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**Beyond Primary Education:
Challenges and Approaches to Expanding Learning Opportunities in Africa**

Parallel Session 6C

**Skills Development
in Technical and Vocational
Education and Training**

**A Study of Entrepreneurship Education in Botswana
and the Significance of Institutional Preparation**

By Jacob R. SWARTLAND

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Draft**

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List of Acronyms and Abbreviations

ACTVE	Advanced Certificate of Technical and Vocational Education
BOTA	Botswana Training Authority
BTEP	Botswana Technical Education Programme
BTVET	Business, Technical and Vocational Education and Training
CDG	Curriculum Development Group
CEDA	Citizens Entrepreneurial Development Agency
CTVE	College of Technical and Vocational Education
DCDE	Department of Curriculum Development & Evaluation
DSE	Department of Secondary Education
DTT&D	Department of Teacher Training & Development
DTSM	Department of Teaching Service Management
DVET	Department of Vocational Education and Training
EB	Enterprise Botswana
EE	Entrepreneurship Education
GSE	General Secondary Education
GoB	Government of Botswana
GTC	Gaborone Technical College
HRD	Human Resource Development
ICT	Information and Communication Technology
ILO	International Labour Organization
IMS	Information Management Systems
JAB	Junior Achievement Botswana
JC	Junior Certificate
JS	Junior Secondary
JSE	Junior Secondary Education
KAB	Know About Business
MIS	Management Information System
MLHA	Ministry of Labour & Home Affairs
MOE	Ministry of Education
NCDC	National Curriculum Development Centre
NCQF	National Credit and Qualifications Framework
NDP	National Development Plan
NGOs	Non-Governmental Organizations
NVTI	National Vocational Training Institute
PAC	Program Advisory Committee
PEO	Principal Education Officer
PPE	Post-Primary Education
PPET	Post Primary Education and Training
PTEOs	Principal Technical Education Officers
QAA	Quality Assurance and Assessment Unit
RNPE	Revised National Policy for Education
SADC	Southern African Development Community
SC	Senior Certificate
SQA	Scottish Qualifications Authority
SS	Senior Secondary
SSE	Senior Secondary Education
TC	Technical College
TE	Technical Education
TEC	Tertiary Education Council
TOR	Terms of Reference
TVET	Technical and Vocational Education and Training
VET	Vocation Education & Training

1. EXECUTIVE SUMMARY

1.0 Background

In general the formal economic situation in many parts of Africa is weak. Young school leavers can neither find employment in the formal sector nor create jobs for themselves in the informal sector. There is therefore an urgent need to explore strategies for equipping these young people with the knowledge and appropriate skills to improve their chances of a decent life.

2.0 Method of Study

The report is the result of reviews of relevant documentation and extensive interviews of key personnel such as policy-makers, heads of learning and training institutions, teachers, tutors and lecturers, including group discussions with staff at their institutions. In addition, other relevant stakeholders such the private sector, employers, parastatals and NGOs were consulted.

3.0 International Perspective

International perspectives and initiatives influence policy formation and direction in many countries in Africa. The concept of Entrepreneurship Education in this report is therefore as defined by the international community.

4.0 Botswana Case Study

4.1 Education System

The structure of the education and training system in Botswana is similar to that of other Anglophone countries of sub-Saharan Africa, namely twelve years of general education. Botswana is one of the countries which have achieved ten years of universal basic education: every child entering Standard One is guaranteed ten years of schooling.

4.2 Policy Framework

The inclusion of Entrepreneurship Education (EE) in Post-Primary Education and Technical Education and Training is guided by the Revised National Policy on Education (RNPE), which emphasizes the need for pre-vocational preparation through, for example, relating the curriculum to the world of work. The National Policy on Vocational Education and Training states that "...there is need to establish a curriculum development process that is consistent with training...for useful and productive lives."

4.3 Entrepreneurship Education in Post-Primary General Education

Learning and teaching materials are infused and integrated with characteristics of EE such as creativity and imagination, the ability to take the initiative, self-confidence and optimism and problem-solving. Practical and vocational subjects have been introduced, with additional laboratories and workshops provided. Both pre-service and in-service programs are in place to facilitate the delivery of EE. Several stakeholders are involved in these processes, and other agencies and organizations exist which provide EE to supplement the education programs.

4.4 Entrepreneurship Education in TVET

Entrepreneurship Education in TVET is delivered through the Botswana Technical Education Programme (BTEP) which includes Key Skills components. There was extensive consultation in the development of BTEP, with industry playing a major role in the conceptualization of the content of training programs. The target group in these programs is young school leavers who have completed either junior secondary or secondary education. It is a modularized, outcomes-based vocational qualification that creates access, opportunity and pathways through a flexible mode of delivery.

BTEP is offered at three levels: Foundation, Certificate and Advanced Certificate, currently available in six technical colleges, which are well resourced in terms of facilities. A well-defined training program was put in place before its introduction; this still continues in in-service mode. College tutors are involved in the development of teaching and learning materials.

Another important component of TVET is the involvement of Youth Brigades Centers. These were initiated by local communities but have recently been taken over by the Ministry of Education. They provide artisan training under the concept of “Training with Production”.

4.5 Comparison between General Education and TVET

The comparison between BTEP and post-primary general education is presented in table form. The main difference between the two is in the support services that the latter receives in terms of the preparation of the curriculum and the training of teachers and support staff.

5.0 A Brief Comparison with the Ugandan Experience

The only information on Uganda available for this comparison is a paper entitled “Concept and Rationale for Entrepreneurship in Formal Education”, prepared by a senior official in the Ministry of Education and Sport at a workshop on ‘Sharing the Experiences and Lessons Learnt in Uganda’ (April 2005).

6.0 Outcomes and Impacts of BTEP

6.1 Tracer Study

Between April and August 2007, a tracer study of BTEP Graduates (2002 to 2006) was undertaken. It focused on two concerns: the relevance and quality of the course in relation to graduate employability, and the consequent level of graduate employment or self-employment. A technical college survey and an indicative employers’ survey were undertaken to complement the information collected in the graduate tracer study. A major problem encountered was the poor availability of contact details for graduates: out of a possible 1634 graduates, only 739 could be contacted.

6.2 Key Findings

The following are among the key findings of the tracer study:

- The BTEP program is still incomplete, since Advanced Certificate and Diploma levels have just been introduced in some of the technical colleges. The Certificate level is not an exit program
- BTEP offers a range and mix of programs to meet the ongoing requirements of the public service, commerce and industry as well as providing graduates with access into smaller enterprises
- A gender breakdown shows higher levels of female (54.25%) to male (45.75%) enrolments

- Nearly 50% of the respondents were either in employment or engaged in further studies
- Graduate satisfaction with the program is fairly high in terms of the content of the program, but they consider its duration rather lengthy. They perceive the quality of tutors to be poor and the balance between theory and practice inadequate
- Many employers are confused about the program and assume that the graduates are artisans
- In contrast, most graduate respondents believe the program they followed to have been relevant to their present jobs
- Very few are self employed and most have problems 'starting up' because of difficulty accessing capital
- At the institutional level, the findings indicate that insufficient career guidance and assistance is provided to students who are soon to graduate.

7.0 Comments from Staff of Technical Colleges

The staff of the technical colleges made the following comments and observations regarding BTEP:

- As a training program designed for young school leavers, the BTEP concept is good
- Initial preparations such as the upgrading of the colleges, the development of materials and the training of staff for implementation of the program was satisfactory
- Considering the short period since its implementation, BTEP's achievements are encouraging
- The Foundation course has proved to be successful because of the colleges' experience at this level
- The Foundation course is too long and the balance between theory and practice is skewed towards the former
- The validation process is lengthy, involving too much unnecessary paperwork
- Some lecturers' qualifications are too low to handle Form V school leavers;
- Feedback from former students indicates that the program has not been thoroughly marketed.

8.0 Conclusions and Recommendations

- The concept of BTEP is good, and the content of the programs facilitates access and equity
- There was adequate consultation of stakeholders in the initial preparation for BTEP
- There is consensus that the institutions were adequately prepared to offer BTEP in terms of infrastructure, learning and teaching materials and staff training
- The three levels of BTEP, Foundation, Certificate and Advanced Certificate, are logical but it is unfortunate that the period of implementation between these levels was too long.
- Most graduates felt motivated and confident to join the world of work in spite of the inadequacy of the program's practical orientation
- The program was not properly marketed to potential employers
- There is a regrettable lack of cooperation between General Education and TVET.

The staff of the Department of Vocational Education and Training made recommendations to sister countries wishing to introduce similar programs.

2. A STUDY OF ENTREPRENEURSHIP EDUCATION IN BOTSWANA AND THE SIGNIFICANCE OF INSTITUTIONAL PREPARATION

1.0 Background

1.1 ADEA and Post-Primary Education

The increasing enrolment rate in primary education in Africa over the last few years is causing a growing demand for post-primary education and employment opportunities for young people. With this background, ADEA – Association for the Development of Education in Africa – has selected the theme of Post Primary Education (PPE) for its 2008 Biennale. Partner organizations and countries have been asked to contribute to the Biennale by organizing the preparation of reports and other documents to close identified knowledge gaps on the theme.

