide, South Australia Institute of Technology.
- Hamblin, A. C. (1974). The evaluation and the control of training. Maidenhead, McGraw-Hill.
- Hannan, M. and J. Freeman (1984). "Structural inertia and organisational change." American Sociological Review **49**: 149-164.
- Hannan, M., S. Hazlett, et al. (2004). Entrepreneurship education; how do we measure success? RENT XV111. Copenhagen.
- Hannon, P. D. (2005). "Philosophies of enterprise and entrepreneurship education and challenges for higher education in the UK." International Journal of Entrepreneurship and Innovation **6**(2): 105-114.
- Harper, M. and G. Finnegan (1998). Value for money? The impact of small enterprise development. London.
- Harper, M. and T. T. Soon (1979). Small enterprise in developing countries: case studies and conclusions. London, Intermediate Technology.
- Hattie, J. (1985). "Methodology review: assessing unidimensionality of tests and items." Applied Psychological Measurement **9**: 139-67.
- Hebert, R. F. and A. N. Link (1989). The entrepreneur: mainstream views and radical critiques. New York, Praeger.
- Hengry, C., F. Hill, et al. (2003b). Entrepreneurship education and training. Ashgate, Aldershot.
- Hengry, C., F. Hill, et al. (2004). "The effectiveness of training for new business creation: a longitudinal study " International Small Business Journal **22**(3): 249-72.

Hengry, C., F. Hill, et al. (2005a). "Entrepreneurship education and training: can entrepreneurship be taught? Part 1." Education and Training **47**: 98-111.

Hengry, C., F. Hill, et al. (2005b). "Entrepreneurship education and training: can entrepreneurship be taught? Part 11." Education and Training **47**: 158-169.

Henson, R. K. and J. K. Robert (2000). Exploratory factor analysis, reporting practices in published research. Advances in social science methodology. B. Thompson. Stamford, JAI Press. **6**.

Hill, F. and C. Leitch (2003). "Developing a coherent enterprise support policy: a new challenge for governments." Journal of Environment and Planning: Government and Policy and Policy **21**: 3-9.

Hill, G. E. (1988). "Variations in University Entrepreneurship Education: An Empirical Study of an." Journal of Business Venturing (3): 109-122.

Hindle, K. (2001). "Entrepreneurship education at university: the plus-zone challenge." Small Enterprise Research **9**(2): 3-16.

Hindle, K. (2002). "Small-i or BIG-I? How entrepreneurial capacity transforms 'small-i' into 'BIG-I' innovation: some implications for national policy." Telecommunication Journal of Australia **52**(3): 51-63.

Hindle, K. (2004). "Choosing qualitative methods for entrepreneurial cognition research: a canonical development approach." Entrepreneurship Theory and Practice **4**(7): 224-300.

Hindle, K. (2004). "A practical strategy for discovering, evaluating and exploiting entrepreneurial opportunity: research based action guidelines." Journal of Small Business and Entrepreneurship **17**(4): 267-276.

Hindle, K. (2007). Chapter 5: Teaching entrepreneurship at university from the wrong building to the right philosophy. Handbook of Research in Entrepreneurship Education. A. Fayolle. Cheltenham, Edward Elgar. **1**: 104-126.

Hindle, K., Ed. (2007). Entrepreneurship in the universities. Cheltenham, Edward Elgar.

Hindle, K. and N. Cutting (2002). "Can applied entrepreneurship education enhance job satisfaction and financial performance? An empirical investigation in the Australian pharmacy profession." Journal of small business Management **40**(2): 162-7.

Hindle, K. and M. Landsdowne (2005). "Brave spirits on new paths: toward a globally relevant paradigm of Indigenous entrepreneurship research." Journal of Small Business and Entrepreneurship **18**(2).

Hisrich, R. D. and M. P. Peters (1998). Entrepreneurship. New York, McGraw-Hill.

Hisrich, R. D. and M. P. Peters (2002). Entrepreneurship. New York, McGraw Hill.

Hjorth, D. and B. Johannisson, Eds. (2007). Learning as an entrepreneurial process. Handbook of Research in Entrepreneurial Education: A General Perspective: Chapter 3. Cheltenham, Edward Elgar Publishing.

Hodges, T. K. (2002). Linking learning and performance: a practical guide to measuring learning and on-the-job application. Melbourne, Butterworth - Heinemann.

Hodgson, M. and W. C. Ballinger (1932). Britain in Southern Africa, No. 2, Bechuanaland Protectorate. Alice, Lovedale Press,.

Holcombe, R. G. (2003). "An easy way on the origins of entrepreneurial opportunity." Small Business Economics **28**.

Honig, B. (2004). "Entrepreneurship: toward a model of contingency-based business planning " Academy of Management Learning and Education **3**(3): 258-73.

Hood, J. N. and J. E. Young (1993). "Entrepreneur's requisite areas of development: a survey of top executives in successful entrepreneurial firms." Journal of Business Venturing **8**: 115-139.

Hornaday, R. W. (1992). "Thinking about entrepreneurship: a fuzzy set approach." Journal of Small Business Management **30**(4): 12-23.

Hulland, J. (1999). "Use of partial squares in strategic management research: a review of four recent studies." Strategic Management Journal **20**: 195-204.

Hunter, J. (1978). Things fall apart: an analysis of the problems of thirteen small Batswana firms. Gaborone, Institute of Development Management.

Hurley, A. E., T. A. Scandura, et al. (1997). "Exploratory factor analysis: guidelines, issues and alternatives." Journal of Organizational Behavior **18**(6): 667-83.

Hynes, B. (1996). "'Entrepreneurship education and training-introducing entrepreneurship into non-business disciplines', ." Journal of European Industrial Training **20**(8): 10-17.

Hytti, K. P. and P. Koupusjarvi (2004). Evaluating and measuring entrepreneurship and entrepreneurship education: methods, tools and practices. Turku, Small Business Institute, Business Research and Development Centre, Turku school of Economics.

Hytti, U. (2005). "New meanings for entrepreneurs: from risk-taking heroes to safe-seeking professionals " Journal of Organisational Change Management **18**(6): 594-611.

Hytti, U. and C. O'Gorman (2004). "'What is "enterprise education"? An analysis of the objectives and methods of enterprise education programmes in four countries'." Education and Training **46**(1): 11-23.

International Labor Organization (1986). The promotion of small and medium-sized enterprises. ILO 72nd Session, Geneva, ILO.

International Labour Organisation, Ed. (1995). Trainer's guide part 11: follow-up methods. A Step-by-Step Approach to Starting and Improving Your Business. Harare and Geneva.

International Labour Organisation, Ed. (1995). Trainer's reader: problem solving-business improvement groups and individual counselling. A Step-by-Step Approach To Starting And Improving Your Business. Harare and Geneva, International Labour Organisation.

International Labour Organisation (2001). Start and Improve Your Business Evaluation Findings. Geneva, ILO.

International Labour Organisation. (2003). "Background information-SIYB." Retrieved 12, November, 2005, from <http://www.siyb.org.vn>.

International Labour Organisation (2003). A global outreach study report on the impact of the Start and Improve Your Business worldwide. Geneva, ILO.

International Labour Organisation (2003). SIYB program in Africa. Start and Improve Your Business Bulletin. Harare, ILO. **45**.

International Labour Organisation (2004). Evaluation of the Start and Improve Your Business program in Southern Africa. Start and Improve Your Business Bulletin. Harare, ILO. **46**.

International Labour Organisation. (2004). "Introduction to the monitoring and evaluation of the SIYB program." Retrieved 12, November, 2005, from <http://wwwsiybblanka.com/introduction>.

International Labour Organization, Ed. (1995). Trainers's guide part 1: training of entrepreneurs. A Step-by-Step Approach to Starting and Improving Your Business. Harare and Geneva, International Labour Organisation.

