

# **The practical application of an entrepreneurial performance training model in South Africa**

**Prof Jurie van Vuuren (Professor)**

University of Pretoria, Lynnwood Road, Economic and Management Sciences Building,

Room 3-51, Pretoria, Republic of South Africa

Telephone +27 12 420 3401

Fax +27 12 362 5198

E-mail: [jurie.vanvuuren@up.ac.za](mailto:jurie.vanvuuren@up.ac.za)

and

**Dr Melodi Botha (Senior lecturer)**

University of Pretoria, Lynnwood Road, Economic and Management Sciences Building,

Room 3-64, Pretoria, Republic of South Africa

Telephone +27 12 420 4774

Fax +27 12 362 5198

E-mail: [melodi.botha@up.ac.za](mailto:melodi.botha@up.ac.za)

# The practical application of an entrepreneurial performance training model in South Africa

**Paper type: Research paper**

## STRUCTURED ABSTRACT

<i>Purpose of this paper</i>	The paper practically applies the constructs of the entrepreneurial performance training model to three different training interventions, known as the Business start-up, Basic Entrepreneurship and Advanced Entrepreneurship programmes. Furthermore the paper measures the business performance indicators and skills transfer that took place after the training interventions.
<i>Design/methodology/approach</i>	Quantitative research was conducted, using three validated research questionnaires. The research design consists of a pre-test, post-test and post-post test (10 weeks after the training interventions took place). Factor analysis was done, descriptive statistics arising from opinions and expressions are presented and statistical tests such as the Chi-square test and ANOVA provide inferential statistics.
<i>Findings</i>	The business performance indicators improved for all three training groups after they attended the training interventions. Furthermore it was proved that skills transfer took place after the respondents attended the training interventions.
<i>Research limitations/implications</i>	The training groups can be measured again after 18 months of three years to really determine the impact of the training interventions. The results of the three training programmes can be compared to see whether the basic entrepreneurship groups gained more skills and their business performance indicators increase more than the business start-up or advanced entrepreneurship programmes.
<i>Practical implications</i>	The outcomes and implications of this research paper emphasises that it is imperative to design training programmes based on training models that have been tested. This paper highlights some aspects how constructs used within the training models can be tested.
<i>What is original/value of paper</i>	The entrepreneurial performance training model was practically applied and provides a set of expectations for other entrepreneurship models as well as presenting a benchmark against which programme performance can be measured. A unique teaching methodology is portrayed that contributes to the overall effectiveness of the training model.

**Keywords:** Entrepreneurial performance training model, training interventions, teaching methodology, skills transfer, entrepreneurial performance indicators

## **1. INTRODUCTION**

Despite the increase in the amount of research conducted into the area of entrepreneurship training and education, many entrepreneurship training initiatives do not actually address the real needs of entrepreneurs. There is often a significant gap between the perceptions of the training providers and those of the entrepreneurs in terms of training needs, for what sometimes appear as key problem areas to the trainer may have little importance for the entrepreneur. As the need for entrepreneurship education and training programmes increase, more and more training models are being developed. These models provide the foundation on which these programmes are based. Each of these models include constructs that the developer perceive as being important but there is a lack in measuring the impact of such training models by practically applying the constructs to the training interventions.

This paper addresses this mentioned shortcoming by practically applying the entrepreneurial performance training model to three different training interventions, known as the Business start-up, Basic Entrepreneurship and Advanced Entrepreneurship programmes. The Business start-up programme assist respondents to start businesses, respondents attending the Basic Entrepreneurship programme are guided on how to run and manage their micro businesses more effectively and respondents on the Advanced Entrepreneurship programme are assisted to grow their established businesses. Mentorship is also a part of all three programmes and the content of the mentorship programme depends on the needs of the respondents from the three different training programmes. The purpose of the paper is threefold: firstly to introduce the entrepreneurial performance training model, secondly to practically apply the constructs of the model to three different training interventions and lastly to measure the impact of the training model by presenting results from three different training interventions.

The structure of the paper is as follows, a theoretical framework for entrepreneurial training models is presented followed by the literature review on the entrepreneurial performance training model used in this study. Thereafter, the Business start-up, Basic Entrepreneurship and Advanced Entrepreneurship Programmes are explained and practically applied to the E/P training model. The research methodology is explained from which research objectives and hypotheses are presented. The final section of this paper refers to the findings, the validity and reliability of the measuring instrument as well as several statistical tests. The paper is complete with the discussion of the findings and a conclusion.

## **2. ENTREPRENEURIAL PERFORMANCE TRAINING MODEL**

An entrepreneurship training model can be defined as a structure or layout of constructs that form the framework of an entrepreneurship training intervention. A model includes all of the training elements that are presented when the training is carried out. Pretorius, Van Vuuren and Nieman (2005:420) define such a model as a structure that is used as the guideline for the compilation of entrepreneurship training programmes. Two existing models were independently developed for entrepreneurship programmes in South Africa. Several other entrepreneurship training models exist worldwide, but for the purpose of this study the Entrepreneurial Performance Training Model (E/P model) only will be discussed.