This report is part of the Norwegian contribution in response to ADEA's request.

1.2 Economic Situation in Africa and the Need for New Businesses

In large parts of Africa the formal economy is weak. Millions of young school leavers on the continent fail to find formal employment in an environment where jobs are scarce. For many of them post primary education, for various reasons, is not an option. Their only alternative is to make a living in the informal sector. Without relevant qualifications for self-employment, the outcome is generally meager.

In this difficult situation, there is a growing awareness that a traditional academic education is inadequate to equip young people with the knowledge and skills they will need to improve their chances of a decent life. In order to meet this challenge, an increasing number of countries are introducing Entrepreneurship Education (EE).

1.3 Entrepreneurship: the concept

In general, EE aims to stimulate creativity in students, enable them to identify opportunities for innovation and motivate them to transform the ideas into practical and targeted activities, whether in a social, cultural or economic context. In most countries the training emphasizes giving the students relevant knowledge and skills to establish and run an enterprise.

There is general motivation for increasing the knowledge base regarding the introduction and operation of this type of training: which modalities have been used, what are the experiences, which are the features of good practice?

2.0 Method and Focus of Study

EE contains more or less the same elements in Africa as in Europe and the US: attitude formation and motivation for self-employment, market assessment, and business plan development as well as basic accounting and business management. But whereas positive outcomes in terms of higher frequency of

business start-ups have been documented in other regions, similar evidence of success has been difficult to find in African countries.

2.1 Approach and Methodology

The review of the relevant documentation and interviews of key personnel are to be the main source of information. The latter was done through well-focused questions. Visits to selected institutions, Ministries responsible for education and training, labor and employment, trade and industry, as well as parastatals and NGOs, were also undertaken. Time and budget constraints have not permitted a systematic and comprehensive gathering of data in Uganda.

2.2 Objectives and Key Research Questions

The purpose of the study is to contribute to the general knowledge about how governments and other stakeholders can facilitate, and actively contribute to, successful Entrepreneurship Education and training. The study will concentrate on Post Primary Education and Training (PPET), and look into the development of policy and programs as well as the organization of structures and coordination between the various relevant departments and administrative levels, including other partners outside the school system that contribute to the development of EE.

One central objective of the study is to find out whether particular emphases and efforts in the preparation of programs and institutions, in particular those institutions that deliver EE, have a demonstrably positive effect on the outcomes of the training. The study should show whether or not such preparation actually does result in an employment and self-employment rate that is higher than that resulting from programs and institutions that did not go through similar preparations.

Botswana has been selected as a relevant case, with a comparative glance at Uganda.

3.0 International Perspectives and Initiatives of Entrepreneurship Education

3.1 UNESCO Congress

During the Second International Congress on Technical and Vocational Education held in April 1999 in Seoul, Republic of Korea, the Commission II on *Innovating the Education and Training Processes* made the following recommendation to UNESCO regarding the issue of unemployment, particularly of the youth:

Case studies and feasibility studies should be undertaken on the development of an Entrepreneurship Education program that focuses on key competences required for the development and sustainability of small and medium sized enterprises – particularly for the youth.

3.2 ILO Training Materials

The International Training Centre of the ILO has developed and tested a set of training materials for EE called “*Know about Business*”(KAB). The primary aim of the package is to encourage young people to choose entrepreneurship as a career option. It was also designed for use in secondary schools and vocational

education and training institutions to give young people some awareness and practice of the opportunities, challenges, procedures, characteristics, attitudes and skills needed for successful entrepreneurship and self-employment.

3.3 LLWF Workshop

During a workshop entitled *Learning for Life, Work and the Future (LLWF)* held in Botswana in 2000, it was noted that one of the needs identified by SADC countries was the “*the emphasis on entrepreneurship courses; business skills including skills for self-employment, particularly at artisan level (to reduce reliance on formal sector employment).*”

4.0 Botswana Case Study - Introduction

4.1 The Education and Training System

The Botswana Government gives high priority to education and training, and the Ministry of Education has the highest recurrent budget allocation of 28.2% of total public spending. The Department of Secondary Education’s allocation of this amount is 12% and that of the Department of Vocational Education and Training (DVET) is 5%. The Ministry’s share of the development budget is 8%, of which Secondary Education is allocated 50%, whereas that of Vocational Education is only 2%.

The structure of the education system in Botswana is similar to that of other Anglophone countries of the sub-Saharan region, such as Uganda, in that it spans a period of twelve years from primary to junior and ultimately senior secondary school. Whereas the Botswana structure is 7:3:2, in Uganda it is 6:4:2. Both systems are similar in that junior secondary school is followed by three to four years of Technical and Vocational Education and Training (TVET).

The transition rates in Botswana are as follows: from primary to junior secondary: 98.0%, from junior secondary to senior secondary: 60%, and from senior secondary to post-secondary: 12%.

Some of the other junior and senior secondary school leavers are absorbed by the six technical colleges of DVET. In addition, there are 41 Brigades Centers, originally totally community-owned but recently taken over by Government; these also admit some of these school leavers.

4.2 Policy Framework and Key Milestones of Entrepreneurship Education in Post-Primary Education and Training

Vision 2016, which encapsulates a long-term vision for the year 2016 when Botswana will have been independent for fifty years, states that “Botswana will need to be educated to understand better the importance of entrepreneurial skills”. In order to achieve this objective, “entrepreneurship and business skills will be an integral part of schooling.”

The **Revised National Policy on Education (RNPE)** of 1994, derived from the 1993 National Commission on Education, outlined the Botswana Government’s reactions to the recommendations of the Report of the National Commission on Education (1993), and laid down the policy guidelines and strategy for future educational development.

While RNPE stressed the commitment of government to provide universal access to secondary education, it also emphasized the need to enhance the employability of secondary leavers:

Government is still committed to providing universal access to junior secondary education. However, in order to enhance the employability and the capacity for further training of junior secondary leavers, the goals and content of the program will be revised to emphasize the pre-vocational preparation through the following:

- Vocational orientation of academic subjects
- Increasing the number of practical subjects offered
- Emphasizing foundation skills applicable to work situations, such as problem solving, self-presentation, team-work and computing
- Relating the curriculum to the world of work by offering both curricular and co-curricular activities that espouse the process and organization of production and the demands of working life
- Career Guidance and Counseling.

In addition, the National Policy on Vocational Education and Training of 1997 laid down the broad framework within which Vocational Education and Training activities are carried out. The scope of the policy includes public institutional training, such as that offered by technical colleges, which admit both junior and senior secondary school leavers. It further states that "... there is the need to establish a curriculum development process that is consistent with training Batswana for useful and productive lives. Such a process shall, inter alia,

- Allow for transition from one level to another
- Encourage modular training to facilitate transferability
- Be responsive to technological change and societal needs
- Encompass both formal and informal training
- Directly involve industry and other stakeholders
- Take cognizance of lifelong learning, pre-vocational preparation and continuing education
- Include development of entrepreneurial skills
- Identify core competencies
- Provide modes of delivery that are adaptable to new technologies and responsive to technological changes.

The provision of Entrepreneurship Education in Post-Primary Education and Training is provided within two paths: in general junior and senior secondary education under the Department of Secondary Education (DSE), and in technical and vocational education under DVET.

4.3 Entrepreneurship Education in Post-Primary General Education

4.3.1 Entrepreneurship Education in the School Curriculum

A deliberate effort was made in the preparation of learning and teaching materials to infuse and integrate issues raised by the RNPE, such as Environmental Education, Population Family Life Education, and HIV/AIDS and Entrepreneurship Education. Although the 1993 Commission seems not to have given great emphasis to the need to prepare young people for the demands of self-employment, the language used contains the so-called 'entrepreneurial characteristics', which can best be understood as consisting of:

- creativity and imagination
- independence in thought and action
- ability to take the initiative
- self-confidence and optimism
- ability to accept responsibility
- social skills and persuasiveness
- ability to cope with uncertainty
- ability to evaluate and take risks
- flexibility
- determination to succeed
- ability to take decisions
- ability to solve problems
- ability to work hard

At both Junior Certificate (JC) and Senior Certificate (SC) Levels EE is delivered both as separate optional subjects and by infusion and integration in the content of the so-called carrier subjects such as Home Economics, Agriculture, Fashion and Fabrics and Design and Technology. For example, one of the aims of teaching Fashion and Fabrics is to ‘acquire basic managerial and entrepreneurial skills in the textile business.’

Junior Secondary Education (JSE)

At JSE level, Business Studies is offered initially as a single subject in Form 1 followed by two options in Forms 2 & 3: Commerce and Office Procedures, or Commerce and Bookkeeping/Accounting. EE is considered as part of their content and deals with various topics such as business ideas, market research, simple costing, business plans, production and selling.