Jacoby, J. (1978). "Consumer research: a state of the art review." Journal of Marketing Research **42**: 87-96.

Jarillo, J. C. (1988). "On strategic networks." Strategic Network Journal **4**: 31-41.

Jeffreys, M. V. C. (1971). Education: its nature and purpose. London, George Allen and Unwin Ltd.

Jennings, F. (1994). Multiple perspective of entrepreneurship: text, reading and cases. Cincinnati, S. W Publishing Company.

Jenssen, J. J. and P. A. Havnes (2002). "Public intervention in the entrepreneurial process: a study based on the three Norwegian cases." International Journal of Entrepreneurial Behaviour and Research **8**(3): 137-87.

Jerusalem, M. and R. Schwarzer (1994). Sel-efficacy as a resource factor in stress appraisal processes. Self-efficacy: Thought control of action. R. Schwarzer. Washington DC, Hemisphere: 195-213.

Johannisson, B. (1988). "Business formation: a network approach." Scandinavian Journal of Management **4**: 83-99.

Johannisson, B. (1991). "University training for entrepreneurshi: Swedish approaches." Entrepreneurship and Regional Development **3**: 67-82.

Johannisson, B., H. Lanstrom, et al. (1998). "University training for entrepreneurship: an action frame of reference." European Journal of Engineering Education **23**: 477-496.

Jonassen, D. H. (1991). "Objectivism versus constructivism: do we need a new philosophical paradigm?" Educational Technology Research and Development **39**: 5-14.

Jonassen, D. H., Ed. (1999). Designing constructivist learning environments. Instructional-design theories and models: A new paradigm of instructional theory New Jersey, Lawrence Erlbaum.

Jones-Dube, E. (1981). Indigenous entrepreneurs in Botswana. Adult Education Forum. Gaborone.

Jones-Dube, E. (1982). Women entrepreneurs in Botswana. Gaborone, Institute of Adult Education.

Jones-Dube, E. (1984). Indigenous and non-Indigenous entrepreneurs in Botswana: historical, cultural and educational factors in their emergence. Department of Adult Education. Massachusetts, University of Massachusetts. **PhD**.

Joreskog, K. G. (1996). "A general approach to confirmatory maximum likelihood factor analysis." Psychometrika **34**: 183-202.

Julien, P. A. (2007). A theory of local entrepreneurship in the knowledge economy. Cheltenham, Edward Elgar.

Karungu, P. and H. Rwingema (1999). "SMME development in Johannesburg's metropolitan local council: an assessment." Development South Africa **16**(1): 1-18.

Kearins, K., B. Luke, et al. (2004). "What constitutes successful entrepreneurship? an analysis of Recent Australian awards experiences." Journal of the Australian and New Zealand Academy of Management **10**(2): 41.

Kearney, P. (1991). Training through enterprise: a practical introduction using enterprise briefs. Hobart, Tasmania, Artemis Publishing Consultants.

Kearney, P. (1996). The Relationship between developing of the key competencies in students and developing of the enterprising students. Education Training and Youth Affairs. Canberra, Department of Employment Education and Training.

Kent, C. A. (1990). Entrepreneurship education: current developments, future directions. New York, Quorum Books.

Khan, G. M. (1994). "Encouraging entrepreneurship education and development in Bahrain." Journal of Enterprising Culture **2**(1): 559-569.

Kickul, J. (2006). Chapter 10: Pathways to new business and strategies for the entrepreneurial classroom. International Entrepreneurship Education. A. Fayolle and H. Klandt. Cheltenham, Edward Elgar.

Kiggundu, M. N. (2002). "Entrepreneurs and entrepreneurship in Africa: what is known and what needs to be done." Journal of Developmental Entrepreneurship **7**(3): 239-257.

King, K. and S. McGrath, Eds. (1999). Enterprise in Africa: between poverty and growth. London, Intermediate Technology.

Kirby, D. (2001). Entrepreneurship. London, McGraw-Hill.

Kirby, D. (2002). Entrepreneurship. New Jersey, McGraw Hill.

Kirby, D. (2005). A case for teaching entrepreneurship in higher.

Kirby, D. (2006). Chapter 3: Entrepreneurship education: can business schools meet the challenge. International Entrepreneurship Education. A. Fayolle and H. Klandt. Cheltenham, Edward Elgar.

Kirby, D. (2007). Chapter 2: Changing the entrepreneurship education paradigm. Handbook of Research in Entrepreneurship Education. A. Fayolle. Cheltenham, Edward Elgar. **1**: 21-23.

Kirkpatrick, D. L. (1994). Evaluating training programs: the four levels. San Francisco, Berrett-Koehler.

Kirkpatrick, D. L. (1996). Evaluating training programs: the four levels. San Francisco, Benett-Koehler.

- Kirkpatrick, D. L. (1999). Evaluating training programs: the four levels. San Francisco, CA, Berrett-Koehler.
- Kirsner, K., G. Speelman, et al. (1998). Implicit and explicit mental processes. London, Lawrence Erlbaum Associates.
- Kirzner, I. (1973). Competition and entrepreneurship. Chicago, University of Chicago Press.
- Kirzner, I. (1997). "Entrepreneurship discovery and the competitive market process: an Austrian approach." The Journal of Economic Literature **35**: 60-85.
- Klandt, H. (1998). Entrepreneurship education at German universities Internationalizing Entrepreneurship Education and Training.
- Klandt, H. (2004). "Entrepreneurship education and research in German-speaking Europe." Academy of Management Learning and Education **3**(3): 293-301.
- Kline, P. (1999). An easy guide to factor analysis. London, Routledge.
- Kline, R. B. (1998). Principles and practice of structural equation modeling. London, The Guilford Press.
- Klofsten, M. (2000). "Training entrepreneurs at universities: a Swedish case." Journal of European Industrial Training **24**(6): 337-44.
- Knight, F. (1921). Risk, uncertainty and profit. York, Augustus Kelley.
- Knowles, M. (1990). The adult learner: a neglected species. London, Gulf Publishing Company.
- Knowles, M., E. Holton, et al. (2005). The adult learner: the definitive classic in adult education and human resource development, Elsevier
- Knudsen, T. and J. Lindgren (2004). "Economic selection theory." Journal of Evolutionary Economics **12**(4): 443-470.
- Kolb, A. (1984). Experiential learning. Experience as the source of learning and development. New Jersey, Prentice-Hall.
- Kotler, P. (2001). Marketing management: the millenium edition. New Jersey, Prentice Hall.
- Kourilsky, M. L., Ed. (1990). Entrepreneurship education: opportunity in search of curriculum. Missouri, Centre for Entrepreneurial Leadership Ewing Marion Kauffman Foundation.



Kourilsky, M. L. (1995). "Entrepreneurship education: opportunity in search of curriculum - 2." Business Education Forum **50**(10): 11-15.

Kourilsky, M. L. and M. Esfandiari, Eds. (1996). Entrepreneurship education in lower socio-economic black youth: an empirical investigation. Missouri, Centre for Entrepreneurial Leadership - Ewing Marion Kauffman Foundation

Kozulin, A., B. Gindis, et al. (2003). Vygotsky's educational theory in cultural context. Cambridge, Cambridge University Press.

Kroy, P. (2003a). Conceptualising entrepreneurship education - the current state and some future expectations Internationalising Entrepreneurship Education and Training Grenoble.

Kroy, P. (2003b). Entrepreneurship pedagogy - the current state and some future expectations. 3rd European Summer University Conference. Paris.

Kroy, P. (2006). Chapter 6: The continental and Anglo-American approaches to entrepreneurship education differences and bridges. International Entrepreneurship Education. A. Fayolle and H. Klandt. Cheltenham, Edward Elgar.