### **2.1 Entrepreneurial Performance Training Model (E/P model)**

The formula for the E/P model is illustrated as:

$$\mathbf{E/P = f [aM (bE/S x cB/S)]}$$

Where,

E/P = Entrepreneurial Performance

M = Motivation

E/S = Entrepreneurial Skills

B/S = Business Skills (General management skills)

a to c = Constants

The model, as developed by Van Vuuren and Nieman (1999:6), is concerned with the elements that drive entrepreneurial performance and was developed to guide syllabi and curriculum development. The four elements (E/P, M, E/S and B/S) that are evident in this model are described in detail.

#### **2.1.1 Entrepreneurial Performance (E/P)**

According to Ladzani and Van Vuuren (2002:156), entrepreneurial performance is based on the starting of a business/utilising of an opportunity, and growth of the business idea. Holland (1985:20) states, in his theory of vocational choice, that the interaction of work environment and personality may affect performance in a career. Specifically, he argues that higher levels

of fit between the personality and work environment characteristics will result in higher performance in that role. Van Vuuren (1997:3) agrees that entrepreneurial performance goes hand in hand with entrepreneurial achievement or results with regard to the realising of set entrepreneurial goals. This construct can be presented as: firstly, an increase in productivity; secondly, the increase in the number of employees employed, which implies the expansion of the business; thirdly, the net value of the business; fourthly, a core aspect in entrepreneurship, namely the increase in profitability; and finally, the completion of the first market-related transactions.

McClelland (1961:40) similarly argues that need for achievement will be related to successful performance in an entrepreneurial role. Entrepreneurs who are high in achievement motivation are more likely to overcome obstacles, utilise resources for help, compete and improve their skills. Therefore, one would expect to find differences in achievement motivation in high-performance entrepreneurs versus low-performance entrepreneurs. Friedrich, Glaub, Gramberg and Frese (2003:3) report on the findings of McClelland's Achievement Motivation training of small business conducted in India and in the USA in 1969. The results showed evidence that Achievement Motivation training significantly improves small business performance, provided that there is some minimum support from the economic infrastructure in the form of available loans, market opportunities and the labour force.

### **2.1.2 Motivation (M)**

Buelens, Kreitner and Kinicki (1999:189) conceptualise motivation per se as those psychological processes where consciousness, direction and perseverance of purposeful voluntary actions are created. Herron and Sapienza (1992:49) state: "Because motivation plays an important part in the creation of new organisations, theories of organisational creation that fail to address this notion are incomplete". What motivates a person to start his/her own business? The development of performance motivation of the entrepreneur should be incorporated in all programmes. Pretorius *et al.* (2005:416) suggest that it contributes towards qualities like inner control, persistence, leadership, decisiveness, determination and sheer guts. From the above statements, it is evident that another important aspect that can be associated with motivation is a need for achievement. The concept of need for achievement (nAch) was formulated in the 1950s (McClelland, Clark, Roby & Arkinson,

1958:11). McClelland and his colleagues argued that high-nAch people are more likely than low-nAch people to engage in energetic and innovative activities that require planning for the future and entail an individual's responsibility for task outcomes. McClelland (1961:35) argued that high-nAch people should also prefer tasks that involve skill and effort, provide clear performance feedback and hold moderate challenge or risk. The author based his hypothesis on individual observation, and proposed the following logical psychological supposition: The more an individual achieves, the more he/she would like to achieve. This achievement is tied to specific action behaviour. The author therefore argues that the motives are rational or can be rationally deduced from the completion of certain actions.

Collins, Hanges and Locke (2004:95) conducted an investigation of 47 different achievement motivation studies, 21 of which used the "Thematic Apperception Test" - TAT (McClelland), six used the Miner Sentence Completion Scale and 20 used various types of questionnaire-based method. Overall, their results supported McClelland's theory that achievement motivation is significantly related to both occupational choice and performance in an entrepreneurial role. The results were further consistent with McClelland's prediction that individuals high in achievement motivation are more likely to be attracted to occupations that offer high degrees of control. Therefore, as suggested by McClelland (1961:36), it seems likely that individuals high in nAch should be attracted to and perform well in entrepreneurial jobs. Antonites (2003:53) mentions that the need to achieve can be fostered through a training intervention. He quotes the following authors who proved this statement empirically: McClelland and Winter (1969; 1987); Timmons (1971); Durand (1975); Boshoff (1987); Mahadea (1988) and Van Vuuren (1997).

It is important to note that training in achievement motivation within the entrepreneurial context is fundamentally aimed at emphasising rivalry and competition in order to set very high standards for achievement. Antonites (2003: 54) therefore believes that motivation on the one hand and achievement motivation on the other play a vital role throughout the training aimed at providing entrepreneurial as well as business skills. McClelland and Winter (1971) in Henry, Hill and Leitch (2003:35) point out that training courses designed to develop achievement motivation have significantly improved small business performance.

