

**VOCATIONAL EDUCATION AND TRAINING
IN BOTSWANA**

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**This thesis is submitted in accordance with the conditions governing candidates
for the degree of Doctor of Philosophy in the University of Wales**

School of Social Sciences

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ABSTRACT

The development of skill formation in Botswana was investigated in the context of the global economy and high youth unemployment. At independence (1966) Botswana was one of the ten poorest countries in the world. As a democratic country the welfare of its citizens was paramount, consequently, when diamonds were discovered (1967) the main objective was to improve living standards throughout the country. When revenue from diamonds increased, diversification by creating a stronger industrial base was considered necessary to develop a sound economy, more employment for its expanding youth population, lessening dependence upon expatriate workers and further investment in schools and vocational education and training (VET) establishments, however, the supply and demand of skilled workers was uncoordinated and employers were dissatisfied with the quality of VET graduates.

Wide ranging information on the opinions of the effectiveness of VET was obtained from village elders; school leavers, teachers and parents; VET leavers, lecturers and instructors; recent VET graduates and employers; and other high ranking individuals. Human capital theory and its assumptions were found inappropriate for analysing the requirements of a developing country, as it failed to consider the effects of traditional culture on development. A more holistic approach, based on the political economy of skill formation, appeared to be more suitable.

The effects of traditional norms and expectations on western industrial practice were highlighted, also, the negative influence of the didactic teaching style on the application of theoretical knowledge, problem solving and the teaching of English in schools. VET institutes were disadvantaged by lecturers and instructors with limited industrial and teaching experience and industrial placements for students were ineffective because of inadequate funding for guidelines and monitoring procedures. Only one third of VET graduates were able to obtain work appropriate to their training. Positive actions to improve the effectiveness of VET were suggested, but they require commitment from all stakeholders

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CHAPTER 1

Introduction

Relevant Personal Background

My interest in Botswana developed during the ten years in which I worked in the field of Vocational Education and Training (VET) for the Botswana Government. This position had resulted from my twenty years working in VET in the UK. The experience prompted me to work towards a Ph.D. in this area, using both theoretical and empirical data, in order to contribute towards a better understanding and appreciation of its importance, especially in developing countries.

My original career path was based on Physics, with thirteen years in Research and Development in various industrial concerns including British Nylon Spinners (later ICI Fibres), Monsanto Chemicals, GEC Applied Electronics, John Laing Research and Development and British Steel. Cutbacks in the funding of viable projects by the government were a continual frustration. After several such projects did not reach fruition I decided upon a career change and ventured into technical education, becoming a Lecturer at Herefordshire Technical College. For three years I was involved with providing the science and mathematical content of craft and technician courses. From there, I moved to the Polytechnic of Wales where, over a period of seventeen years, my work included involvement with technician and degree courses, and particularly in the development of degree courses in Building, Civil Engineering and Quantity Surveying, which were validated by the Council for National Academic Awards (CNAA).

In May 1987 my wife and I went to Botswana, where I took up the post of Senior Lecturer in the Department of Civil Engineering and Building at the Botswana Polytechnic. At that time the Polytechnic provided both craft and technician courses, which were externally examined by the City and Guilds London Institute (C&G) and was on the point of developing degree programmes. With the invaluable help of UK experts, we prepared B.Eng. degrees in Building, Civil Engineering, Electrical Engineering and Mechanical Engineering, together with a B.Ed. in Design and Technology (D&T) for prospective senior secondary school teachers. These were all validated by the University of Botswana (UB) and moderated by well-known experts from the UK.

I soon became Head of Department, and in 1990, by which time I was Principal of the Polytechnic, the degree programmes were all under way. We had worked closely with industry whilst developing the programmes. An integral part of all programmes was the compulsory job experience. My contacts with industry were already well established, and my involvement with schools developed with the B.Ed. (Design and Technology) and the City and Guilds Technical Teacher Training Programme which provided me with a link to the Vocational Training Colleges. With the post of Principal there also came much greater contact with the upper echelons of the Ministry of Education (MOE).