Krueger, J. R. and P. R. Dickson (1994). "How believing in ourselves increases risk taking: perceived self-efficacy and opportunity recognition." Decision Sciences **25**(3): 385-400.

Krueger, N. F. and D. V. Brazeal (1994). "Entrepreneurial potential and potential entrepreneurs. . ." Entrepreneurship: Theory & Practice **18**(3): 91-104.

Kunda, Z. (1999). Social cognition - making sense of people. London, Massachusetts Institute of Technology Press

Kuratko, D. F. (2005). "The emergence of entrepreneurship education: development trends and challenges." Entrepreneurship Theory and Practice **29**(5): 577-597.

Lang, J. R. and P. A. Golden (1989). "Evaluating the efficiency of SBDCs with data analysis: a longitudinal approach." Journal of Small Business Management **27**(2): 42-49.

Leedy, P. D. and J. E. Ormrod (2001). Practical research: planning and design. New Jersey, Prentice-Hall.

Leibenstein, H. (1968). "Entrepreneurship and Development" American Economic Review **58**: 72-83.

Lewis, A. (1954). "Aspects of industrialization." Nigeria Trade Journal **11**(4): 11-12.

- Lewis, B. (2001). Learner behavior - biological, psychological, and sociocultural perspectives. New Jersey, Prentice Hall.
- Lindsay, N. J. and P. Balan (2005). Entrepreneurial self-efficacy, reasons for venture start-up and perceived success. AGSE Regional Entrepreneurship Exchange Forum, Swinburne University of Technology.
- Lindsay, N. J. and J. Craig (2002). "A framework for understanding opportunity recognition: entrepreneurs versus private equity financiers." The Journal of Private Equity **6**: 13-24.
- Lipsey, M. W. (1998). Design sensitivity: statistical power for applied experimental research. Handbook of applied social research methods. L. Bickman and D. J. Rog. Thousand Oaks, CA, Sage: 39-68.
- Lobler, H. (2006). "Learning entrepreneurship from a constructivist perspective." Technology Analysis and Strategic Management **18**: 18-38.
- Locke, K. (2002). Grounded theory in management research. London, Thousand Oaks, New Delhi, Sage Publications.
- Long, U. (1996). "Entrepreneurship." The Journals of Elizabeth Lees Price: 376.
- Long, W. (1983). "The meaning of entrepreneurship." American Journal of Small Business **2**(8): 47-56.
- Long, W. and W. E. McMullan (1984). Mapping the new venture opportunity identification process. Frontiers of Entrepreneurship Research Wellesley, MA, Babson College.
- Low, M. B. (2001). "The adolescence of entrepreneurship research: specification of purpose." Entrepreneurship Theory and Practice **25**(4): 17-25.
- Low, M. B. and I. C. MacMillan (1988). "Entrepreneurship: past research and future challenges." Journal of Management **14**: 139-161.
- Luczkiw, E. (1998). What is enterprise education? Brock, Brock University, Canada.
- Luczkiw, E. (2007). "The end of entrepreneurship: a holistic paradigm for teaching and learning about, for and through enterprise." Industry and Higher Education: 43-57.
- Luthje, C. and F. N (2003). "The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT." Regional Development Management **33**(2): 135-147.
- Malhotra, N. K. (1999). Marketing research: an applied orientation: edition 3. Sydney, Prentice-Hall.

- Malhotra, N. K., H. John, et al. (2002). Marketing research: an applied orientation: edition 4. Sydney, Prentice-Hall.
- Markman, G. D., D. B. Balkin, et al. (2002). "Inventors and new venture formation: The effects of general self-efficacy and regretful thinking." Entrepreneurship Theory and Practice (Winter): 149-165.
- Markman, G. D. and R. A. Baron (2003). "Person-entrepreneurship fit: why some people are more successful as entrepreneurs than others." Human Resources Management Review **13**: 281-301.
- Marsh, H. W., J. R. Balla, et al. (1988). "Goodness-of-fit indices in confirmatory factor analysis: the effect of sample size." Psychological Bulletin **103**: 391-410.
- Martin, S. and I. Sanderson (1999). "Evaluating public policy experiments." Evaluation **5**(3): 245-258.
- Martins, R. A. (2007). The use of performance measurement information as a driver in designing a performance measurement system. Boston, Centre for Business Performance.
- Maruyama, G. M. (1998). Basics of structural equation modeling. London, SAGE Publications.
- McClelland, D. C. (1961). The achieving society. New Jersey, Van Nostrand.
- McClelland, D. C. (1976). The achieving society. New York, John Wiley and sons.
- McClelland, D. C. and D. G. Winter (1969). Motivating economic achievement. New York, Free Press.
- McClelland, D. C. (1965). "Achieving motivation can be developed." Harvard Business Review **6**(24): 178.
- McGee, J. E., M. Peterson, et al. (2009). "Entrepreneurial self-efficacy." Entrepreneurship: Theory & Practice.
- McGrath, S. and K. King (1999). Learning to grow: the importance of education and training for small and micro enterprise development Enterprise in Africa. K. King and S. McGrath. London, Intermediate Technology.
- McMahon, R. G. P. (1989). Developments in enterprise education: an international perspective, the Flinders University of South Australia: 1.

- McMullan, W. E., J. J. Chrisman, et al. (2001). "Some problems in using subjective measures of effectiveness to evaluate entrepreneurial assistance programs." Entrepreneurship Theory and Practice **26**(1): 37-54.
- McMullan, W. E. and L. M. Gillin (1998). "Developing technological start-up entrepreneurs: a case study of graduate entrepreneurship programme at Swinburne University." Technovation **18**(4): 275-286.
- McMullan, W. E. and L. M. Gillin, Eds. (2001). Entrepreneurship education in the nineties: revisited. Entrepreneurship education: a global view. New Jersey, Ashgate
- McMullan, W. E. and W. A. Long. (1987). "Entrepreneurship education in the nineties." Journal of Business Venturing **2**: 261-275.
- McMullen, J. S., L. A. Plummer, et al. (2007). "What is entrepreneurial opportunity?" Journal of Small Business Economics **3**(4).
- McMullen, J. S. and D. A. Sheperd (2006). "Entrepreneurship action and the role of uncertainty in the theory of entrepreneur." Academy of Management Review **31**(1): 132-152.
- Megirr, P. and D. Blackman (2005). Why is evaluating management development not enough? Training Evaluation Conference. University of Western Sydney.
- Mentoor, E. R. and C. Friedrich (2007). "Is entrepreneurial education at South African universities successful? An empirical example " Industry and Higher Education **21**(3): 221-232.
- Meyer, H. H. and M. S. Raich (1983). "An objective evaluation of a behaviour modelling training program." Personnel Psychology **1**(22).
- Meyer, K. L. and J. M. Raich (1983). Evaluating training programs. London Sage.
- Miller, S. and Chen (1994). Organisations: a quantum view. New Jersey, Prentice HALL.
- Ministry of Finance and Development Planning (1995). Financial Assistance Policy third revision report. Gaborone, Ministry of Finance and Development Planning.
- Ministry of Finance and Development Planning (2001). CEDA guidelines. Gaborone, Ministry of Finance and Development Planning,.
- Mohr, G. L. (1995). The professionalization of everyone. Boston, McGraw-Hill.
- Moran, P. and S. Ghoshal (1999). "Markets, firms and the process of economic developemnt." Academy of Management Review **24**(3): 390-412.