### 2.1.3 Entrepreneurial Skills (E/S)

Individuals' belief in their own ability to start a business plays an important role in their decision to start a business. People who believe that they have the ability to start a business are five times more likely than others to actually attempt to start a business (Orford, Herrington and Wood, 2004:34).

Carney and Turner (1987), in Henry *et al.* (2003: 96), based on the work carried out on the CITY project (Community Improvement through Youth Programme) in Adelaide, South Australia, identify a set of twelve core enterprise skills that are essential for successful entrepreneurship. These include the ability to assess and appreciate one's strengths and weaknesses and evaluate one's performance; to communicate with other people; to negotiate; to deal with people in power and authority; to resolve conflict; and to cope with stress and tension. In addition, making decisions, planning one's responsibilities and solving problems were highlighted.

Hisrich, Peters and Shepherd (2005:21) stress that the development of particular skills, namely inner control, risk taking, innovativeness, being change oriented, persistence and visionary leadership differentiates an entrepreneur from a manager. Herron and Robinson (1995:75) refer to entrepreneurial skills as the ability to discover opportunities for profitable reallocation of resources to new endeavours. For the purpose of this study risk propensity, creativity and innovation, opportunity identification, following of role models and networking are all categorised under the E/S construct. Hisrich *et al.* (2005:20) and Nieman (2001:445) argue that the skills required by entrepreneurs can be classified into three main areas: technical skills, business management skills (which will be discussed under the B/S construct) and personal entrepreneurial skills.

Antonites and Van Vuuren conducted a study in 2002 in which 70 different global entrepreneurial training programmes were evaluated and the content of these programmes was assessed. The results, as shown in Antonites (2003:62), indicate which of the training programmes listed the entrepreneurial skills as presented in this paper. The following table indicates the extent of use of different entrepreneurial skills included in the 70 entrepreneurship training programmes.

**Table 1: Entrepreneurship training programmes: Entrepreneurial skills**

<b>Entrepreneurial skills</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Risk propensity	5	0.7
Creativity and innovation	52	74
Opportunity identification	28	40
Role models	37	53
All entrepreneurial skills	23	33
<b>N = 70</b>		<b>X = 50</b>

Source: Antonites (2003:62)

#### **2.1.4 Business Skills (B/S)**

Business skills of general management skills are required to run the business on a daily basis. Nieman and Bennet (2006:4) mention that there are certain functional areas in a business which are essential for any entrepreneur. These areas include: general management, marketing management, financial management, human resource management, production and operations management, corporate communications management, information management and e-business, and purchasing and materials management. For the purpose of this paper the most significant business skills are summarised in Table 2.

**Table 2: Business skills required by entrepreneurs**

<b>Business skills</b>	<b>Description</b>
General management	How a business works and how it must be managed. Planning, organising, leading, motivating and control also form part of general management. Proper planning for the future, the investigation of all production factors, leading the operation and the control of all staff activities will ensure that the performance of the entrepreneur is greatly enhanced.
Marketing management	Conducting market research, selecting a target market and how to sell to it and positioning the business in the market. Identifying the marketing mix (price, product, place, promotion, physical evidence, people and process) within the

**Table 2 continued...**

<b>Business skills</b>	<b>Description</b>
	business as well as managing consumer behaviour.
Legal skills	Business forms, contractual law, understanding the necessity for ethical behaviour within a business as well as registering trademarks, logos and designs.
Operational management	Manufacturing the finished product and service, identifying raw materials and suppliers, identifying wholesalers and retailers.
Human resource management	Management of people within the business. Recruiting, selecting and training and development of employees on a continuous basis are important.
Communication skills	Internal communication between employees and owner/manager and external communication between the entrepreneur and all other stakeholders such as customers and suppliers.
Business plan compilation	Before committing time and energy to preparing a business plan, the entrepreneur should do a quick feasibility study of the business concept. The feasibility study - done by the entrepreneur – is in preparation for writing the business plan. The business plan is a comprehensive action plan of how an entrepreneur will achieve his/her business goals.
Financial management	How to do financial planning, how to collect money from customers and pay suppliers, what sources of finance must be used to obtain capital and how to compile financial statements – income, balance and cash flow statements.
Cash flow management	Managing the cash inflow and outflow in a business and solving cash flow problems.

Source: Botha, M (2006:71)

Finally, the entrepreneurial performance education model is summarised by Antonites (2000:21), who formulated a table that contributes to the current the entrepreneurship training model. This is summarised in Table 3.