In June 1992 I was invited (as one of the two non-citizens) to become a member, and secretary, of the twelve person National Commission on Education (NCE) and was seconded for a period of one year. The membership represented the wide spectrum of government, industry, management and education, supplemented for a period of one month by three overseas experts on Vocational Education and Training, one each from Germany, Malaysia and Singapore. One of the major reasons for setting up the Commission was the government's concern about the high level of youth unemployment, together with the low level of productivity, which still exists in Botswana's industry.

The Commission held regular meetings where we were fully briefed by senior MOE officers and other experts. In addition, we attended district council meetings of the major town councils; meetings with educational bodies, for example teacher training colleges, and UB, and many village meetings (*kgotlas*) throughout the country, where ordinary villagers had the right to speak. These latter meetings were considered essential in order to give validity to the Commission's recommendations. Written submissions were also requested and many were received. In these ways, the points of concern were discussed by all interested parties around the country and the responses, both written and oral, were analysed. It was noticeable that much greater attendance at *kgotla* meetings was seen at those meetings held at the greater distances from the towns. We commissioned sixteen consultancies to further investigate points of specific concern within the country. After the meetings in Botswana were completed, the members of the NCE split into two equal groups and we continued our fact-finding mission in appropriate countries around the world. Twelve countries were visited covering Africa, Europe and the 'Asian Tigers'.

The Secretariat consisted of three members and, apart from recording minutes and writing the final report, we contributed in our own right to discussions during meetings, organised all internal and external travel to outside meetings, contacted diplomatic representatives to arrange such things as meetings and accommodation within foreign countries, obtained appropriate technical and educational data and generally ensured the smooth running of the NCE. Most of the 'secretarial' work was conducted in the MOE, which enabled full use to be made of the MOE hierarchy and their experience. The NCE was chaired by The Right Honourable, Mr. P. H. K. Kedilkiwe, MP (Chairman of the ruling Botswana Democratic Party) and Minister for Commerce and Industry – later Minister of State for the Office of the President and then Minister for Education. The NCE report was published in June 1993 and formed the basis for the Revised National Policy on Education Act (RNPE) of 1994.

Soon after my return to Botswana Polytechnic it was merged with the University of Botswana (UB) and for 1995, the year of transition, I was given the temporary role of Dean of the Faculty of Engineering and Technology. After deciding not to accept the permanent post offered by UB, I remained with the government where I worked on their Vocational Education and Training Policy. For this purpose I worked at the Madirelo Training and Testing Centre (MTTC) where all craft level certificates were tested, and where responsibility for the selection and industrial placement of apprentices was held. These programmes were devised by the Directorate for Apprenticeship and Industrial Training (DAIT) and organised along the lines of the German dual-system of training. Both the MTTC and DAIT were part of the Ministry of Labour and Home Affairs (MLHA) and were located on the same site, this allowed me to further develop my relationship with their officers. Among the concepts devised by the NCE was the Botswana Training Authority (BOTA) which has now been established following an Act of Parliament in 2002. One of its main objectives was to eliminate, or at least reduce, the destructive rivalry between the MOE and MLHA which sometimes operated against the best interests of both students and industry.

During my time with Botswana's VET, and especially after working on the NCE and its aftermath, I felt that major problems had still to be resolved. On my retirement, I decided to approach the matter via a Ph.D, which I started in 1998 when I applied for a research permit from the Office of the President in Botswana.¹

¹ Appendix A1: Research Permit

Concerns Regarding VET in Botswana

My initial concerns about the quality and quantity of VET in Botswana arose from the unacceptably high level of reports that employers were dissatisfied with the calibre of the qualified graduate apprentices, craftworkers and technicians. It was claimed, for instance, that they were unable to work without supervision, or that they had spent the whole of the industrial training element of their course practising only one of the many essential skills of their trade. This latter allegation had been confirmed during conversations with students, graduates and apprentices.

There appeared to be a number of possible causes which warranted further investigation, starting with the obvious one of poor or inappropriate training. It was possible, for instance, that the preparation of both staff and students had been compromised by the inadequacies of their preceding general education. The excellent, but challenging, aim of providing free education for all children up to and including junior secondary level had entailed massive school building and teacher training programmes during the 1980s, which were not completed until the early 1990s. Mathematics and Science teachers were at a premium and these subjects were often taught by expatriates. The importance of English as the language of instruction in all subjects after the first four years in primary school (more recently from year two), as well as being the language of instruction for the installation, commissioning and maintenance of equipment, was not generally appreciated. Children in many rural schools, where their environment exposed them to English to a much lesser extent than their siblings in urban areas, generally had poorer exam results.