These two subjects incorporate the acquisition of both academic and practical skills that will help the students to fit into working environment. A significant proportion of the business subjects involve description and explanation of the economic institutions, of recording, processing and storing business information and of studying business management functions. The subjects aim at providing students with fundamental skills such as problem solving, communication, teamwork, self-assessment, critical evaluation and logical thinking. They help to develop good working habits, positive attitudes to work and a sense of leadership. They generally contribute to developing students into informed producers and consumers.

An interesting aspect of the subjects is the inclusion of a practical module called ‘Mini-Enterprise’. It is a group project carried out across a period of three terms from Term 2 of Form 2 to Term 1 of Form 3. Undertaken by all students, it takes the form of the creation of small businesses within the school.

Infusion suggests that the content of EE is incorporated into the curriculum to permeate and alter it in a way that affects all learners. EE content is therefore spread across as many subjects as possible to provide learners with frequent EE encounters. Infusion does not require a strong affinity between subjects, as in the case of integration, and the content of the main subject does not alter. For example, creative writing in an English lesson about ‘Roles People Play in Enterprises’ would represent an attempt to infuse EE into the English lesson. In infusion, the objectives of EE are thrown into the contents of different subjects, together with instructional materials as and when necessary.

In integration, the content of EE is incorporated into the carrier subjects through common or strongly related topics. In Design and Technology, for example, the development of business ideas can be linked to design processes. In the case of Business Studies, the topics are often common and only need distinct emphasis on application.

Senior Secondary Education (SSE)

At SSE level, EE is offered as part of the following optional subjects: Commerce, Accounting and Business Studies. The aims of these subjects are similar to those at JS except that the content is of a higher level. They have a more organized EE content, starting from the features of the entrepreneur, through business idea development, to market research and business plan implementation. Of particular interest is the establishment and running of a *student enterprise*, compulsory for all Business Studies students. Statistics of the 2006 Botswana General Certificate of Secondary Examinations shows that nearly 50% of the students opted for Commerce as one of the subjects at this level.

Close examination reveals that the range of subjects that integrate EE into their content is continually increasing. Apart from those mentioned earlier, these include Home Management, Food and Nutrition, Art and Design and Design and Technology. The content of these subject syllabuses incorporates topics such as production costing, record keeping, marketing, business plans and organization, with varying coverage and depth.

Table 2.1 Business Studies 3-year JS Syllabus: major elements

Year 1

Module 1: Introduction, incl. basic concepts and production process

Module 2: Introduction to Bookkeeping / Accounting

Module 3: Recording of Business Transactions

Module 4: Introduction to Office Procedures

Module 5: Office Machines, Equipment and Keyboarding

Year 2

Compulsory

Module 7: Mini-enterprise: Establishing a Business; Mini-enterprise: Accounting Optional

i. Module 6: Systems and Procedures (Mailing, Filing, etc) *or*

ii. Module 3: Recording of Business Transactions 2 *and*

Module 9: Trial Balance and Final Accounts

Year 3

Compulsory

Module 7: Mini-enterprise: Operating the Business *and*

Module 8: Finance (Money and Financial Institutions)

Optional

i. Module 5: Office Machines etc: Elaboration

Module 6: Systems and Procedures: Elaboration *or*

ii. Module 3: Recording of Business Transactions 3 *and*

Module 10: Computer Application in Accounting.

Table 2.2 Business Studies 2-year SS Syllabus: major elements

Module 1 Business Organisation; Purpose of Business Activity; Economic Activity; Business Units; The Government in Business

Module 2: Production Management; Business Location; Production Strategies and Activities; Technology and Business

Module 3: People and Organisational Behaviour; Organisational Structure; Managing Business; Communication in Business

Module 4: People in the Workplace; Motivation; Human Resource Management; Industrial Relations

Module 5: Business Finance; Business Accounting; Financial Forecasting; Financing Business Activity

Module 6: Marketing Management; Marketing and Market Research; The Marketing Mix: Product, Price, Promotion and Place

Module 7: Starting a Business; Funding Business Ideas; Business Planning and Start-up.

Career Guidance and Counseling

In terms of improving the orientation of senior secondary education to the world of work, teacher training institutions include programs for all teachers in Guidance and Counseling, as well as providing exposure to commerce and industry. In the schools, Guidance and Counseling is provided by ordinary teachers designated as School Coordinators. The Coordinators' other teaching loads have been reduced and they are provided with facilities to undertake this function. Relevance to the world of work is drawn out in the curriculum of every subject and taught by every teacher.

4.3.2 Preparation of Teachers for Entrepreneurship Education

Teachers of Business Studies at junior secondary are trained at Tonota College of Education, graduating at diploma level. SS teachers consist of a mixture of University of Botswana graduates, those who trained in South Africa and about 30% expatriates, mainly from the SADC region.

Most of the teachers at both levels were orientated into EE through workshops to implement Business Studies and Commerce syllabi.

With the recent acquisition of Know About Business (KAB) materials from the International Labour Organization (ILO) through Enterprise Botswana (EB), the situation is going to improve (see para. 4.3.4 below). KAB is an entrepreneurship program that includes both content and methodology. Some officers of the Departments of Teacher Training & Development and Curriculum Development in the Ministry of Education have been trained to use these materials, and they in turn are providing an intensive ten days' training of teachers to infuse or integrate EE into their teaching.

4.3.3 The Development of Learning and Teaching Materials

To facilitate continued co-ordination and communication among those responsible for curriculum development of general education, the Ministry of Education constitutes national subject panels. The fundamental objective of these panels is to assist and contribute to the development of an effective and continuous curriculum from primary through post-primary education. Membership of these panels includes staff from schools, colleges and other tertiary institutions, some government ministries, appropriate NGOs and industries. Further comments and suggestions are solicited from organizations such as Junior Achievement Botswana (JAB), Botswana Confederation of Commerce, Industry and Manpower (BOCCIM), Botswana Institute of Bankers and other relevant industries.

4.3.4 Other Supplementary Programs Supporting EE in Secondary Education

(a) Junior Achievement Botswana (JAB)

JAB is a non-profit organization that deals with business, economics and EE programs. It was initially funded in April 1994 with seed money from USAID under an agreement with the Botswana Government.

Its mission is to empower young Botswana to succeed in the world of work through a dynamic business, economic and EE program, and thereby cultivate and energize the spirit of free enterprise and self-reliance. It offers the following services:

- Training, which also provides opportunities for the participants to share business information;
- Monitoring and evaluation: through a tailor-made range of activities, it regularly invites its partners to assess the impact the program is making on the lives of young people;
- Mentorship: it provides support to young entrepreneurs who wish to start, as well as those who have started, to strengthen their business;

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- Business Research: it takes part in continuous social and economic dialogue and carries out independent inquests into business opportunities, markets and economic trends to inform its partners and participants.

Since its inception in 1994, JAB has been delivering its program to students in secondary schools all over the country. Over 70 000 young people have been reached through this program.

(b) *Enterprise Botswana (EB)*

Enterprise Botswana was set up 1997 by UNDP, the Government of Botswana and the Private Sector as an entrepreneurship and business development project. Since its inception, it has developed an active client base.

In 2006 the Ministry of Education commissioned EB to provide an Entrepreneurship Training Program for Education Officers, and Heads of Department and Principals of Senior Secondary Schools and Technical Colleges. This training is based on the Know About Business (KAB) program developed by the International Training Centre of the ILO, whose primary aim is to encourage young people to choose entrepreneurship as a career option.

The general objective of the EB program is to assist in the promotion of an entrepreneurial culture in the education and training systems. More specifically, it is intended to

- Providing the participants with the knowledge and skills for promoting, designing, supporting and monitoring strategies and programs for the integration of EE in national education systems;
- Enabling teachers and trainers to become KAB facilitators and to teach KAB to trainees and students in their institutions;
- Preparing the participants to become key facilitators in order to train teachers and instructors.

Nearly a hundred SSE Headmasters and Deputies, Senior Lecturers of technical colleges and In-Service Training Officers have received training using KAB materials.

(c) *Citizen Entrepreneurship Development Agency (CEDA)*

The Government established CEDA in response to the recommendations of the National Conference on Citizen Economic Empowerment held in July 1999. The guiding principle for CEDA policy calls for objectives that include the following:

- Fostering citizen entrepreneurship and empowerment through encouragement of local entrepreneurial culture, and increasing the level of entrepreneurial skills;
- The creation of sustainable employment opportunities through the development of citizen enterprises.

CEDA focuses specifically on the development of viable, sustainable, citizen-owned business enterprises, through the development of and access to entrepreneurial and management skills training, monitoring and mentoring, the provision of finance and the sharing of risks. This financial assistance is in the form of loans at subsidized interest rates, as opposed to outright grants. This is meant to be a soft window for citizens wishing to start or expand business operations and to buy into existing businesses.