**Table 3: The entrepreneurship training model based on the entrepreneurial performance education model**

<b>Entrepreneurial Performance (E/P)</b>	<b>Performance motivation (M)</b>	<b>Entrepreneurial Skills (E/S)</b>	<b>Business Skills (B/S)</b>
Establishment of own business	Motivation	Risk propensity	General management skills
Growth in net value of business	Role models	Creativity and Innovation	Marketing skills
Recruitment of employees		Opportunity identification	Legal skills
Increasing productivity levels		Role model analysis	Operational skills
Increasing profitability		Networking	Human resource management skills
			Communication skills
			Business plan compilation
			Financial management
			Cash flow management

Source: Adapted from Antonites (2000:21)

### **3. THE BASIC ENTREPRENEURSHIP, BUSINESS START-UP AND ADVANCED ENTREPRENEURSHIP TRAINING PROGRAMMES**

#### BUSINESS START-UP PROGRAMME

The business start-up training programme focuses specifically on introducing the concepts and principles of entrepreneurship and small business management to the delegate that will equip him/her to start a business. **The target audience are individuals with a business idea but has never operationalised this idea.** The programme specifically focus on introducing the delegate to pre-start up and start-up processes and principles that are vital for establishing long-term success and sustainability. Critical skills such as the content, strategies and processes of entrepreneurship, creativity, innovation and opportunity recognition as well an introduction to basic business skills are included in this programme.

#### BASIC ENTREPRENEURSHIP PROGRAMME

The basic entrepreneurial training programme focuses on establishing basic entrepreneurial and management skills to the delegate. **The target audience are individuals with survivalist businesses (One person businesses).** The programme specifically focus on the concepts of basic small business management (planning, organising, leading and control), by communicating and equipping the delegates with skills and knowledge that relates to the introduction and basic financial-, operational-, human resources- and marketing management.

#### ADVANCED ENTREPRENEURSHIP PROGRAMME

The advanced entrepreneurial training programme focuses on introducing more advance entrepreneurial and small business management concepts to the delegate. **The target audience are individuals with five or more employees (Established Small Businesses).** The programme is designed to address typical management issues such as growth and expansion to establish growth and development of the venture as an entrepreneurial venture in the market. By introducing the delegate to the concept of strategic planning, a future orientation towards doing businesses in South Africa is established.

### **3.1 TEACHING METHODOLOGY AND TRAINING PROCESS**

These programmes are offered to the delegates in collaboration with the City of Tshwane's Local Economic Development Department as a development project by the local government. Prospective delegates are invited to enrol for the programme usually on four occasions, where each one is interviewed and if accepted placed on one of the programmes. There are certain criteria they have to meet before they are selected to participate. Then they are registered and training can be delivered. All three programmes start on a specific Monday and there are 40 contact hours in a classroom situation. Following that is a twelve week mentorship programme where a mentor has a 60 minute meeting with the delegate every week on a specifically designed step by step process. This mentorship process/ programme is very important as it serves to reinforce what was done in class and because the mentors build a very close relationship since conducting the classroom lecturers, successes achieved are very good. Obviously the content of the mentorship programmes are in line with the course content covered in class.

## **4. RESEARCH OBJECTIVES**

### **4.1 Primary research objective**

**The primary research objective is:**

To determine whether the constructs of the entrepreneurial performance training model can be applied to three different training interventions, namely the Basic Entrepreneurship, Business start-up and Advanced Entrepreneurship training programmes.

### **4.2 Secondary research objectives**

In order to determine the primary objective, the following secondary objectives are stated which includes the different constructs within the entrepreneurial performance training model:

- To determine whether the respondents of the three different training programmes enhanced their entrepreneurial business performance indicators after the training programmes;
- To determine whether the performance motivation increased after the respondents attended the training programmes;
- To determine whether entrepreneurial skills transfer took place after the respondents attended the training programmes; and
- To determine whether business skills (general management skills) transfer took place after the respondents attended the training programmes.

## **5. RESEARCH METHODOLOGY**

A literature review and empirical research are presented. Quantitative research was conducted, using nine validated research questionnaires as the measuring instruments. In this paper non-probability sampling was used that indicates that specific respondents who fit the sampling frame of all three groups, identified are included in

the samples. The factors that were taken into consideration when each sample was selected are known as the sampling frame and included the following:

#### **BUSINESS START-UP**

- Determinant 1 – Respondents that have a business idea but has not operationalised it.
- Determinant 2 – At least a Grade twelve qualification;
- Determinant 3 – Start-up entrepreneurs whose training needs matched the training content of the Start-up programme.

#### **BASIC ENTREPRENEURSHIP**

- Determinant 1 – Respondents that have a micro business but lack entrepreneurial and management skills.
- Determinant 2 – At least a Grade twelve qualification;
- Determinant 3 – Small-scale entrepreneurs whose training needs matched the training content of the basic entrepreneurship programme.

#### **ADVANCED ENTREPRENEURSHIP**

- Determinant 1 – Respondents that have established businesses and want to grow their businesses.
- Determinant 2 – At least a Grade twelve qualification;
- Determinant 3 – Established entrepreneurs whose training needs matched the training content of the advanced entrepreneurship programme.

A total sample size of 450 was obtained including respondents that were tested with the validated instruments for each of the three training interventions. The sample consisted of 135 Basic entrepreneurship programme, 247 Business start-up programme and 68 Advanced entrepreneurship programme respondents.