- Mouton, J. (2002). How to succeed in your masters & doctoral studies. Paarl - South Africa, Van Schaik.
- Mullins, J. and D. Forlani (2005). "Missing the boat or sinking the boat: a study of new venture decision making." Journal of Business Venturing **20**(1): 47-69.
- Munck, I. M. (1979). Model building in comparative education. Stockholm, Almqvist and Wiksell.
- Munck, R. and D. O'Hearn (1999). Critical development theory: contributions to a new paradigm. London, U.K., Zed Books Ltd.
- Mushonga, B. L. B. (1980). African small scale entrepreneurship with special reference to Botswana. Gaborone, National Institute of Development and Cultural Research.
- Nande, A., Ed. (1999). Starting a small business. Start and Improve Your Business: Practical Management For Small Business. Pretoria, International Labour Organisation
- Nande, A. and M. Clarke, Eds. (1999). Business planning. Start and Improve Your Business: Practical Management for Small Business Pretoria, International Labour Organisation.
- Narayan-Parker, D. (1982). Factors affecting small-scale production in rural Botswana, southern District. Gaborone, Ministry of Commerce and Industry and Rural Industries Innovation Centre.
- Naude, W. A. (2000). Why are African economies dwindling? Woord en Daad. Potchefstroom. **373**: 21-23.
- Newal, J. (1992). Management: a practical approach. Boston, McGraw-Hill.
- Newstrom, J. W. (1978). Leveraging management development through the management of transfer. London, Sage.
- Nickols, F. (2005) A stakeholder approach to evaluating training. **Volume**, DOI:
- Nieman, G. (2001). Training entrepreneurs and small small business enterprises in South Africa: a situational analysis. Pretoria, Van Schaik.
- Nieman, G., J. Hough, et al. (2003). Entrepreneurship: a South African perspective. Pretoria, Van Schaik.
- Nunnally, J. C. (1967). Psychometric theory: edition 1. New York, McGraw-Hill.
- Nunnally, J. C. (1978). Psychometric theory: edition 2. New York, McGraw-Hill.
- Nunnally, J. C. (1994). Psychometric theory: edition 4. New York, McGraw-Hill.

O'Leary-Kelly, S. W. and V. R. Robert (1998). "The empirical assessment of construct validity." Journal of Operations Management **16**: 387-405.

Olson, M. E., O. C. Walker, et al. (1995). "Organising for effective new product development: the moderating role of product innovativeness." Journal of Marketing **59**: 48-62.

Organisation for Economic Co-operation and Development (1998). *Fostering entrepreneurship: a thematic review*. Paris, Organisation for Economic Co-operation and Development.

Organisation for Economic Co-operation and Development (1993). *Partnership: the key to job creation*. Paris, Organisation for Economic Co-operation and Development.

Organisation for Economic Co-operation and Development (1998). *Fostering entrepreneurship: the OECD job strategy*. Paris, Organisation for Economic Co-operation and Development.

Organisation for Economic Co-operation and Development (2001). *Putting the youth in business: policy challenges for youth entrepreneurship*. Paris, Organisation for Economic Co-operation and Development.

Organisation for Economic Co-operation and Development (1989). *Towards an enterprising culture: a challenge for education and training*. Educational Monograph. Paris, Organisation for Economic Co-operation and Development.

Organisation for Economic Co-operation and Development (1998). *Fostering entrepreneurship education*. OECD. Paris, OECD.

Ormrod, J. E. (2003). Educational Psychology: Developing Learners. New Jersey, Prentice Hall.

Paasio, K. and P. Nurmi (2004). *Current practices and evolutionary trends in the Finnish university-based enterprise education*. RENT XV111. Copenhagen.

Pallant, J. (2001). SPSS survival manual: a step by step guide to data analysis using SPSS. Canberra, Allen and Unwin.

Parsons, N. (1975). "Khama and company and the Jousse trouble, 1910 -1916 (1)." Journal of African History, **XV1** (3): 386.

Parsons, N. (1975). "Khama and company and the Jousse trouble, 1910 - 1916 (2)." Journal of African History, **XV1** (3): 404.

- Parsons, N. and R. Palmer (1977). The economic history of Khama's country in Botswana, 1844-1930 - The roots of rural poverty in central and southern Africa. London, Heinemann Educational Books Ltd.
- Patton, D., S. Marlow, et al. (2000). "The relationship between training and small firm performance: research frameworks and lost quests." International Small Business Journal **19**: 1.
- Penrose, E. (1990). The emperor's new mind. Oxford, Oxford University Press.
- Penrose, E. (1995). The theory of the growth of the firm. Oxford, Oxford University Press.
- Penrose, E. T. (1959). The theory of the growth of the firm. Oxford, Basil Blackwell.
- Penrose, E. T. (1963). The theory of the growth of the firm. Oxford, Basil Blackwell.
- Peter, J. (2004). Adult education and lifelong learning: theory and practice. London, RoutledgeFalmer: Taylor and Francis Group.
- Peter, P. J. (1979). "Reliability: a review of psychometric basics and recent marketing practices." Journal of Marketing Research **16**: 6-17.
- Petman, N. and J. Kennedy (2003). "Entreprise education: Influencing students' perceptions of entrepreneurship." Entrepreneurship: Theory & Practice **28**(2): 129-35.
- Phan, P., P. Wong, et al. (2002). "Antecedent to entrepreneurship among university students in Singapore: beliefs, attitudes, and background." Journal of Enterprising Culture **10**: 151-174.
- Philips, J. (1991). A handbook of training evaluation and measurement methods. Houston TX, Gulf Publishing.
- Philips, J. (1996). "The search for best practices." Training and Development **50**: 42-47.
- Phillips, J. J. (1994). A handbook of training evaluation and measurement methods. Gulf, Houston TX.
- Phillips, J. J. (1999). "A rational approach to evaluating training programs including calculating ROI." Journal of Lending and Credit Risk Management **79**(11): 43-50.
- Pierre, V. (1996). Why do we need pedagogy of understanding? London, Sage.

- Pihkala, J. and A. Miettinen (2003). Entrepreneurship education: does it promote entrepreneurial potential? Internationalizing Entrepreneurship Education and Training Finland.
- Pittaway, L. and J. Cope (2007). "Entrepreneurship education: A systematic review of the evidence." International small Business Journal **25**: 479.
- Pittaway, L. and J. Cope (2007). "Simulating entrepreneurship learning: Integrating experiential and collaborative approaches to learning." Management Learning **38**: 211.
- Plaschka, G. R. and H. P. Welsch (1990). "Emerging structure in entrepreneurship education: curricular designs and strategies." Entrepreneurship Theory and Practice **14**(3): 55-70.
- Plummer (2007). "Entrepreneurship education." Academy of Management Executive **3**(3): 238.
- Politis, D. (2008). "Does prior start-up experience matter for entrepreneurs' learning A comparison between novice and habitual entrepreneurs." Journal of Small Business and Enterprise Development **15**(3): 472-489.
- Poon, J. M., R. A. Ainuddin, et al. (2006). "Effects of self-concept traits and entrepreneurial orientation on firm performance." International Small Business Journal **24**(1): 61-82.
- Porter, M. (1980). Competitive advantage of nations. New York, The Free Press.
- Porter, M. (1985). Competitive advantage: creating and sustaining superior performance. New York, The Free Press.
- Porter, M. (1990a). "The competitive advantage of nations." **March-April**: 73-93.
- Porter, M. (1990b). The competitive advantage of nations New York, The Free Press.
- Porter, M. and v. d. Linde (1995). "Towards a new conception of the environment competitiveness relationship." Journal of Economic Perspectives **9**(4): 97-118.
- Preacher, K. J. and R. C. MacCallum (2003). "Repairing Tom Swift's electricity factor analysis machine." Understanding statistics **2**(1): 13-43.
- Rabbior G., Ed. (1990). Elements of a successful entrepreneurship/economics/education program. Entrepreneurship education: current developments, future directions. New York, Quorum books.
- Rae, D. (2000). "Understanding entrepreneurial learning: a question of how." International Journal of Entrepreneurial Behaviour and Research **6**(3): 145-59.