Under CEDA Young Farmers Fund guidelines, specific training is considered critical for the success of the project. In this respect, requisite training, consistent with the nature of the project, is provided prior to the disbursement of the loan. A poultry beneficiary, for example, will be trained in Basic Poultry Management, Poultry Production Quality Control and Marketing.

CEDA Young Farmers Fund believes that EE is vital for the success of any business, irrespective of the sector. It is against this background that for all the beneficiaries of the scheme, two weeks of intensive workshops on “Entrepreneurship Skills Development” are undertaken. These workshops are administered by Enterprise Botswana.

4.4 EE in Technical and Vocational Education

4.4.1 Introduction of the Botswana Technical Education Programme (BTEP)

In 1997, the Ministry of Education published a Qualifications Blueprint for the Botswana Technical Education Programme (BTEP) to “ensure access for all Batswana to high quality lifelong education and training, with a view to producing self-reliant, knowledgeable and skilled individuals who will engage in achieving Botswana’s development goals, in particular the creation of employment, the reduction of inequity and eradication of poverty”.

4.4.2 Involvement of relevant Stakeholders in the Development of BTEP

The Department of Vocational Education and Training (DVET) decided to introduce EE following nationwide consultation with stakeholders in 1997 and 1998. A wide range of stakeholders were consulted, and included:

- Formal sector employers from large, medium and small businesses covering a range of different vocational areas
- Entrepreneurs from a range of different vocational areas, both local and regional
- Educationalists (teachers, lecturers, principals)
- Other entrepreneurial training providers (locally, regionally and internationally)
- Government officials drawn from various department of the MoE
- Scottish Qualifications Authority
- Quality Assurance Officers (QAA, External Verifiers, Validation Panel members)
- Students (both potential and existing).

During this initial consultation process stakeholders expressed the need to equip Batswana with the relevant knowledge, skills and attitudes that would enable them to set up their own business rather than rely wholly on the formal employment system. Entrepreneurial education was subsequently incorporated as a Key Skill in the BTEP Qualifications Blueprint and became a mandatory component of all BTEP training programs.

Initially the Scottish Qualifications Authority (SQA) was major consultant/partner in the development of BTEP and the overall purpose of the continued support between SQA and the Ministry of Education (MoE) is for the International Accreditation of the Botswana Technical Education Programmes and to build technical and professional capacity in the Department of Vocational Education and Training in the curriculum development process for Technician and diploma level programs.

The SQA consultants will also continue to assist DVET in consolidating and developing the QAA Units capacity to manage quality assurance systems and put in place support measures required to validate programs, approve centers for their delivery and certificate students at both unit and Program level.

4.4.3 The Role of Industry in the Development of BTEP Curriculum

The Botswana Technical Education Programme (BTEP) Curriculum has been the outcome of the joint efforts of the Ministry of Education and the employers. It is in line with National Development Plan 8 of Botswana which state that: “The future Economic growth of Botswana will depend upon the extent to which its labour force has skills and technical ability to make it competitive in the global market Place. To this end, education and training can contribute significantly.”

Each BTEP is developed and implemented in cooperation with employers and industrialists, through a range of activities to increase levels of quality assurance. These activities include a standardized research approach; membership of both Curriculum Development Group (CDG) & Policy Advisory Committees (PAC); participation in industry validation panels; external verifiers and employers providing work placement for students.

The BTEP was planned at four different levels: Foundation, Certificate, Advanced Certificate and Diploma level. The Curriculum Development Group (CDG), which is responsible for monitoring the development of a suitable curriculum, appointed a Programme Advisory Committee (PAC) for each vocational field, e.g. Hospitality & Tourism. The CDG had to go through an extensive process of ensuring that the units developed by PACs adhered to the aspirations of the employers and conformed to a “blueprint” of the Program, but also met the highest international standards.

BTEP was introduced at the six government technical colleges between 2001 and 2003. One of its more important objectives was to “reverse the bias against self-employment”. It contains a variety of courses, including Hospitality and Tourism, Hairdressing and Beauty Therapy, Clothing Design and Textiles, Construction, Mechanical Engineering, Electrical Engineering, Automotive Engineering and Business. EE is an integral part of the compulsory Key Skills education in every BTEP course.

The main purpose of the BTEP Qualifications Blueprint is

- To create access, opportunity and pathways through a flexible mode of delivery;
- To develop a wealth of transferable Key Skills;
- To equip graduates with a range of knowledge and skills in their vocational area of study that is recognized by industry.

4.4.4 Key Skills in the Content of BTEP

Key Skills assume a significant role in the BTEP, with approximately one third of total credits allocated towards their study. Key Skills provide qualities, skills and knowledge transferable to many applications and contexts, including lifelong learning and study skills. They are essential for employability, personal development and further or higher education and training. All students, irrespective of their vocational interest or the specialist focus of the programs they choose, undertake units and assessments in the following Key Skills:

- Communication Skills
- Numeracy
- Information and Communications Technology
- Personal and Interpersonal Skills
- Entrepreneurship
- Problem Solving.

4.4.5 Entrepreneurship Key Skills in BTEP

Entrepreneurship Skills at each BTEP level can be offered within a full-time, college-based vocational program or on a part-time basis during the evening, as open learning or block release.

The product, the entrepreneur, is someone with the knowledge and skills to

- identify opportunities for business
- organize resources for the business
- start his/her own business
- take calculated risks.

Between 1998 and 1999 periodic primary and secondary research was conducted to confirm the need for EE and for it to inform the content and structure of the units themselves. Members of the PAC reviewed the research findings and made recommendations regarding the content of the units of each subject area, the chief of which was to “ensure that the graduates of the system have the necessary skills to enter into self-employment”. The content was finally included in the entrepreneurship validation document only after

rigorous quality assurance checks by an independent validation panel appointed by the QAA Unit for a period of five years.

At the end of the validation period a similar development process was followed in order to revalidate these units. A literature search was supported by two surveys carried out between December 2004 and January 2005 by the Curriculum Development Group: entrepreneurs were questioned on the skills required, and entrepreneurship training providers were questioned on the skills they recognized should be taught. The results supported the view that entrepreneurship training should play a vital role in the development of the future workforce of Botswana.

Secondary research confirmed the findings of these surveys, and the PAC fully endorsed the entrepreneurship units validated by industry. This process ensured that these would meet the requirements for new entrepreneurship training and education in a clear and well-structured manner. The units, taken either as a whole suite or in other combinations, offer key entrepreneurship skills and skills for life in the changing environment of Botswana today.

4.4.6 The Delivery of the EE: BTEP Structure

The key aim of the BTEP is to improve access to, and quality of, vocational education and training and to produce graduates who are trainable, employable or who have the ability and initiative to start their own businesses. It is divided into three levels: Foundation, Level 2 Certificate and Level 3 Advanced Certificate. Only Levels 1 & 2 are presently offered in the six Technical Colleges. With the introduction of Level 3, the program also provides new pathways to tertiary education within the TVET system. This is a unique program that offers the following features:

- as mentioned above, every program is developed in close consultation with employers to include practical work, projects and work experience;
- students are able to choose some of the content of the program. From a total of fifteen vocational credits, between six and eight are mandatory units providing the core skills and knowledge required. In addition, students may also select between four and six credits from a list of elective units, thereby enhancing their core skills and knowledge by selecting those topics they find most interesting or which support their career aims;
- there are no examinations at the end of the program: achievement is measured through continuous assessment.

BTEP curricula allocate about 30% of the total time to key skills, as mentioned above. The entrepreneurship units are presented for delivery in the two main modes: firstly, as a progression from levels 1 to 3, certifying Key Skills in line with set goals; secondly, as units to be offered singly or in combination (i.e. level 1 and 2 together, or level 3 alone). The progression in skills and demand through levels 1 to 3 is clearly stated. The progression of skills development, and the development of entrepreneurship through practical activities, is clearly represented in the tasks contained in the respective units. Taken together, this provides an holistic approach in which candidates are required to investigate a business idea, prepare a business plan and evaluate an operating business. Taken as a complete program, these three units offer a thorough grounding in Entrepreneurship Key Skills, thus achieving the policy goals for entrepreneurship provision.

Table 2.3 Extract from the Gaborone Technical College Information Brochure on programs

The Building Construction Department

What will you study on a BTEP Building Construction Program?

Both Foundation and Certificate programs incorporate a number of Key Skills – Communication, Numeracy, Information & Communication, Entrepreneurship and Personal and Interpersonal Skills.