Because of its lack of resources, its harsh climate and its poverty (until the discovery of diamonds in 1968), Botswana remained isolated and industrially underdeveloped, with certain elements of its traditional society and culture relatively intact even to this day. For example, great respect is given to the elders, and children are brought up not to question their parents or others in authority. This behaviour pattern is often carried forward into school, college (where many will not ask questions unless specifically provoked) and even the workplace. Thus, enquiring minds and creativity are often suppressed. In the workplace, some older workers even refuse to take legitimate instruction from their younger, but better qualified, supervisor. Questions of status in the workplace are not restricted to Botswana. However, in its current form, such attitudes and behaviour cannot but damage the

effectiveness of VET and contribute to Botswana's low level of productivity. Such workers can neither be accommodated in Fordist style industry with its detailed supervision of all, irrespective of age, nor in the more recent high skills approach, with its equality of status for young and old alike.

Another emerging factor of concern was the relationship between supply of skilled personnel and their demand by industry. The government was attempting to attract new and existing investors to set up more industry in Botswana. Various inducements, including training grants, were made available. The Brigades and other basic training schemes had already been established and, in the 1980s, a dual-apprenticeship scheme was set up to provide training for specific craft skills. Other programmes produced trained technicians considered to be appropriate for other industries. However, youth unemployment was rising and the government's attempts to attract new industry were not sufficiently successful, and more and more trained, unemployed and disillusioned young people were being produced.

The lack of industry has produced another effect on the calibre of training, one which must arise in other developing countries which are trying to change from an agrarian to an industrial economy, namely that there are not enough places or personnel to provide adequate, appropriate workplace experience, or instructors with sufficient industrial experience for the college based element of the training.

This problem was compounded by the division of responsibilities for the apprenticeship programme between the Ministry of Education for the theoretical, college based aspects of each course, and the Ministry of Labour and Home Affairs for the initial selection of students, and the on-the-job placement requirement and its monitoring, for each course. Due to inadequate staffing, this monitoring was never completed and neither ministry appeared to appreciate its central importance in the context of Botswana.

A further concern was to find, and understand, the justification behind the existing vocational education and training (VET) scheme since, in the light of the high unemployment rate, it did not appear to be achieving its stated aims of attracting more industry or of reducing high youth unemployment.

In addition, the government had already accepted the challenge of globalisation as part of its plans for the diversification and expansion of industry. In 1998, the government declared its intention for the creation of a high skill society for Botswana, but without explaining how this would be achieved, or the role of VET in this undertaking.

To summarise, the employer's adverse comments concerning VET graduates appeared to have several potential roots, amongst these were the following (not in rank order).

1. Shortcomings in the pre-VET schooling, for example, due to its stage of development; the effect of traditional culture on the attitude and behaviour of teachers and pupils; a lack of appreciation of the role of English, Mathematics and Science, especially in rural areas; and poor parental and teacher career advice.
2. The poor quality of VET lecturers and instructors, which resulted mainly from their lack of workplace experience, and was often reflected in poor understanding and expectations in their students.
3. The adverse effects of traditional culture on attitudes and behaviour in regard to learning at all levels; from school, to VET, to the workplace - for example, the college lecturers/instructors and the workplace mentors.
4. The split responsibility for each apprenticeship course between the Ministry of Labour and the Ministry of Education resulted in the failure to implement effective learning from workplace experience, an essential component of most courses.

The following points also influenced the effectiveness of the VET graduates:

5. The ability to operate effectively in the workplace should depend, not only upon technical skills, but also upon social skills; together these should determine the rewards and status afforded to VET graduates.
6. The apparent lack of connection between the quantity and quality of skills required by new and existing investors which had led to the current high youth unemployment.
7. The direction of the government's economic and industrial policies, and the consequent adjustments to education and training required to successfully achieve a positive outcome.