### **5.1 RESEARCH DESIGN**

The empirical part consisted of quantitative research in which nine different research questionnaires were used to obtain information from respondents. The first questionnaire was given to respondents before the actual training took place, to measure the respondents' level of knowledge and skills as well as training

expectations and needs (this is referred to as O1). The second questionnaire was given to respondents to measure their behaviours and attitudes directly after they completed the training programme (this is referred to as O2) and the third questionnaire measured the respondents' business performance ten weeks after they had completed the training programme (this is referred to as O3). The first group of respondents attended the Basic entrepreneurship programme and three measurements were taken, the second group of respondents attended the Business Start-up programme and three measurements were taken. The last group of respondents attended the Advanced entrepreneurship programme and three measurements were taken. The measuring instruments were adapted for each training group as per the content that was included in each training programme.

The study is causal in nature; there is at least one independent variable and one dependent variable in a causal relationship. In this paper the independent variable (IV) is the training interventions and the dependent variables (DV) are "starting own businesses" and "growing start-up or established businesses".

The research design consists of:

**O1 X1 O2 X2 O3**

Effect measured by:

**O2 - O1**

And

O3 - O2 or

O3 - O1

O = Observations 1 – 3

X = Interventions (Training and Mentorship)

The three measurements include:

- Pre-Measurement (**Pre-test**): Respondents complete this questionnaire before any training or contact is initiated. This determines their level of knowledge and skills before the training and mentorship intervention take place.
- Post-Measurement 1 (**Post-test**): Respondents complete this questionnaire after the training intervention has taken place. This measurement provides an

indication of the skills and knowledge transfer that had taken place during the training intervention.

- **Post-Measurement 2 (Post-post test):** Respondents complete this questionnaire after the mentorship has taken place. This measurement provides an indication of the skills and knowledge transfer that had taken place after the training intervention and the mentorship programme had taken place.

## 6. HYPOTHESES

It should be noted that experimentation provides the most powerful support possible for a hypothesis of causation. In this paper it was decided to state hypotheses rather than propositions, due to the fact that a hypothesis is a proposition that is empirically testable (Cooper & Schindler, 2001:136). The following hypotheses are stated:

Null hypothesis (H1o): The constructs of the entrepreneurial performance training model cannot be applied to three different training interventions, namely the Basic Entrepreneurship, Business start-up and Advanced Entrepreneurship training programmes.

H2o: The respondents of the three different training programmes did not enhance their entrepreneurial business performance indicators after the training programmes took place.

H3o: The respondents of the three different training programmes did not increase their performance motivation after the training programmes took place.

H4o: There are no significant differences regarding the entrepreneurial skills gained by the respondents after the training programmes took place.

H5o: There are no significant differences regarding the entrepreneurial skills gained by the respondents after the training programmes took place.

The acceptance or rejection of the above hypotheses will be presented under the discussion of the findings in the paper.

## **7. FINDINGS**

### **7.1 Demographic information**

**Demographic information of sample used in the research study participating in the Business Start-Up Training Programme is as follows:**

92% of the delegates participating indicated that their businesses are situated in the greater Tshwane Region, Gauteng, South Africa; 94% find themselves in the age group 18 – 55 years; 70% has completed grade twelve; 60% male and 40% female and 95% are Africans.

**Demographic information of sample used in the research study participating in the Basic Entrepreneurship Training Programme is as follows:**

93% of the delegates participating indicated that their businesses are situated in the greater Tshwane Region, Gauteng, South Africa; 79% find themselves in the age group 18 – 55 years; 70% has completed grade twelve and a higher tertiary education; 60% male and 40% female and all of the respondents, are Africans.

**Demographic information of sample used in the research study participating in the Advanced Entrepreneurship Training Programme is as follows:**

94% of the delegates participating indicated that their businesses are situated in the greater Tshwane Region, Gauteng, South Africa; 83% find themselves in the age group 18 – 55 years; 85% has completed grade twelve and a higher tertiary education; 60% male and 40% female and 97% are Africans.

## **7.2 Validity and reliability of the measuring instruments**

To confirm the validity and reliability of the research questionnaires used, factor analysis was executed. Factor analysis was performed on the three pre-test questionnaires for the three training groups, namely Business Start-up, Basic entrepreneurship and Advanced Entrepreneurship. In this paper, 0.600 was used as the benchmark to measure the Cronbach alpha values against.

### **Business start-up programme**

From the 13 items, posed on a 5-point Likert scale, the derived factor delivered an excellent Cronbach Alpha result. A value of 0.8903 was obtained for all the variables used. This factor was named, Entrepreneurial and general management skills. Factor analysis was performed on the second set of variables in the research questionnaire used and three factors were generated. From the 22 items, posed on a 4-point Likert scale, the derived three factors delivered excellent Cronbach Alpha results. A value of 0.9662 was obtained for all the variables used. The first factor was named: Financial management skills, the second factor, was named: Legal and change management skills and the third factor, was named: Business plan compilation skills.