Other units are as follows:

Foundation Program	Certificate Program
<i>Mandatory Units</i>	<i>Mandatory Units</i>
- Building Science: An Introduction	- Building Service: Water Supply & Drainage
- Construction Craft: An Introduction	- Finishes to Domestic Building
- The Construction Industry: An Introduction	- Site Preparation & Concrete Work
- Building Drawing 1	- Major Building Element 1
- Building Drawing 2	- Major Building Element 2
- Construction Health & Safety	- Building Drawing 3
	- Properties & Uses of Construction Materials
	- Power Tools
	- Secondary Elements of a Building
<i>Elective Units (Choose 6)</i>	<i>Elective Units (Choose 4)</i>
- Bricklaying & Plastering 1	- Bricklaying & Plastering 3
- Bricklaying & Plastering 2	- Plumbing 3
- Carpentry & Joinery 1	- Carpentry & Joinery 3
- Carpentry & Joinery 2	- Painting & Decorating 3
- Plumbing 1	- Slabs & Paving
- Plumbing 2	- Electricity in Domestic Housing: An Introduction
- Painting & Decorating 1	
- Painting & Decorating 2	

All candidates will also undertake a Work Experience unit and External Project.

4.4.7 Institutional Preparations to Implement BTEP

(a) Provision of Resources to deliver BTEP

During 1998/99 the MoE, with the assistance of European Union funding, put in place mechanisms to provide all six technical colleges with the necessary equipment to implement BTEP. While old workshops and laboratories were upgraded with up-to-date equipment, more were built to cater for the proposed new BTEP courses. In addition to the traditional TVET courses such as Construction, Carpentry, Electrical and Mechanical Engineering, there are new ones such as Business Studies, Information and Communications Technology (ICT), Hospitality & Tourism, Clothing Design & Textiles, Hairdressing & Beauty Therapy.

Arrangements were also made for students to get work experience by attachment to the industries in the neighborhood.

(b) Staff development for BTEP

To ensure that the BTEP Qualifications Blueprint became a reality, and to raise standards in the colleges, Human Resource Development (HRD) planners in DVET designed an in-service staff development program to improve teacher competencies, capabilities, leadership and management skills. Based upon an initial training needs analysis and a skills profile, in conjunction with a base line study of teacher competence and management capacity, the DVET HRD Division designed and produced a staff development program to ensure

- (i) high quality, relevant pedagogy
- (ii) the application of cross-college assessment and quality assurance
- (iii) sound management of the BTEP and quality assurance processes.

(i) High quality, relevant pedagogy

The shortage of teachers in Botswana's Vocational Education and Training (VET) sector resulted in the recruitment of many unqualified teachers. Even those who were qualified had a skills profile more suited to a training centre than to the modern flexible college environment required to deliver the BTEP. Since BTEP aims to inculcate the independence, flexibility and adaptability necessary for young adults to become lifelong learners, the program itself required a mode of learning to facilitate this goal.

As a result, constructivism predominated as the main pedagogical method and significant attention was paid to the training of teachers in the features of student-centered learning, blended with other learning modes. Within the context of Botswana this meant that many teachers would need to change the way that they taught and to unlearn the model of teaching they had received throughout their education and some of their training as well.

(ii) The application of cross-college assessment and quality assurance

Before the introduction of BTEP, VET programs relied on external examinations to measure student achievement. The implementation of quality assurance measures inherent in modular outcomes-based, continuously-assessed programs required a shift in the roles and responsibilities of all staff.

This was accompanied by an increased procedural workload for many college staff, which included providing flexible assessment opportunities, sampling assessment decisions, completing internal verification records, giving and receiving feedback, preparing evidence for external verification, recording achievement and carrying out internal auditing.

(iii) Sound management of the BTEP and quality assurance process

The management of quality assurance within the colleges posed the greatest challenge, and institutional capacity building was required to address their organizational structure. New posts of responsibility were established, including Deputy Principal, Centre Contacts, Program Team Leaders, Internal Verifiers and Assessors.

The implementation of the BTEP as a radical national innovation meant that all staff in the technical colleges, including management, needed an intensive, generalized in-service training program. Such a program was therefore put in place for all staff, irrespective of their level of understanding, experience or preferred modes of development. This approach was based on the premise that individuals are only able to identify their needs when they are clearly aware of where they are going.

In addition to these formal staff development sessions, entrepreneurial lecturers are involved in curriculum development itself, writing of teaching and learning materials and drafting of assessment instruments under the guidance of the Principal Technical Education Officer II (PTEO II) for entrepreneurship. This process has aimed to build a sense of ownership and deeper understanding of the units.

Finally, many lecturers received coaching and mentoring on the job during the early phases of unit implementation. This certainly helped in the interpretation of the standards and the application of student-centered teaching and learning techniques.

The training program is designed to raise awareness of assessment and quality assurance issues; to enable staff with new management responsibilities to value the importance of their role vis-à-vis traditional examinations and criterion-referenced assessment, and to smooth implementation.

The main objectives of the training program are

- To develop the knowledge, skills and attitudes required to facilitate change and implement the BTEP
- To improve the independence and attainment of students in the technical colleges
- To develop the 'learning and management' skills of the teachers to ensure sustainability of the initiative.

To achieve these objectives the program used the four-stage model considered essential to promote effectiveness in the classroom: theory, demonstration, practice and feedback.

Phase 1, 'An Introduction to BTEP', is a four-day workshop aimed at raising awareness of the purpose, terminology, learning approaches, key characteristics and concepts behind outcomes based education and the inherent assessment and quality features. Its main purpose is to ensure that all members of staff are pulling in the same direction.

Phase 2, 'The Launch of the Program', promotes behavioral change and allows staff to reflect on the advantages and disadvantages of teacher and student centered learning approaches. The workshop includes the demonstration of teaching, learning and assessment methods deemed appropriate for outcomes based, student centered learning.

Phase 3 is internal verifier training for assessors who have gained some practical experience of assessment. The training explores the rationale of quality assurance, the role of the internal verifier, the external verifier, and the regulatory role of the Quality Assurance and Assessment Unit (QAA). The workshop uses actual student material and simulated exercises to develop key competences.

Phase 4 is a generic staff development program with upgrading of skills and knowledge. This is meant to add value to the teaching and learning process as well as providing a means of evaluating BTEP.

4.4.8 Involvement of Technical College (TC) Staff in the Preparation of Training Materials

The PTEO II for Entrepreneurship developed the specific training materials based on the format agreed by all Program Development Delivery staff during the initial development of the Phase Training Packs. Equipment and textbook lists were provided by the PTEO II for entrepreneurship, and members of staff were introduced to their use during Phase II training.

Training materials and approaches are designed to model student-centered teaching and learning techniques and to show how best each learning outcome can be delivered and assessed. This often provides staff with the confidence to interpret the standards, and subsequently raises levels of motivation. The Curriculum Development Group (CDG) consists mainly of teaching staff of Technical Colleges who are completely involved in the process, from the development to the validation of the units. As a result, these members have developed a sense of ownership of the units.

4.5 Similarities and Differences between BTEP and other Post-Secondary Programs

Table 2.4 Comparison between EE in BTEP and in GSE	
BTEP	EE in General Secondary Education
1. EE is a component of Keys Skills which are components of courses	EE introduced by infusion & integration in other subjects
2. Institutions have adequate facilities such as labs and workshops for all BTEP courses	Schools have labs for science subjects and workshops for practical subjects such as Design & Technology
3 Most of the teaching materials are developed by DVET with inputs from the business community & industry	Learning and teaching materials are developed by the DCDE in consultation with other relevant stakeholders
4. Qualifications of instructors: most instructors have reached diploma level, but for BTEP at Cert and Adv. Cert, they have a degree	Qualifications of teachers: minimum qualification at Junior Secondary is a diploma, at Senior level is a degree
5. In-service training is provided by a few Technical Education Officers in DVET	In-service training of all secondary teachers is the responsibility of DTT&D
6. Technical colleges get involved in income-generating activities such as motor mechanics and catering	Teachers have Subject Associations to encourage students to produce goods related to their subjects; school competitions are held annually
7. Graduates are prepared for the world of work, but many do not find any employment.	Most JC leavers proceed to technical institutions and SC leavers to tertiary education. The rest join the world of work.

4.6 The Role of Brigades Centers in Technical Training

There are 41 Brigades Centers initiated by communities in various villages, which provide artisan training under the concept of “Training with Production”. As the name implies, the centers have two divisions: Training and Production. The former concentrate on theoretical courses and the latter is their practical application. In the production units, goods and services are produced for sale to the community. For example, trainees in carpentry make tables, chairs and coffins, which they sell to the public. Money accrued from sales is ploughed back into either training units or production.

The minimum intake requirement used to be Standard 7, but with the recent achievement of ten years of basic education, the trainees are mainly JC and SC leavers whose grades were too low to allow them admission into tertiary education institutions. Examples of courses offered include Construction, Carpentry, Auto Mechanics, Welding, Textiles, Horticulture, Agriculture, Bricklaying and Draughtsmanship. At present, the Brigades enroll over six thousand students.

The Ministry of Education has recently taken over the management of the Brigades and there are plans to gradually introduce BTEP in a selected few. But for the time being they will continue to offer Level C Skills Certificate after two years, and Level B Certificate after an additional year of study.