In order to fully evaluate the effectiveness of Botswana's VET system, it was also necessary to consider any other major factors, so far unidentified, which might influence the effectiveness of the skills training programmes. For instance, at independence there was a

shortage of technically trained and educated personnel capable of running a newly created country and a serious lack of institutional infrastructure. Its main sources of income were pastoral and subsistence farming, which together accounted for 90% of the workforce, (UNESCO, 1964), plus the remitted income from migrant labour in the South African gold mines. The former is dependent upon the regular occurrence of the annual rains and the latter upon external market forces, both beyond the control of the Botswana government. In addition, Botswana faced hostile governments and/or wars of independence across its borders. In view of the limited industrial experience of most government officials and employers, coupled with the strong cultural background of the Botswana, it was considered necessary to adopt a wide ranging approach to the empirical research programme, to obtain relevant data and contribute to a better understanding of VET in Botswana.

Research Questions

The following questions will be investigated.

- (a) How do the major stakeholders in Botswana's VET system perceive its contribution to the employability of students and the creation of a high skill economy?
- (b) What is the influence of traditional norms and expectations on attitudes to skill formation?
- (c) How may these norms and expectations be inappropriate for human capital theory?
- (d) If there are flaws on the supply side of skill formation how can they be identified and rectified?
- (e) To what extent does the lack of demand for skilled labour influence youth unemployment and what measures could be taken to improve the situation?
- (f) Has the importance of the industrial placement element in skill formation training been fully appreciated in Botswana?

Outline of Chapters

Until the advent of revenues from diamonds Botswana depended heavily upon foreign aid. The UK government provided all of its capital expenditure and an estimated 40% of its recurrent expenditure, (Monkge, 2001). How Botswana existed before the income from diamonds became assured, and especially where that mode of life influenced later developments, forms the basis of Chapter 2. One such factor may be found within the strong and pervasive influence of Botswana's traditional culture. Relevant background information

is introduced in the second chapter, with a brief account of Botswana, its physical resources, its people, their culture and occupations. This background is necessary if the response of the donor aid. Even with the revenue from diamonds, Botswana has faced the same problems Batswana to the impact of 'western' commerce and industry is to be fully appreciated. For many years, as an extremely poor nation, they had struggled to survive under harsh and unpredictable drought conditions. The social structures and attitudes, which were necessary for pre-diamond revenue survival do not necessarily promote western style industrialisation of high levels of productivity or high skills development.

By the beginning of the 1980s it had become evident that Botswana's diamond revenue was very large, would be assured for many years to come, and would provide for the essentials of a modern state, including physical infrastructure, education and health care, but not substantial employment. Chapter 3 explores how Botswana responded to such factors. These responses had initially depended upon revenue from the South African Customs Union (SACU) and foreign which have also faced industrialisation programmes of many very poor, traditional, agricultural economies, such as low productivity in manufacturing industries, a severe lack of appropriate human capital and the lack of entrepreneurial skills. The important characteristics of Botswana's industrial and economic development programmes and the problems entailed are examined in this chapter.

Chapter 4 considers human capital theory which, for several decades, has underpinned the skills formation policies of many western, capitalist economies. Its applications and its shortcomings, together with those of social capital theory, are analysed and discussed. It also includes important sections on the measurement of skills and the political economy of skill formation. The impacts of seven major contextual influences on skill formation analyses, as influenced by globalisation, are considered. These include the supply and demand for skills, the need for a consensus among stakeholders and for co-operation and trust in the workplace.

In Chapter 5, the requirements and implications of skills development for both the knowledge driven society and the high skills economy are examined from the viewpoint that skills and skill formation are socially constructed, and that they are embedded in the institutional relationship of high or low trust of the workplace. The need for parallel provision for low skill, low wage training and job creation is examined in this section on the political economy

of skill formation policy. The state should then choose and promote the appropriate balance between high and low skill development within the global economy. A brief review of current employment available in Botswana is also provided, further justifying the need for creating low wage, low skill jobs in order to reduce unemployment. In addition, failure to promote the relevant employment to match the VET graduate output following major investment in VET could only promote more unemployment.