**Factor analysis performed on the Business start-up programme pre-test questionnaire presented the following Eigen values (EV) and Cronbach alphas (CA):**

- Factor 1 (Entrepreneurial and General Management skills, EV= 6.92307 and CA= 0.8841)
- Factor 2 (Business Plan Compilation skills, EV=1.20581 and CA= 0.9127)
- Factor 3 (Legal and change management skills, EV=1.29582 and CA=0.9479)
- Factor 4 (Financial management skills, EV=12.9541 and CA=0.9366)

### **Basic entrepreneurship programme**

From the 13 items, posed on a 5-point Likert scale, the derived two factors delivered an excellent Cronbach Alpha result. A value of 0.9053 was obtained for all the

variables used. The first factor was named, Business management skills and the second factor was named, Business plan compilation skills. Factor analysis was performed on the second set of variables in the research questionnaire used and four factors were generated. From the 22 items, posed on a 4-point Likert scale, the derived four factors delivered excellent Cronbach Alpha results. A value of 0.9551 was obtained for all the variables used. The first factor was named: Human resource management skills, the second factor, was named: Entrepreneurial and general management skills, the third factor, was named: Financial management skills and the fourth factor was named, Operational and marketing management skills.

**Factor analysis performed on the Basic entrepreneurship programme pre-test questionnaire presented the following Eigen values (EV) and Cronbach alphas (CA):**

- Factor 1 (Business Management skills, EV= 6.121187 and CA= 0.9035)
- Factor 2 (Business Plan Compilation skills, EV=1.37890 and CA= 0.8719)
- Factor 3 (Human resource management skills, EV=11.5118 and CA=0.9555)
- Factor 4 (Entrepreneurial and general management skills, EV=2.27512 and CA=0.9182)
- Factor 5 (Financial management skills, EV=1.32201 and CA=0.9559)
- Factor 6 (Operational and marketing management skills, EV=1.17201 and CA=0.9014)

#### **Advanced entrepreneurship programme**

From the 13 items, posed on a 5-point Likert scale, the derived factor delivered an excellent Cronbach Alpha result. A value of 0.9555 was obtained for all the variables used. This factor was named, Business management and planning skills. Factor analysis was performed on the second set of variables in the research questionnaire used and three factors were generated. From the 22 items, posed on a 4-point Likert scale, the derived four factors delivered excellent Cronbach Alpha results. A value of 0.9509 was obtained for all the variables used. The first factor was named: Business plan compilation skills, the second factor, was named: Business growth and

implementation skills, the third factor, was named: General management and entrepreneurial skills and the fourth factor was named: Strategic management skills.

**Factor analysis performed on the Advanced entrepreneurship programme pre-test questionnaire presented the following Eigen values (EV) and Cronbach alphas (CA):**

- Factor 1 (Business Management and planning skills, EV= 8.49427 and CA= 0.9035)
- Factor 2 (Business Plan Compilation skills, EV=11.1491 and CA= 0.9555)
- Factor 3 (Business growth and implementation skills, EV=3.133011 and CA=0.9088)
- Factor 4 (Entrepreneurial and general management skills, EV=1.45357 and CA=0.8361)
- Factor 5 (Strategic management skills, EV=1.2112 and CA=0.9147)

***Testing the statistically significant differences***

The Chi-square tests were performed on the various entrepreneurial business performance indicators to illustrate the statistically significant differences between the pre-test and post-post test measurements of the three training programme groups. The One-way Analysis of variance (ANOVA) was used to measure the skills transfer factors of the three groups before and after the training interventions.

**Table 4: Chi-square test: Comparison between the before and after measurement regarding business performance indicators of the Business Start-up Training Programme**

Variable	Frequency	DF	Chi-Square value	P-value
Success of the business	280	3	30.7871	<0.0001
Profitability of the business	272	3	23.2901	<0.0001

Break-even point	278	3	14.7003	0.0021
$\alpha < 0.05$ (95% confidence level)		$\alpha < 0.001$ (99% confidence level)		

From table 4 it can be deduced that there are statistical significant differences between the variables related to success inside the group if the variables are compared before and after the training and mentorship intervention. It is believed that this experimental design allows the researchers to claim cause and effect regarding the abovementioned variables.

**Table 5: Chi-square test: Comparison between the before and after measurement regarding business performance indicators of the Basic Entrepreneurship Training Programme**

Variable	Frequency	DF	Chi-Square value	P-value
Success of the business	194	3	25.7398	<0.0001
Profitability of the business	192	3	17.4871	0.0006
Break-even point	185	3	15.0366	0.0018
$\alpha < 0.05$ (95% confidence level)		$\alpha < 0.001$ (99% confidence level)		

From table 5 it can be deduced that there are statistical significant differences between the variables related to success inside the group if the variables are compared before and after the training and mentorship intervention. It is believed that this experimental design allows the researchers to claim cause and effect regarding the abovementioned variables.