4.7 The Role of the Botswana Training Authority

The Botswana Training Authority (BOTA) is responsible for the accreditation, registration and monitoring of both public and private training institutions to ensure adherence to the required standards and quality of training. BOTA also coordinates vocational training activities in order to achieve better integration and harmonization of the vocational training system being developed.

BOTA has made a deliberate effort to involve industry and institutions in the establishment of unit standards and qualifications through the Standards Setting Task Forces, which are made up of experts in the sector. Members are as follows: employers and employees; representatives of training institutions and associations (including the Technical Colleges); interested parties and/or members of NGOs. The membership does not exceed twelve (12), and a Business and Entrepreneurship Standards Setting Task Force has recently been established.

5.0 A Brief Comparison of BTEP with the Ugandan Experience

The latest information on the Ugandan experience is a paper presented to a workshop on 'Sharing the Experiences and Lessons Learnt by Uganda' entitled *Concept and Rationale for Entrepreneurship in Formal Education*.¹

5.1 Introduction

The development of the EE curriculum in the secondary education system was started in 2001 by the Department of National Curriculum Development Centre (NCDC) in collaboration with the Department of Technical, Vocational, Business Education and Training (DTVBET) in the Ministry of Education. The latter department is responsible for skills, artisan and technical education. Unlike in Botswana, the EE curriculum was based on the entrepreneurship and business skills education curriculum that had been introduced earlier into the primary education system in the country, and successfully developed.

The main objectives of EE in Uganda are similar to those of Botswana: namely, to enable the youth to develop positive attitudes towards entrepreneurship, business and self-employment.

5.2 The Progress Made in EE Curriculum Development

- i. The Syllabus for Senior 1 – 6 (secondary education) has been developed, with support learning and teaching materials such as teachers' guides and teachers' instructional manuals to guide and assist teachers in conducting EE classes. In addition, students' EE textbooks have been printed and are presently being used in most secondary schools.

¹ by Mr Nsumba Lyazzi, Ass. Commissioner, Secondary Education – Comprehensive, Ministry of Education and Sport, in April 2005.

- ii. EE has been successfully introduced and piloted in secondary schools since July 2002. As at 30 November 2004, about 10,000 students were learning entrepreneurship in secondary schools.
- iii. Of particular interest, in Uganda, the school communities, administrators, teachers and students were mobilized and sensitized about EE, and this raised awareness and created a demand for it. In particular, the school communities were sensitized about allowing EE students to use their businesses for practical training purposes; also to participate in the teaching of EE as resource persons.
- iv. An in-service teacher training program for teachers has been developed, through which 150 teachers have already been trained and are teaching EE in 54 secondary schools. In addition, a core team of teachers with capacity to train other in-service teachers more conveniently and cheaply has been established within the secondary education system.
- v. Tools to monitor the piloting of the EE curriculum were developed and are being used by the parties involved in the exercise.
- vi. Examination of Senior Six and Four EE candidates has been successfully institutionalized into the country's examination system. Uganda National Examinations Board will from 2006 be fully responsible for funding and setting all senior six and four final exams.
- vii. A pool of national experts (from within and without the education system) with capacity to develop entrepreneurship curriculum and teaching materials has been established in the country and is available to complete the exercise.
- viii. The Ministry of Education and Sports has initiated the process of getting secondary schools to nominate in-service teachers in readiness for the induction training program (to empower them to become EE teachers).
- ix. Based on experiences gained from the two-year piloting exercise, the National Curriculum Development Centre has developed working papers in readiness for the curriculum revision process.

5.3 Institutional Preparation at National Vocational Training Institute (NVTI)

- i. A basic entrepreneurship skills curriculum, which was received well by NVTI management, staff and students, has been developed and introduced into training programs. This curriculum replaced the earlier traditional business education program.
- ii. An instructional manual including sample teaching materials was developed and adopted by NVTI Instructors for training their students in basic entrepreneurship skills to ease the Instructors' session preparation process
- iii. Twelve Instructors were trained and are teaching EE to the whole of the NVTI student population.
- iv. The NVTI management has created a fully-fledged section for EE, and is paying responsibility allowances to Entrepreneurship Instructors to motivate them.
- v. NVTI has been assisted to publicize its training programs. For example, it was assisted to participate in the business – business show for micro and small businesses (sponsored by UNIDO).

Most of the planned activities will be implemented mainly through the NCDC's relevant technical committee meetings, training workshops for the target teachers and service contracts with technical team members for short-term and specific assignments. The NCDC's Head of Department, Business and Vocational Training, will supervise all implementation work.

5.4 How the Ugandan Experience compares with that of Botswana

Table 2.5 Comparison between EE in Uganda and Botswana	
BTEP/Botswana	BTJET/Uganda
1. Objective: to prepare students for the world of work/self-employment	Similar
2. Well structured program: Foundation, Certificate, Advanced Certificate and Diploma levels	Offered in two main paths: - Skills – artisan and TVE by the DTVBET: a 3-year JC course in TE - Industrial Training by Directorate of Industrial Training
3. Program content: relevant technical & vocational subjects, which include Key Skills such as Business, Design & Textiles, ICT	Emphasis on basic entrepreneurship skills in business studies & other vocational courses such as Commerce & Agriculture
4. Well resourced technical colleges, state-of-the-art equipment, labs & workshops, but meager support from industry	Basic equipment and workshops, but with a lot of support for practical work; business community a major partner
5. Curriculum and other support teaching materials developed by experts in DVET and TC staff	Sample teaching materials and instructional manual developed by NCDC
6. Qualifications and staff training: tutors for Key Skills are graduates and others are H.Dip. Periodic in-service program in place using experts and experienced tutors	Minimum A level in addition to TVET experience. There was initial training of instructors to offer EE. Qualifications at TVET institutions vary considerably
7. Consultation with stakeholders: mostly with technicians in middle level businesses and industry. Not very effective	Mostly with community in the surrounding vicinity, small businesses and parents. Effective
8. Motivation of instructors: fairly good because of adequate facilities such as labs & workshops	EE instructors paid responsibility allowances and assisted by the community to publicize their courses/programs
9. Economic benefits: not easily discernible. Some graduates can neither find employment nor create self-employment	Students able to integrate EE in activities such as HE, Carpentry and Agric. to start small businesses; EE teachers have small businesses

Similarities and differences between Botswana and Uganda in the provision of EE in General Secondary Education

Common features include

- The development of teaching and learning materials by a group of experts that includes stakeholders outside the education system coordinated by the National Curriculum Development Centre
- The development and provision of in-service training programs for teachers of EE; furthermore, training other teachers to sensitize them about the need to include entrepreneurship skills in their subjects
- Examinations for both Junior and Senior General Certificate have been successfully institutionalized

Main differences:

- Uganda has a separate EE syllabus whose content deals mainly with establishing and running a business, whereas in Botswana entrepreneurship skills are encapsulated in subjects such as Business Studies and Commerce and infused and integrated in other practical subjects
- In Uganda there was a concerted effort to mobilize the communities including businesses to embrace the introduction of EE. The school communities were sensitized about allowing entrepreneurship students to use their business for practical training purposes
- In Botswana the recent tracer study revealed that the business community and industry as a whole were not thoroughly sensitized to EE, hence their reluctance to embrace it in their work environment. They are willing to provide in-house training to recruits as long as “the material was there to work with”. Even organizations such as CEDA which offer some training in entrepreneurship skills to applicants do not link up with education and training institutions’ programs
- One significant difference between the two countries is that in Uganda teachers are permitted to get involved in income generating activities such as providing business-consulting services to the business community in and around their schools to supplement their salaries. Therefore more teachers are keen to get involved in EE.

6.0 Outcomes and Impacts of BTEP

It is fortunate that during May/June 2007 the Department of Vocational Education and Training commissioned a tracer study on BTEP graduates, whose overall objective was to analyze empirical data regarding the students who graduated between 2002 and 2006. Below are edited extracts from the Draft Report of the BTEP Tracer Study.

6.1 Key Findings of the BTEP Tracer Study – September 2007

BTEP as a Program

1. BTEP is still half way through the implementation of its overall program, as the Advanced Certificate and Diploma levels are about to be offered to students. This tracer study of graduates must therefore be read within the overall context of an incomplete program: the Certificate program, which is currently the exit qualification, is not the end point. This impacts on graduates regarding
 - their levels of qualification which they can present to employers;
 - their educational progression, as many are waiting to register for the next level, i.e. Advanced Certificate;
 - the lack of BTEP awareness by employers, who may be requiring an NCC or other better-known qualification.

It is noted that the delays in offering the Advanced Certificate and Diploma levels have contributed significantly to negative perceptions of BTEP.

2. BTEP currently offers a range and mix of programs to meet the ongoing requirements of Botswana’s public services, commerce, and industries (e.g. ICT, EME and Tourism) as well as enabling graduate entry into smaller entrepreneurial enterprises (Beauty & Therapy, Hairdressing, Multi-media) and cottage industries (Clothing & Textiles). The range and coverage will be extended under the proposed Advanced Certificate and Diploma.