- Rae, D. (2004). Entrepreneurial learning: a narrative based conceptual model. Institute for Small Business Affairs 27th National Conference Newcastle Gateshead.
- Rae, D. and M. Carswell (2000). "Using a life-story approach in researching entrepreneurial learning: the development of a conceptual model and its implications in the design of learning experiences." Educationa + Training **42**(4/5): 220-228.
- Rasheed, S. and E. Chole (1994). Human development: an African perspective. New York, Division for public policy, United Nations.
- Rasheed, S. and D. F. Luke (1995). Development management in Africa: empowerment and entrepreneurship Bolder, Westview Press.
- Reynolds, P. D. (1997). "Who starts new firms? Preliminary explorations of firms in-gestation." Small Business Economics **9**: 449-462.
- Ridsdale, G. (1996). An evaluation of the SIYB in South Africa. Geneva, ILO.
- Robertson, S. I. (2004). "Student perceptions of module questionnaires: questionnaire completion as problem solving." Assessment & Evaluation in Higher Education **29**(6): 6-12.
- Rodgers, J. (2001). Adult learning. Philadelphia, Open University Press.
- Rogoff, B. (1990). Apprenticeship in thinking: cognitive development in social context. Melbourne, Oxford University Press.
- Rogoff, B. (1997). "Artistic development." Human Development **40**(3).
- Rogoff, B. and J. Heck (2003). The cultural nature of human development. Oxford, Oxford University Press.
- Rogoff, B. and J. Lave (1984). Everyday cognition: its development in social context. Cambridge, Havard Universityh Press.
- Rosa, P. (1992). Entrepreneurship training in the UK: past confusion and future promise. Scottish Enterprise Foundation Conference Paper Series, Stirling, Stirling University.
- Rossi, P. H., H. E. Freeman, et al. (1998). Evaluation: a systematic approach. London.
- Samuelson, P. (2003). "The Start and Improve Your Business program achievements." Retrieved 12, November, 2005 from <http://www.ilo.org>.

- Sarasvathy, S. D. (2004). "The questions we ask and the questions we care about: reformulating some problems in entrepreneurship research." Journal of Business Venturing **19**: 707-719.
- Sarkar, M. B., R. Echambadi, et al. (2001). "The influence of complementarity, compatability, and relationship capital on allience performance." Journal of the Academy of Marketing Science **29**(4): 358-73.
- Say, J. B. (1824). A treatise on political economy. Boston, Wells and Lily.
- Schapera, I. (1970). Tribal innovators-Tswana chiefs and social change, 1795-1940. London, The Athlone Press.
- Scheiner, J. (1994). Program evaluation. London, Sage.
- Scheiner, S. (1994). "Guidelines for medical student education in community-based pediatric offices." American Academy of Pediatrics **2**(4).
- Schumacker, R. E. and R. G. Lomax (1996). A beginner's guide to structural equation modeling. New Jersey, Lawrence Erlbaum Associates.
- Schumpeter, J. A. (1934). The theory of economic development: An inquiry into profits, capital, credit, interests, and the business cycle. Oxford, Oxford University Press.
- Schumpeter, J. A. (1939b). Business cycles. New York, McGraw Hill.
- Schumpeter, J. A. (1993a). Business cycles. New York, McGraw-Hill.
- Schunk, D. H. (2004). Learning theories: an educational perspective, 4th edition. New Jersey, Prentice Hall.
- Scott, E. and G. Lodge (1995). The mediating role of self-efficacy in the development of entrepreneurship. London, Sage.
- Scott, M. G., P. Rosa, et al. (1998). Educating entrepreneurs for wealth creation. Educating entrepreneurs for wealth creation. M. G. Scott, P. Rosa and H. Klandt. Ashgate, Aldershot: 1-14.
- Sexton, D. L. and N. B. Bowman-Upton (1991). Entrepreneurship: creativity and growth. New York, Macmillan.
- Sexton, D. L. and H. Lanstrom, Eds. (2000). Handbook of entrepreneurship. Oxford, Blackwell Business.
- Sexton, D. L., H. Smilor, et al. (1987). "Evaluation of an innovative approach to teaching entrepreneurship." Journal of Small Business Management **25**(1): 35-43.

- Shane, S. and S. Venkataraman (2000). "The promise of entrepreneurship as a field of research." Academy of Management Review **25**(1): 217 - 226.
- Shavelson, R. J. J. (1996). Statistical reasoning for the behavioral sciences Boston, Allyn and Bacon.
- Shook, C. L., R. L. Priem, et al. (2003). "Venture creation and the enterprising individual: a review and synthesis." Journal of Management **23**(3): 379-99.
- Short, L. and P. Dunn (2002). The search for a theory of entrepreneurship. Louisiana, University of Louisiana.
- Sichel, J. (1982). Program evaluation guidelines: a research handbook for agency personnel. New York, HumanScience Press.
- Silitshena, R. M. K. (1978). Trading and settlement in the Kweneng district of Botswana. SSRC Conference on Land Tenure in Botswana, Gaborone. University College of Botswana
- Sillery, A. (1952). Bechuanaland Protectorate. Cape Town, Cape Town Press.
- Simon, H. A. and A. Newell (1972). Human problem solving. Englewood Prentice - Hall.
- Singh, L. and C. Lumsden (1990). "Theory and research in organisational ecology." Annual Review of Sociology **16**: 161-195.
- Sir Seretse Khama (1972). A Policy for harmony. The Eleventh Conference of the Botswana Democratic Party, Francistown, Rex Collins.
- Slater, S. F. and J. C. Narver (2002). "The positive effects of a market orientation on business profitability: a balanced replication." Journal of Business Research (48): 69-73.
- Smilor, R. W. (1997). "Entrepreneurship: reflections on a subversive activity." Journal of Business Venturing **12**(5): 341-346.
- Smilor, R. W. and M. S. Wortman (1987). "Entrepreneurship: an integrating typology and evaluation of the empirical research in the field." Journal of Management **13** (2): 259-79.
- Smith, A. M. (2004). Tears of the girraffe. London, Abacus.
- Smith, D. H. (1994). "The issue of compatibility between cultural integrity and economic development among native American tribes." American Indian Culture and Research Journal **18**(2): 177-205.

Smith, D. H. (2000). Modern tribal development: paths to self-sufficiency and cultural integrity in Indian country. Walnut Creek, CA, AltaMira Press.

Smith, D. H. and B. Wise. (2002). "Impact assessment of enterprise of enterprise in post conflict regions: a Balkan perspective." Retrieved November, 2005.

Solomon, G. T. (2008). "Entrepreneurship in the twenty-first century from pedagogy to practice." Journal of Small Business and Enterprise Development **15**(2).

Solomon, G. T., S. Duffy, et al. (2002). "The state of entrepreneurship education in the United States: a nationwide survey and analysis " International Journal of Entrepreneurship Education **1**(1): 65-86.

Solomon, G. T. and L. W. J. Fernald (1991). "Trends in small business management and entrepreneurship education in the United States." Entrepreneurship Theory and Practice **15**(3): 25-39.

Solomon, G. T. and E. K. Winslow (1991). Emotional armor of the American entrepreneur. 36th ICSB World Conference, Viena, Austria.

Solomon, G. T., E. K. Winslow, et al. (1998). Entrepreneurship education in the United states: an emperical review of the past twenty years. International Council for Small Business 43 world Conference, Singapore.

Song, M. X. and M. E. Parry (1997). "The determinants of the Japanese new product success." Journal of Marketing Research **34**(February): 64-76.

Souitaris, V., S. Zerbinati, et al. (2007). "Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources." Journal of Business Venturing **22**(4): 566-591.