**Table 6: Chi-square test: Comparison between the before and after measurement regarding business performance indicators of the Advanced Entrepreneurship Training Programme**

Variable	Frequency	DF	Chi-Square value	P-value
Increase in number of customers	105	7	14.3241	0.0457
Success of the business	108	3	19.1937	0.0002
Profitability of the business	108	3	24.9864	<0.0001

$\alpha < 0.05$  (95% confidence level)

$\alpha < 0.001$  (99% confidence level)

These are critical findings for entrepreneurs already in established businesses. This intervention had a statistical significant influence on three of the most important vital indicators of a successful entrepreneurial concern. A number of skills are required to increase your customer base, success and profitability.

**Table 7: ANOVA between the pre-test and post-post test measurement for the Business Start-up programme**

No.	Factor	Sum of Squares	Mean Square	F- value	P-value
1	Entrepreneurial and general management skills	0.37816	0.37816	1.32	0.2507
2	Financial management skills	50.8665	50.8665	103.41	0.0001***
3	Legal and change management skills	57.6002	57.6002	102.87	0.0001***
4	Business plan compilation skills	31.2020	31.2020	80.74	0.0001***

P \*\*\* Statistically significant difference

$\alpha < 0.05$  (95 % confidence level)

$\alpha < 0.0001$  (99 % confidence level)

It is valuable to note that there are statistical differences between the pre-test and post-post test measurements for **all the skills transfer factors accept for the entrepreneurial and general management skills** identified. This indicates that skills transfer took place successfully and that the business start-up group gained general management (business) skills and knowledge after the completion of the training programme. These findings emphasise that the B/S constructs identified in the entrepreneurial performance training model could practically be applied in the business start-up programme.

**Table 8: Scheffe’s Test between the pre-test and post-post test measurement for the Business Start-up programme**

No.	Factor	Mean	Scheffe grouping and direction of change
1	<b>Entrepreneurial and general management skills</b>	Pre-test (A) 4.15297	A < B
		Post-post test (B) 4.22048	
2	<b>Financial management skills</b>	Pre-test (A) 2.36435	A < B
		Post-post test (B) 3.14729	
3	<b>Legal and change management skills</b>	Pre-test (A) 2.32062	A < B
		Post-post test (B) 3.15378	
4	<b>Business plan compilation skills</b>	Pre-test (A) 2.73620	A < B
		Post-post test (B) 3.34941	

The Scheffe's test indicates the direction of change between the means of the pre-test and post-post measurements. All the factors indicated an enormous difference between the means except for the first factor, where the means are almost the same. This supports the fact that there were not statistical significant difference between the pre-test and post-post test measurements when skills transfer was measured.

**Table 9: ANOVA between the pre-test and post-post test measurement for the Basic entrepreneurship programme**

No.	Factor	Sum of Squares	Mean Square	F- value	P-value
1	Business management skills	6.2084	6.2084	14.39	0.0002**
2	Business plan compilation skills	19.1011	19.1011	30.88	0.0001***
3	Human resource management skills	40.5713	40.5713	76.55	0.0001***
4	Entrepreneurial and general management skills	17.3965	17.3965	60.27	0.0001***
5	Financial management skills	36.2341	36.2341	55.39	0.0001***
6	Operational and marketing management skills	32.7752	32.7752	69.33	0.0001***

**P \*\*\* Statistically significant difference**

**$\alpha < 0.05$ \*\* (95 % confidence level)  $\alpha < 0.0001$ \*\*\* (99 % confidence level)**

It is valuable to note that there are statistical differences between the pre-test and post-post test measurements for **all the skills transfer factors** identified. This indicates that skills transfer took place successfully and that the basic entrepreneurship group gained entrepreneurial as well as general management (business) skills and knowledge after the completion of the training programme. These findings emphasise

that the E/S and B/S constructs identified in the entrepreneurial performance training model could practically be applied in the basic entrepreneurship programme.

**Table 10: Scheffe's Test between the pre-test and post-post test measurement for the Basic entrepreneurship programme**

No.	Factor	Mean	Scheffe grouping and direction of change
1	Business management skills	Pre-test (A) 3.4674	A < B
		Post-post test (B) 3.8536	
2	Business plan compilation skills	Pre-test (A) 3.0304	A < B
		Post-post test (B) 3.7079	
3	Human resource management skills	Pre-test (A) 2.1273	A < B
		Post-post test (B) 3.1147	
4	Entrepreneurial and general management skills	Pre-test (A) 2.79755	A < B
		Post-post test (B) 3.44408	
5	Financial management skills	Pre-test (A) 2.2446	A < B
		Post-post test (B) 3.1776	
6	Operational and marketing management skills	Pre-test (A) 2.3652	A < B
		Post-post test (B) 3.2526	

All the factors indicated an enormous difference between the means. This supports the fact that there were significant differences between the pre-test and post-post test for all the skills transfer factors identified.