Access and equity

1. The graduate tracer study indicates that gender tends to be a predictor of program choice and that BTEP female enrolment is higher than that of most other VET providers.

2. Information on graduates who were physically disadvantaged proved difficult to obtain. However, the enrolment rates of physically disadvantaged persons for BTEP are very low, which is consonant with the findings from the national surveys of other vocational education and training programs.
3. There was little information obtained on graduates with HIV/AIDS and whether this affected their ability to find employment. This was because of a reluctance to give information, which is understandable for fear of arbitrary dismissal for medical reasons.

Graduate satisfaction with BTEP

1. Although the BTEP Certificate program was criticized by graduates, in focus discussion groups just over half said that they would nevertheless recommend it to their friends.
2. There is need to re-consider the program structure of BTEP, especially with regard to the balance between theory and practical assignments, as both employers and graduates identified this as an area of weakness.
3. Graduates consider that BTEP programs are too long, especially at Foundation level.
4. Graduate respondents believed the credit allocation and program emphasis given to work experience to be lacking in importance. Increased work experience, which is a feature of both the Advanced Certificate and Diploma, would help to develop and nurture stronger links with employers.
5. Respondents also identified problems with the quality and education levels of instructors.
6. The Employers' Satisfaction Survey indicated that employers find that BTEP recruits need to be updated "with new technology". However, a number of employers indicated that they were more interested in the employability of recruits in terms of 'added value' beyond their vocational training. They want recruits who have a positive attitude towards the job, who can show initiative and can work with a degree of autonomy, and who have the required key skills necessary for that particular job opening. Employers were willing to provide in-house training to recruits as long as "the material was there to work with".

Graduate unemployment

1. A serious concern for BTEP is that half of the total graduate respondents are still unemployed or economically inactive; although some of those who stated they were unemployed were seeking to carry on into further education.
2. Reasons given for unemployment are that: companies/organizations do not recognize BTEP qualifications; that there are few jobs in their field of training; there is already high unemployment which makes finding work highly competitive; and employers are looking for graduates with have higher qualifications.
3. Many employers are confused about the BTEP program and assume that the BTEP graduates who apply for jobs are artisans. Few employers (except in hairdressing and the hotel sector) regard the BTEP certificate as a satisfactory exit from technical training. The very few who have some knowledge of the Advanced Certificate believe that it will improve the applicants' likelihood of gaining employment.
4. A key factor which was not identified by graduate respondents, but which has been identified by other researchers working in the field as well as by a few employers, is that there is a mismatch between supply and demand. This is an issue that needs to be addressed between DVET and the Technical Colleges, and that carries implications regarding the ability of the curriculum development system to ensure that BTEP provides graduates with the right skills for the market they are going into.

5. Graduates also believed that a Foundation or Certificate qualification was too low level for many employers. However, many of the employers contacted stated that they had a mixed recruitment policy and they were not averse to taking on school leavers to train. They were looking for good key skills, and the 'right attitude to work'.

Graduate employment

1. At present, BTEP is not viewed as the direct gateway to employment, as evidenced by the relatively low employment rate of graduates with a BTEP qualification. However, over half of graduate respondents considered their program highly relevant to their present job.
2. The graduate survey indicates that most graduate respondents believe their program to be relevant to their present job and a minority (17.5%) to be not relevant at all. Approximately 10% of employed graduate respondents are not employed in their subject specialization, which is generally either because of poor job availability in their area of specialization, or because they had switched to a job with better career prospects and/or better pay.
3. Very few graduate respondents are self-employed, and most have problems 'starting up' because of problems accessing capital and/or their lack of the requisite business skills. However, this is consonant with world wide trends in which new graduates tend to enter formal employment first and then move to self-employment. .

Career Guidance & Counseling

1. At the institutional level, the findings indicate that insufficient career guidance and assistance is provided to students who are soon to graduate.
2. The survey findings show that some 10% of respondents were still unemployed because they considered salaries to be low.

Further Education

Although the number of graduates who indicated that they had taken up further education or part time training was low (12%), nearly half of the total numbers contacted (366) wished to continue on to the Advanced Certificate with the ultimate aim of improving their employability. This in itself can be considered an indicator of BTEP satisfaction, although caution is required, as many were unemployed and they felt they 'had nothing to lose' by going on to the next level.

Reform of Present System

Although very rigorous and transparent, the system for introducing course changes is not sufficiently responsive to meet short-term adjustments. This indicates that there should be a more streamlined system (with fewer stages) in order to adjust to changing technology and market needs.

College Survey

The major finding from the student and staff focus groups is one of confusion over whether the Certificate program provides an exit qualification or a bridging program to the Advanced Certificate. This should be resolved without delay.

6.2 Brief Comparison with the Ugandan Experience

Impact and Sustainability of EE

Implementation of EE has made a big impact in Uganda in general, particularly in secondary schools and NVTI. As in Botswana, EE has created very positive attitudes amongst tutors, students industry and parents. The following outcomes are worth mentioning:

- (i) Students have been able to integrate entrepreneurship skills with other technical skills acquired in subjects such as home economics, agriculture and carpentry to start small income-generating activities at home and even at school. This has created a lot of excitement and enthusiasm for EE among the students.
- (ii) The students' attitudes towards work and views about their future prospects have become more positive, and this has greatly impressed their parents.
- (iii) Entrepreneurship teachers have started small businesses, which they use to supplement their incomes. Others are providing business consulting services to the business community in and around their schools. This has created a lot of interest in the subject among the teachers.
- (iv) The attitude of school administrations towards EE, as well as its implementation, has changed for the better. Previously they wanted to be given resources to enable them to implement it; now they are willing to do so unsupported.
- (v) EE has encouraged the participation of the school communities in the teaching of their children. This has demystified the teaching of secondary school students so that even the not-so-learned business persons can now go and teach effectively, based on their rich practical experience. EE students now see themselves as part of their communities, and look forward to the day when they will go back to improve the businesses being carried out there.
- (vi) Those parents who were initially sceptical about the influence of EE on their children are now in favor of it, having noticed the positive attitude and value changes the children now exhibit.
- (vii) Through the Ministry of Education, the Government is now very supportive of the program and is marketing it as its own product. This has increased demand for it in schools and institutions.
- (viii) Higher institutions of learning such as universities have developed and introduced entrepreneurship as a stand-alone course or as a subject for all students.

7.0 Comments and Observations by the Staff of the Technical Colleges

All six colleges were visited, and staff members were invited to give their views of the BTEP and the inclusion of entrepreneurial skills in the courses. During mid-2003 Principals of the six technical colleges held a forum to discuss the implications of the implementation of BTEP, and came up with suggestions for improvements and rationalization. There was an opportunity to meet these Principals in September in Gaborone, during a DVET Strategic Seminar, to further discuss their comments and suggestions for improvements. These are as follows:

- (a) They confirmed that DVET insisted on a thorough preparation at institutional level and conducted a close follow-up of each institution in the preparation phase and during the first year of operation, both in order to ensure management and staff motivation and support, and to ascertain that the necessary equipment, organization and teacher qualifications met the requirements for a successful delivery.
- (b) Considering the short period since BTEP was developed and implemented, the achievements so far are commendable and should be encouraged.
- (c) Since the Foundation Level has been implemented generally across all vocational areas, it is therefore true at this level that the colleges have valuable experiences with which to deal with the aftermath.
- (d) All BTEP Foundation programs are too lengthy, too basic and repetitive and not challenging enough, especially for Form V school leavers. They are also too general, and do not equip the students with adequate knowledge and skills to be considered appropriate exit points to the world of work. Therefore they should never have been considered as exit programs, but as “bridging levels” into certificate courses.
- (e) Staff members are frustrated because suggestions for maintaining or modifying certain aspects of BTEP implementation have been accepted in theory but not put into practice. However, they are pleased to be included in the consultation process concerning the revision of programs.
- (f) The balance between theory and practice is skewed towards the former, but in some colleges this has been rectified by introducing ‘mini-enterprises’. For example, Maun Technical College runs a lodge where Hospitality and Tourism students do practical work (catering, hotel management, waiting at tables, administration, etc).
- (g) The validation process is very lengthy and involves too much unnecessary paperwork.
- (h) It is generally felt that some lecturers whose qualifications do not equip them to teach at Form V level feel insecure, and need further training to be able to handle the demands of the BTEP.
- (i) Staff have been informed by former students that industry does not know anything about BTEP; in other words, it has not been properly marketed. In addition, those students we were able to interview complained that there are inadequate facilities and materials for some courses.

3. CONCLUSIONS AND RECOMMENDATIONS

(a) *Initial Preparation for the Implementation of BTEP*

There is general agreement that both management and teaching staff were sufficiently trained to implement BTEP as a whole. Facilities such as laboratories, workshops and teaching and learning materials are adequate, but maintenance of equipment is not satisfactory because of budget constraints. Nevertheless the motivation of the staff at all six technical colleges is fairly good.