Spence, J. E. (1964). "British policy towards the high commision territories." Journal of Modern African Studies **2**(2): 221-246.

Stajkovic, A. D. and F. Luthans (1998). "Self-efficacy and work-related performance: a meta-analysis." Psychological Bulletin **124**: 240-261.

Steenkamp, J. and E. M. van Trijp (1991). "The use of lisrel in validating marketing constructs." International Journal of Research in Marketing **8**: 283-99.

Stevens, P. R. (1996). "Exploratory and confarmatory factor analysis." Educational and Psychological Measurement **54**(3): 757-765.

Stevenson, H. H. and J. J. C (1990). "A paradigm of entrepreneurship: entrepreneurial management." Strategic Management Journal **11**(17-27).

- Stevenson, H. H., M. J. Roberts, et al. (1999). New business ventures and the entrepreneur. New York, Irwin/Mcraw-Hill
- Stevenson, H. H. and W. A. Sahlman (1986). Entrepreneurship: a process, not a person., Harvard, Harvard Business School.
- Stevenson, H. H. and W. A. Sahlman (1989). The Entrepreneurial process. Small Business and Entrepreneurship. P. Burns and J. Dewhurst. London, Macmillan: 94-157.
- Storey, D. J. (1994). Understanding the small business sector. London, Routledge.
- Storey, D. J., Ed. (2000). Six steps to heaven: evaluating the impact of public policies to support small business in developed economies. The Blackwell Handbook of Entrepreneurship. Oxford, Blackwell.
- Storey, D. J. (2004). "Exploring the link, among small firms, between management training and firm performance: A comparison between UK and other OECD countries." International Journal of Human Resources Management **15**(1): 112-130.
- Stufflebeam, D. L. (1971). "The relevance of the CIPP evaluation model for educational accountability." SRIS Quarterly **5**(1).
- Stufflebeam, D. L., Ed. (2003). The CIPP model for evaluation. The international handbook of educational evaluation: Chapter 2. Boston, Kluwer Academic Publishers.
- Swedberg, R., Ed. (2000). The social science view of entrepreneurship: introduction and practical applications. Entrepreneurship: The Social Science View. Oxford, Oxford University press.
- Tabachnick, B. G. and L. S. Fidell (1996). Using multivariate statistics. New York, Harper Collins.
- Tams, S. (2006). "Constructing self-efficacy at work: women's growth." Connection New York **1**: 223-225.
- Taylor, P. B. and E. H. Mathews (1998). Making the researcher's life easier. Johannesburg, MCI (Pty) Ltd.
- Thompson, J. (2005). Teaching computer course to school children. Education. Melbourne, Melbourne University. **PhD**.
- Timmons, J. A. (1999). New venture creation: entrepreneurship for the 21st century. Boston, McGraw-Hill.
- Timmons, J. A. (2002). New venture creation: entrepreneurship for the 21st Century. New York, McGraw-Hill

Trochim, W. M. (2005). Research methods: the concise knowledge base. Cincinnati, Ohio, Atomic Dog Publishing.

Tshikuku, K. (2001). Culture, entrepreneurship and development in Africa. International conference on cultural approach to development in Africa. Dakar-Senegal.

Tucker, L. R. and C. Lewis (1973). "A reliability coefficient for maximum likelihood factor analysis" Psychometrika **38**: 1-10.

Turner, J. (1988). Impact assessment. London, sage.

Tussie, D. and D. Glover (1993). The developing countries in world trade: policies and bargaining strategies. New York, Lynne Rienner.

United Nations Educational, S. a. C. O. (1997). How is education defined in GATS? International Standard Classification of Education. New York, UNESCO.

van Praag, M. (1996). Determinants of successful entrepreneurship. Amsterdam, Theses Publishers.

Vazquez, R., M. L. Santos, et al. (2001). "Market orientation, innovation and competitive strategies in industrial firms." Journal of Strategic Marketing **9**: 69-90.

Venkataraman, S., Ed. (1997). The distinctive domain of entrepreneurship research: an editors perspective Advances in in entrepreneurship, firm emergence, and growth. Greenwich, JAI Press.

Vesper, K. H. (1985). Entrepreneurship education. Babson, MA, Babson College for Entrepreneurial Studies.

Vesper, K. H. (1990). Summary of entrepreneurship survey. Seattle, University of Washington, Department of Management and Organisation.

Vesper, K. H. and W. B. Gartner (1997). "Measuring progress in entrepreneurship education." Journal of business venturing **12**(5): 403-421.

Vincett, P. S. and S. Farlow (2008). "'Start-a-business': an experiment in education through entrepreneurship." Journal of Small Business and Venturing **15**(2): 274-288.

Volkman, C. (2004). "Entrepreneurship studies-an ascending academic discipline in the twenty-first century." Higher Education in Europe **29**(2): 177-185.

Vosloo, S. (1992). Building and strengthening institutional capacity by fostering entrepreneurship. 4th UN Conference Geneva.

Vosloo, W. (1992). Entrepreneurship and economic growth. Pretoria, HSRC Publishers.

- Vygotsky, L. S. (1962). Thought and language. Cambridge, MIT Press.
- Vygotsky, L. S. (1978). Mind in society: the development of higher psychological processes. Cambridge, Mass, Harvard University Press.
- Walter, K., V. L. Patel, et al. (1997). "The role of long-term working memory in text comprehension." Psychologia **42**(186-198).
- Weber, M. (1965). The protestant ethic and the spirit of capitalism. Unwin, Unwin University Books.
- Weiss, R. S. (1994). Learning from strangers: the art and method of qualitative interview studies. New York, Free Press
- Wengraf, T. (2001). Qualitative research interviewing: biographic narrative and semi-structured methods. London; Thousand Oaks, Calif., SAGE.
- Werbner, P. (1999). "What colour 'success'? Distorting value in studies of ethnic entrepreneurship." The Sociological Review **47**(3): 548-579.
- Westhead, P. and D. J. Storey (1996). "Management training and small firm performance: why is the link so weak?" International Small Business Journal **14**(4): 13-24.
- Westhead, P., D. J. Storey, et al. (2001). "Outcomes reported by students who participated in the 1994 Shell Technology Enterprise program." Entrepreneurship and Regional Development **13**: 163-85.
- Wickham, P. A. (2001). Strategic entrepreneurship: a decision-making approach to new venture creation and management. Essex, Pearson Education Limited.
- Widaman, K. F. and S. P. Reise (1997). Exploring the measurement invariance of psychological instruments: applications in the substance use domain. The science of prevention: methodological advances from alcohol and substance abuse research. K. J. Bryant, M. Windle and S. G. West. Washington, DC, American Psychological Association 281-324.
- Wiklund, J. and D. Sheperd (2003). "Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized business." Strategic Management Journal **24**(9): 1307-14.
- Wiklund, J. and D. Shepherd (2005). "Entrepreneurial orientation and small business performance: a configurational approach." Journal of business venturing **20**: 71-91.

Wildman, P. H. and G. Baker (1986). The social impact assessment handbook: how to assess and evaluate the social impacts of resource development on local communities. N.S.W, Impacts Press.

Wilman, P., J. Warner, et al. (c2003). Problem-solving & decision making toolbox fully reproducible, ready to use tools. Amherst, HRD Press.

Wise, J. W. and G. C. Smith (2002). "Evaluation of a commercial video image analysis system." Journal of Animal Science **2**(44).

Woolfolk, A. (2007). Educational psychology. Boston, Allyn and Bacon.

World Bank (2002). The impact of FDI policies on industrialisation and the supply of capacity, policy issues to consider. New York, World Bank in association with United Nations Development Program.

World Economic Forum (1992). The world competitiveness report. Lausanne, IMF.

Yu, W. L. (2001). Innovation and entrepreneurship development Honduras, Sage.