**Table 11: ANOVA between the pre-test and post-post test measurement for the Advanced entrepreneurship programme**

No.	Factor	Sum of Squares	Mean Square	F- value	P-value
1	Business management and planning skills	10.3316	10.3316	24.01	0.0001***
2	Business plan compilation skills	40.2671	40.2671	82.15	0.0001***
3	Business growth and implementation skills	22.8898	22.8898	63.76	0.0001***
4	Entrepreneurial and general management skills	15.8949	15.8949	52.73	0.0001***
5	Strategic management skills	33.6386	33.6386	69.63	0.0001***

**P \*\*\* Statistically significant difference**

**$\alpha < 0.05^{**}$  (95 % confidence level)  $\alpha < 0.0001^{***}$  (99 % confidence level)**

It is valuable to note that there are statistical differences between the pre-test and post-post test measurements for **all the skills transfer factors** identified. This indicates that skills transfer took place successfully and that the advanced entrepreneurship group gained entrepreneurial as well as general management (business) skills and knowledge after the completion of the training programme. These findings emphasise that the E/S and B/S constructs identified in the entrepreneurial performance training model could practically be applied in the basic entrepreneurship programme.

**Table 12: Scheffe's Test between the pre-test and post-post test measurement for the Advanced entrepreneurship programme**

No.	Factor	Mean	Scheffe grouping and direction of change
1	<b>Business management and planning skills</b>	Pre-test (A) 3.2993	A < B
		Post-post test (B) 3.7976	
2	<b>Business plan compilation skills</b>	Pre-test (A) 2.1644	A < B
		Post-post test (B) 3.1480	
3	<b>Business growth and implementation skills</b>	Pre-test (A) 2.62681	A < B
		Post-post test (B) 3.36842	
4	<b>Entrepreneurial and general management skills</b>	Pre-test (A) 2.82609	A < B
		Post-post test (B) 3.44408	
5	<b>Strategic management skills</b>	Pre-test (A) 2.3016	A < B
		Post-post test (B) 3.2007	

All the factors indicated an enormous difference between the means. This supports the fact that there were significant differences between the pre-test and post-post test for all the skills transfer factors identified.

Performance motivation (M) was one of the constructs identified in the entrepreneurial performance training model and was mentioned in the factor analysis section. ANOVA was performed on this variable and combined for all the training interventions as it was measured in all the training programmes.

**Table 13: ANOVA between the pre-test and post-post test measurement for the performance motivation variable for all the programmes**

Variable	Sum of Squares	Mean Square	F- value	P-value
Performance motivation	47.4932	5.9367	7.27	0.0001***

**P \*\*\* Statistically significant difference**

**$\alpha < 0.0001$  (99 % confidence level)**

This is an important finding as it illustrates statistical significant differences between the pre-test and post-post test measurements for **performance motivation** for all three the training programmes. This indicates that the respondents' performance motivation increased after the completion of the training programmes. This finding emphasise that the Motivation (M) construct identified in the entrepreneurial performance training model could practically be applied in all three the training programmes.

## **8. CONCLUSION**

The literature review introduced various important elements within the field of entrepreneurship and specifically in the context of education and training programmes and models.

**Several skills transfer factors** were identified in this paper and it was pointed out that the three training group respondents improved significantly regarding these factors after they attended the training programmes. The Chi-square tests performed

indicated that the business performance indicators increased within all three the training programmes.

The empirical findings indicated that the constructs (E/S, B/S, M and E/P) identified in the entrepreneurial performance training model were practically applied within the Business start-up, Basic entrepreneurship as well as the Advanced entrepreneurship programmes.

Finally, it is necessary to revisit the hypotheses stated earlier in the paper. Based on the empirical findings, all the null hypotheses are rejected and it was statistically proved that the respondents' business performance indicators as well as their performance motivation increased after the programmes. Furthermore, the paper highlighted that entrepreneurial and business skills transfer took place after the programmes and the respondents gained or increased these skills.

## **8.1 LIMITATIONS OF THE PAPER**

Although the paper aimed at measuring the various constructs of the entrepreneurial performance training model, it was only a starting point and it is therefore acknowledged that there are limitations, namely:

- The respondents were aware that research was being conducted and thus the usefulness of the research design might be reduced. The main interference was that some delegates did not finish the training programmes due to illness, work-related circumstances or a lack of transport and could not complete the programme.
- The ten-week period after the training intervention took place is too short to fully measure the impact of the training programmes on the delegates' businesses. It was not practically possible to widen the timeframe of the study due to budget and time constraints.
- One could make the criticism that the changes and improvements that occurred within the respondents' attitudes and behaviours, as well as the growth of their businesses, were not due to the training programmes only. It can be suggested

that these occurrences could have been influenced by other external factors such as a favourable economic situation or the entrepreneur's personal life.

## **8.2 RECOMMENDATIONS AND FURTHER RESEARCH**

The following opportunities and recommendations were identified, namely:

- More studies of effectiveness which use control groups and include longitudinal designs are needed, so that findings from research such as this can have greater external validity.
- The ideal situation would be to measure the training groups again after 18 months and again after three years to really determine the impact that the training programmes had on their businesses.
- The results of the three training programmes can be compared to see whether the basic entrepreneurship groups gained more skills and their business performance indicators increase more than the business start-up or advanced entrepreneurship programmes.

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