(b) *Structure and delivery of BTEP*

The structure is clearly articulated to deliver at three levels: Foundation, Certificate and Advanced Certificate, with a period of between 12 and 18 months at each level. The Foundation level is considered satisfactory, except that the industry attachment of two weeks is not sufficient, and the 18-month training period is too long.

Although BTEP was originally intended for JC school leavers, there are now more Form V school leavers who apply for entry into TCs because of the recent increase in transition rates between these two levels. These cohorts of students are admitted straight into Certificate level, which they find very challenging.

Feedback from industry is that students who have undertaken both the Foundation and Certificate courses fit more easily in the work environment than those who skip the Foundation level. This confirms the belief that the Foundation level was never intended to be an exit course.

Some of the staff members in the TCs are not equipped to teach Form 5 leavers, especially those whose qualifications are below Diploma level.

(c) *Access and Equity*

It should be noted that female participation in Technical Education has been gradually increasing since 2002, as follows: 2002 - 30.3%, 2004 - 27% and 2006 - 41%. The gender breakdown of BTEP students for the same period shows higher level of female (54.25%) to male (45.75%) enrolments. The trend that emerges is that males still enroll for the more physically demanding trades such as construction, plumbing, etc.

The increase in female participation may be mainly due to a number of factors: increased number of programs outside the 'traditional' technical/vocational areas (such as Hospitality & Tourism, Textiles & Fabrics) as well as an increasing number of females entering into programs which were once seen as a male preserve (Mechanical and Electrical Engineering, Electronics, Fabrication, & Welding and Automotive Engineering).

(d) *Are the graduates of BTEP motivated and confident to join the world of work?*

The tracer study and interview with the current students reveal that there is overall satisfaction with the content at both Foundation and Certificate level, but some comments were received that indicated that the programs were too basic and not challenging enough, especially Numeracy Skills.

Some of the concerns of the students suggest the need to reconsider the structure, especially with regard to the balance between theory and practical assignments; they feel that there is insufficient emphasis on/credit allocation for work experience and that the quality and education levels of the staff are inadequate.

Although some Colleges augment the practical part of the courses by running "mini businesses" within the campus (e.g. MTC has an in-house mini hotel, and GTC has a restaurant serving lunch to the local community), consideration should be given to carrying out a reassessment of the relative weighting between

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the theory component and the practical/work experience components so as to ensure a more balanced program.

There is need to reassess the program content of the Foundation and Certificate levels in relation to the Advanced Certificate and Diploma which is soon to be introduced, as well as between Foundation and Certificate.

There is evidence that some students' expectations of the job market are unrealistic. The technical colleges could provide a much more professional and focused guidance and counseling service to BTEP students. If possible, this should also be extended to some form of job placement advisory service linked to local employers.

The view is supported that some consideration should be given to undertaking a market salary survey to inform students about Certificate, Advanced Certificate and Diploma salary expectations within each of the program areas on offer.

(e) *Employer satisfaction with BTEP graduates and their influence in the economy*

The results of the recent tracer study found that the majority of employers considered BTEP graduates to be lacking the skills needed at the work place. Many are confused about the program and assume that the graduates are artisans. Very few regard the Certificate level as a satisfactory exit level: they therefore look forward to the introduction of the Advanced Certificate course. This view is shared by some of the graduates.

There is no single strategy to create awareness of BTEP to enhance the employability of technical college graduates. A range of role players and stakeholders (e.g. QAA, TEC, professional bodies, trade unions etc.) will need to work together to overcome this problem. Possible strategies suggested by the tracer study include:

- Marketing promotions
- The establishment of a National Credit and Qualification Framework (NCQF)
- Promotion and information to public and private sector employers with regard to the stringent quality assurance processes of BTEP programs
- Information dissemination to private and public sector employers concerning areas of uncertainty and confusion (e.g. the rationale behind the assessment of learning outcomes).

(f) *The difference between Entrepreneurship Education in General Education and in Technical and Vocational Education*

The delivery of EE in general education is by integration and infusion in technical/vocational subjects such as Business Studies, Home Economic and Agriculture. In TVET, EE is self standing, and is a component of regular technical and vocational programs which require practical exposure. A strategy should be devised that allows the two systems of EE delivery to support and complement each other.

(g) *Based on lessons learnt, the staff of DVET recommend the following to any other country wishing to introduce or improve EE within TVET:*

- Clearly identify and consult a wide range of stakeholders to inform the development of entrepreneurship through a thorough stakeholder analysis
- Actively involve stakeholders in an initial consultation process that clearly defines entrepreneurship and its purpose within the specific country context
- Continually involve stakeholders in the design implementation and quality assurance of entrepreneurship
- Undertake extensive primary and secondary research to establish what content and structure EE should take
- Combine EE with some form of vocational skills development

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- Ensure that there is a balance between theory and practice
- Make EE mandatory. Many students do not even know they have a flair for this.
- Ensure that the program is complete, providing the graduate with the skills, knowledge and attitudes needed to identify, research and design a business plan and put into practice what they have developed without risk of major financial failure.
- Involve industry, mainly experienced entrepreneurs, in the development and delivery and quality assurance of entrepreneurial programs. Formal employers need not necessarily possess these characteristics or knowledge.
- Be aware that some entrepreneurs may be reluctant to share what they know for fear of developing competition!
- Entrepreneurial Education should be student centered and outcomes based, and flexible enough to allow students to adapt to local conditions.

(h) Recommendation Relating to Future Tracer Studies

The future evaluation through tracer studies of the external efficiency of innovative TVET programs will involve the collection of data from graduates and employers. Arrangements for the collection, processing and analysis for policy purposes should be made beforehand by the institutions being evaluated and the responsible agency.

Information management systems in the technical colleges need to be upgraded, especially if they are to carry out their own tracer studies in future in order to assess the impact of their programs in the labor market.

4. APPENDICES

1. List of Persons, Institutions and Organizations Consulted

(a) The staff in the Departments of the Ministry of Education

DVET	Edwin Samuels, CTEO Mr Promod Mathai Mani, PTEO - Curriculum Mr Ian Morris, PTEO (Statistician)
DTT&D	Mrs Susan Makgothi, Director Mrs Tebogo Mongatane, CEO
DCDE	Mr David Ratsatsi, Director and Mrs Mpho Molefe, CEO
DSE	Mr M. Hulela, PEO I, (Inspectorate) Mr G. Mokoti, PEO II, Design & Technology Mr T. Sepora, PEO II, Physical Education Mr N. M. Mbuso, PEO II, Art Ms K. Lekoba, PEO II, Guidance & Counseling Mr L.K. Morake, Religious Education Mr M. Martin, PEO II, Setswana Ms P.Q. Kenosi, PEO II, Home Economics Mr A. Sebeso, PEO II, Social Sciences

(b) The principals and staff in the Technical Education Colleges:

- Principal Mr L.N Tshome, Staff: Mr C. Siachengile, Ms S. Tshukhudu, Mr F. Tsiako, Ms T. Setshwane (Automotive Trades Training College)
- Principal Mr O. Sebele, and staff, Mr. M.T. Setilo (HOD), Ms F. Seitiso Ms C, Ngwato, Ms A Sinclare and Mr V. Motswagae (Gaborone Technical College)
- Principal Mr T.P. Kula and staff, Ms D Kagiso (HOD – Business Studies), Ms M. Rabai, Mr Zulu, Mr Nyirongo (HOD- Key Skills) and Ms Chilvasa (Jwaneng Technical College)
- Principal Mr K Maikaelelo and staff, Mr F. Sipatele (HOD), Ms T. Smarts, Mr K. Mokupa and Mr P Masumba (Maun Technical College)
- Principal Mr T Mmopi, and staff Mr A. Tembo (HOD – Key Skills) and Ms M Chiwanza (Palapye Technical College)
- Principal Mrs M. Khumalo and staff Mr K. Manyanja (HOD _ Key Skills), Mr T. Mavedzenge, Mr L.V. Selwe, Mr W. Mututwa, Mr K. Ntlhokane and Ms T. Mosu (Selibe Phikwe Technical College)
- Principal Mr F.O. Ntshebe and Deputy Principal Mr D Modise (College of Technical and Vocational Education).

(c) Other Organisations

- Botswana Confederation of Commerce Industry & Manpower (BOCCIM)* Ms Maria Machailo-Ellis, Executive Director
- Botswana Training Authority (BOTA)* – Mr M. Mmapatsi, Director Quality Assurance, Mr R. Sengalo
- Citizen Entrepreneurial Development Agency (CEDA)* - Mr T. Kayawe, Executive Director
- Enterprise Botswana (EB)* - Mr Dennis Maswabi, Managing Director
- Junior Achievement Botswana (JAB)* Ms T. Thlong, Executive Director
- Local Enterprise Authority (LEA)* – Mr A.T. Yalala, Market Access Manager

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