Zahra, S. and G. Dess (2001). "Entrepreneurship as a field of research: encouraging dialogue and debate." Academy of Management Review **26**: 8-10.

Zahra, S. A. (1991). "Predictors and financial outcomes of corporate entrepreneurship: an explorative study." Journal of business venturing **6**: 259-285.

Zahra, S. A. (1993). "Environment, corporate entrepreneurship and company performance: a taxonomic approach." Journal of business venturing **8**(4): 319-340.

Zahra, S. A. and J. Covin (1995). "Contextual influence on the corporate entrepreneurship -performance relationship: a longitudinal analysis." Journal of business venturing **10**: 43-58.

Zhao, H., S. E. Seibert, et al. (2005). "The mediating role of self-efficacy in the development of entrepreneurial intentions." Journal of Applied Psychology **90**: 1265-72

Zikmund, W. G. (2000). Exploring marketing research. Sydney, The Dryden Press.

Zikmund, W. G. (2003). Business research methods. Orlando, The Trden Press.



# **Appendix A**

**Self-reporting questionnaire**

**Swinburne University of Technology**

**Australian Graduate School of Entrepreneurship**

**(AGSE)**

**Entrepreneurship Education in Developing Countries: An Evaluation of the Start  
and Improve Your Business Programme in Botswana.**

**SURVEY**

**January 2004**

C/O Development Management Associates  
P.O Box 21278, Bontleng, Gaborone  
Botswana  
January 2004

Dear Respondent,

I am a postgraduate student at Swinburne University of Technology, Australian Graduate School of Entrepreneurship, pursuing a PhD programme in Entrepreneurship. I am enclosing a copy of a questionnaire and I hope you will try to find about thirty minutes somewhere in your busy schedule to complete it.

The survey seeks to assess the impact of the Start and Improve Your Business programme on the performance of small and medium enterprises in Botswana. It consists of six main parts:

1. Entrepreneurial cognition
2. Enabling environment for entrepreneurs
3. Skills for starting the business
4. Skills for improving the business
5. Demographic information
6. Business performance

Please answer all questions as frankly as possible. Circle the appropriate number or fill in the blank spaces where required.

The study has been approved by the university and the data collected will be held in the strictest confidence. A summary report of the research findings will be made available on request to all participants.

Your co-operation in filling this questionnaire is highly appreciated

Yours sincerely

Topoyame Efitlhile Moremong-Nganunu (Ms)

## SECTION 1: ENTREPRENEURIAL COGNITION

### A. Motivation

*The following statements relate to your motivation to being an entrepreneur. Please indicate how they relate to you using the provided scale: (strongly disagree) 1 2 3 4 5 6 (strongly agree)*

A-1	I started a business as I did not have any other option	1	2	3	4	5	6	
A-2	I started a business as I did not have any source of income	1	2	3	4	5	6	
A-3	I am convinced that my success or failure depends entirely on my own effort	1	2	3	4	5	6	
A-4	I like to serve my community and make some money out of it	1	2	3	4	5	6	
A-5	I like to be my own boss	1	2	3	4	5	6	
A-6	Running a successful business makes one respectable in their community	1	2	3	4	5	6	
A-7	No one in the area was effectively serving the needs of the population		1	2	3	4	5	6

### B. Self-efficacy

*The following statements relate to how you handle personal and business situations. To what extent do you agree with the following: The scales are to be interpreted as:*

*(1): not at all true (2): barely true (3): moderately true (4): exactly true*

B-1	I can always manage to solve difficult problems if I try hard enough	1	2	3	4
B-2	It is easy for me to stick to my aims and accomplish my goals	1	2	3	4
B-3	I am confident that I could deal efficiently with unexpected events	1	2	3	4
B-4	Thanks to my resourcefulness, I know how to handle unforeseen situations	1	2	3	4
B-5	I can solve most problems if I invest the necessary effort	1	2	3	4
B-6	I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4
B-7	When I am confronted with problems, I can usually find several solutions	1	2	3	4
B-8	If I am in trouble I can usually think of a solution	1	2	3	4
B-9	I can usually handle whatever comes my way	1	2	3	4

### C. Problem Solving and Initiative

The following statements relate to how you handle and solve personal and business problems. To what extent do you agree with the following: The scales are as follows: (strongly agree) 1 2 3 4 5 6 (strongly disagree)

C-1	I usually think of many ways to solve a problem	1	2	3	4	5	6
C-2	I consult experts when faced with a totally new problem	1	2	3	4	5	6
C-3	I seek suggestions from experienced friends when faced with unusual problem	1	2	3	4	5	6
C-4	I try to anticipate problems to ensure I have some solutions when they arise	1	2	3	4	5	6
C-5	The first solution that comes to mind is rarely the best	1	2	3	4	5	6
C-6	It is my responsibility to resolve problems in my business	1	2	3	4	5	6
C-7	I seek to solve most of the problems personally	1	2	3	4	5	6
C-8	I rarely seek assistance until I have seriously tried to find a solution	1	2	3	4	5	6

### D Opportunity

The following statements relate to your ability to seize opportunities when they arise. The scales are as follows: (strongly agree) 1 2 3 4 5 6 (strongly disagree)

D-1	I will take an opportunity even if it appears risky	1	2	3	4	5	6
D-2	I act quickly if I see an opportunity	1	2	3	4	5	6
D-3	I am always on the lookout for opportunities to make money	1	2	3	4	5	6
D-4	I always view problems as potential opportunities	1	2	3	4	5	6
D-5	I am always happy to take any opportunities created by government policies	1	2	3	4	5	6

### E Innovation

The following statements relate to the innovative capabilities of your business. Please indicate to what extent your firm performs the following. In the following sections the scales are to be interpreted as:

(1): not at all (2): minimal extent (3): slight extent (4): moderate extent (5): to a great extent (6): very extensively

<b>Managerial Innovation</b>							
E-1	Management constantly seeks to develop new ideas	1	2	3	4	5	6
E-2	Our business invests in applied research and development	1	2	3	4	5	6
E-3	Innovative ideas are rewarded in our business	1	2	3	4	5	6
E-4	People are encouraged to perceive innovation as an opportunity	1	2	3	4	5	6
E-5	Management rewards individuals for innovative ideas	1	2	3	4	5	6
<b>Product/service Innovation</b>							
E-6	Our business is prepared to do things that are totally new in our industry	1	2	3	4	5	6
E-7	Our new product introductions have caused significant changes in the industry	1	2	3	4	5	6
E-8	We constantly modify our product to better serve our customers	1	2	3	4	5	6
E-9	We prefer to be the first in the market with new products/services	1	2	3	4	5	6

## SECTION 2: ENABLING BUSINESS ENVIRONMENT

Business environment is one of the determinants of success for enterprises. In this section we would like to find out how you perceive the enabling environment for small and medium enterprises.

### F. Support from the government and the banks

*Considering the business environment in Botswana, please indicate to what extent you agree with the following statements. The scales are to be interpreted as:*

*(strongly agree) 1 2 3 4 5 6 (strongly disagree)*

F-1	The government of Botswana continues to support small and medium enterprises financially	1	2	3	4	5	6
F-2	Training institutions offer appropriate courses for entrepreneurs	1	2	3	4	5	6
F-3	Entrepreneurs get free assistance from government related authorities whenever they have problems concerning their enterprises	1	2	3	4	5	6
F-4	Entrepreneurs do not find it difficult to borrow money from commercial banks	1	2	3	4	5	6
F-5	It is easy to be allocated commercial land for building business premises	1	2	3	4	5	6
F-6	Getting a trading license is not difficult	1	2	3	4	5	6
F-7	The government of Botswana offers free technical skills to people interested in starting businesses	1	2	3	4	5	6
F-8	Government officials are generally competent	1	2	3	4	5	6
F-9	The government of Botswana actively promotes the development of SME	1	2	3	4	5	6

## G. Competition

Please indicate to what extent you agree with the following issues in respect to competition. The scales are to be interpreted as:

(strongly agree) 1 2 3 4 5 6 (strongly disagree)

G-1	There are too many competitors in our industry	1	2	3	4	5	6
G-2	Our competitors always cut down their prices	1	2	3	4	5	6
G-3	Our competitors are large and have economies of scale	1	2	3	4	5	6
G-4	Our competitors have a strong distribution support, so they never run out of products	1	2	3	4	5	6
G-5	We have lower operating costs than our competitors	1	2	3	4	5	6

## SECTION 3: STARTING YOUR BUSINESS

## H. Initial Capital

The following statements describe how you initially financed your enterprise. Please indicate the extent to which you agree or disagree with the statements. The scales are to be interpreted as follows:

(strongly disagree) 1 2 3 4 5 6 (strongly agree)

H-1	Our business was initially financed by a bank loan	1	2	3	4	5	6
H-2	Our business was initially financed by money borrowed from friends	1	2	3	4	5	6
H-3	Our business was initially financed by money from our own savings	1	2	3	4	5	6
H-4	Our business was initially financed by a government grant	1	2	3	4	5	6
H-5	Our business was initially financed by retrenchment capital	1	2	3	4	5	6

## I. Prior Preparation

The following statements relate to your preparations prior to starting your business. Please indicate the extent to which you agree or disagree with the statements. The scales are to be interpreted as: (strongly agree) 1 2 3 4 5 6 (strongly disagree)

I-1	We attended a business-training course before we started a business	1	2	3	4	5	6
I-2	We participated in the Start Your Business training programme before we started a business	1	2	3	4	5	6
I-3	We constructed a business plan before we started a business	1	2	3	4	5	6
I-4	We registered our business before we started operating	1	2	3	4	5	6
I-5	We attended the Improve Your Business course before starting business	1	2	3	4	5	6

## SECTION 4: IMPROVE YOUR BUSINESS

### **J. Ability to Reconcile Family, Culture and Business**

*The following statements relate to your ability to reconcile family, culture and business. Please indicate to what extent you agree or disagree with the statements.*

*The scales are to be interpreted as: (Strongly agree) 1 2 3 4 5 6 (strongly disagree)*

J-1	I will need to take from my business whatever money my family needs	1	2	3	4	5	6
J-2	If members of my family are in financial difficulties, I will have to help them even though it may cost my business	1	2	3	4	5	6
J-3	My family and social obligations have a higher priority over my business	1	2	3	4	5	6
J-4	I will not give away my business assets to my friends and family members for free	1	2	3	4	5	6
J-5	I cannot say 'no' to my friends and family members if they ask for credit knowing well that they will not pay	1	2	3	4	5	6

### **K. Ability to Adapt to Business Needs**

*The following statements test your ability to adapt to business needs. Please indicate the extent to which you agree or disagree with the statements. (strongly agree) 1 2 3 4 5 6 (strongly disagree)*

K-1	I will produce only those goods and services which I enjoy producing	1	2	3	4	5	6
K-2	If customers want a cheaper product they can go elsewhere	1	2	3	4	5	6
K-3	I will not sell my products or services on credit to anybody	1	2	3	4	5	6
K-4	I am not prepared to re-locate my business. Customers and suppliers will come to me wherever I am	1	2	3	4	5	6
K-5	I can not change my believe and attitude towards business just because the world is changing	1	2	3	4	5	6

## L. Family Support

The following statements relate to the support you get from your family towards your business. Please indicate the extent to which you agree or disagree with the statements.

(strongly agree) 1 2 3 4 5 6 (strongly disagree)

L-1	I involve my family in most business decisions, which may affect them	1	2	3	4	5	6
L-2	My family understands my inability to pay enough attention to them because of my business commitments	1	2	3	4	5	6
L-3	If my business fails, my family will be willing to put up with financial hardships it may cause them	1	2	3	4	5	6
L-4	My family will be willing to help in my business difficulties	1	2	3	4	5	6
L-5	My family supports my business idea	1	2	3	4	5	6

## M. Business Management Skills

The following statements relate to the level of your business management skills. Please indicate the extent to which you agree or disagree with the statements.

(strongly agree) 1 2 3 4 5 6 (strongly disagree)

M-1	I lack Marketing and Buying skills	1	2	3	4	5	6
M-2	I know reasonably good knowledge of Accounting and Record keeping	1	2	3	4	5	6
M-3	I do not know how to cost my products and services	1	2	3	4	5	6
M-4	I lack the knowledge of how to develop a business plan	1	2	3	4	5	6

## N. Negotiation Skills

The following statements relate to the level of your negotiation skills. Please indicate the extent to which you disagree or agree with the statements.

(strongly agree) 1 2 3 4 5 6 (strongly disagree)

N-1	I am able to negotiate every aspect of business	1	2	3	4	5	6
N-2	I communicate well with others	1	2	3	4	5	6
N-3	I have good patience and I try to understand the other person's views	1	2	3	4	5	6
N-4	Before starting negotiations, I evaluate my, as well as the other person's positions of advantages and disadvantages	1	2	3	4	5	6
N-5	When negotiating, it is not my concern if the other person loses out. I must get what I want	1	2	3	4	5	6

## O. Contribution to business performance



To what extent do the following contribute to your business performance? The scales are to be interpreted as:

(1): no contribution (2): insignificant contribution (3): small contribution (4): some contribution (5) high contribution (6): very high contribution

O-1	Physical location	1	2	3	4	5	6
O-2	Access to finance	1	2	3	4	5	6
O-3	Experienced management	1	2	3	4	5	6
O-4	Skills and competencies of employees	1	2	3	4	5	6
O-5	Our culture of innovativeness	1	2	3	4	5	6
O-6	Our ability to introduce new products/services into the market	1	2	3	4	5	6
O-7	Our ability to communicate with customers	1	2	3	4	5	6
O-8	Our ability to manage finances	1	2	3	4	5	6

## SECTION 5: BACKGROUND INFORMATION

**Please write the appropriate response for each question**

P-1 Position of respondent in the business -----

P-2 How long has the business been in operation for? -----

P-3 Number of employees in the business-----

P-4 What is your line of business? E.g. retailer, manufacturer etc-----

P-5 Type of business. E.g. partnership, cooperative etc-----

P-6 Respondent's level of education -----

P-7 Respondent's age in years -----

P-8 Have you attended the Start Your Business course? Yes. No. If so, go to P-8a below

P-8a How did you benefit from the course?

-----

P-9 Have you attended the Improve Your Business course? Yes. No. If so, go to P-9a below

P-9a How did you benefit from the course?

-----

P-10 Have you attended any other business development course?

P-11 If so, name the course and give the date. -----

P-12 Do you keep business records? Yes. No. If yes, which ones? E.g Cash book, debtor's record etc.

## SECTION 6: BUSINESS PERFORMANCE

### Q. Your Business's Performance

*The following items refer to aspects of your business's performance. Using the scale below, please indicate to what extent each of the following has changed in the last five years. In the following sections, the scales are to be interpreted as:*

*(1): decrease of more than 20%    (2): decrease of 11-20%    (3): to some extent    (4): no change  
(5): increase of 11-20%    (6) increase of more than 20%*

Q-1	Cash-flow	1	2	3	4	5	6
Q-2	Sales	1	2	3	4	5	6
Q-3	Profit	1	2	3	4	5	6
Q-4	Costs	1	2	3	4	5	6
Q-5	Employment	1	2	3	4	5	6
Q-6	Assets	1	2	3	4	5	6

THANK YOU VERY MUCH FOR YOUR TIME!!

LE KA MOSO!!