The systemic pressure points approach of Brown *et al* (2001) in which proposals to determine human capital requirements for skills development in a 'high skills' economy, and their likely chances of success, are introduced. It provides a method which takes account of the social context of the country concerned and allows a greater relevance and wider perspective than human capital theory in the evaluation of a nation's future skills requirements in the global economy.

In the empirical research programme, the opinions of those Botswana who are most involved with the current operation of the VET system and its related factors, have been surveyed. In Chapter 6 those factors, which were based on the subject matter and concerns of the previous chapters form the basis of the research objectives. Questionnaires, structured interviews and focus group discussion schedules were derived from these, and related, objectives. This chapter outlines the design of the study and reflects on the research problems.

Chapters 7 to 13 are based on the empirical findings. In Chapter 7, the elders of five village focus groups provided a unique insight into their traditional way of life and how it has been influenced since independence. The parents of the school children also gave their opinions on the schools and the role of education. Their children (Chapter 8) gave their expectations of school, their wishes for further education and training, job aspirations and factors influencing their choice of job. The teachers (Chapter 9) explained how they interpreted their role in preparing their pupils for work or for entry onto a VET course. VET leavers (Chapter 10) commented on their VET programmes and how they compared with their expectations and their usefulness as a preparation for employment. In Chapter 11, VET lecturers/instructors provided data on their training, qualifications, their experience in industry and in VET, the factors which caused them to choose their career and their opinions of student performance. Employed recent VET graduates (Chapter 12) reported their opinions of VET training, why

they had chosen their career and their job satisfaction. In Chapter 13, employers, or their representatives, provided information about themselves, their company, their opinions of graduate employees abilities and VET training.

Chapter 14 will give an overall summary of the results of the empirical analysis in the light of the skill formation theories discussed in Chapters 4 and 5. It will also present the key conclusions to emerge from this doctoral thesis.

CHAPTER 2

Background to Botswana and its People

Introduction

Important factors in this thesis are the origins, demography and culture of Batswana society and its consequences for its industrial and economic development, and its effect on the creation of skills and their implementation in Westernised workplaces.

Geography and Climate

Botswana has a land area of 582,000 km.², roughly the size of France. It lies at the centre of the Southern African Plateau, on the Tropic of Capricorn, at an average height of 1000 m. It is landlocked and has borders with Namibia, South Africa, Zambia and Zimbabwe.¹ The land is largely arid or semi-arid and experiences a highly unpredictable rainfall, which ranges between an average of 650 mm. p.a. in the north-east and 250 mm. p.a. in the south-west. Seventy per cent of Botswana consists of the gently undulating plains of the Kalahari Desert which, although covered with sand, supports scrub vegetation and grasses. The remaining eastern region straddles the north-south railway line and has a somewhat less harsh climate and more fertile soils. Temperatures range between the extremes of -5° C and 43° C. There is virtually no permanent surface water; the exceptions being the Chobe River and the remarkable Okavango Delta in the north.²

Resources

At independence (1966), Botswana was one of the ten poorest countries in the world, with little economic or no physical infrastructure on which to build a modern state. There were 20 km. of tarred road, in 1999 there were more than 5,570 km.³ There are now three main resources in Botswana: agriculture, minerals and wildlife habitats. The rain fed agriculture takes place on soil of naturally poor fertility. Its major component is the production of beef, most of which is exported to Europe. Arable farming is mainly for subsistence purposes with a much smaller proportion of commercial farming in the few places where irrigation is possible. At independence, agriculture contributed 40% of the Gross Domestic Product

¹ Appendix A2: Map of Botswana:

² Campbell, 1980

Ministry of Commerce and Industry (1997) Botswana Review, 18th Edition

Republic of Botswana (1997) National Development Plan 8

Stanbic Bank Botswana Limited (1998) Botswana in Figures

³ Republic of Botswana (2002) Diamonds for Development

(GDP) it has now shrunk to 4%. This reduction has been due to severe droughts, the drift of population to towns and the dramatic rise in the production of diamonds and, to a lesser extent, tourism, and the consequent increase in their contribution to the GDP.¹ The World Bank has now classified Botswana as an upper-middle-income country, with a *per capita* GDP of over US\$6,000, with an average income *per capita* of approximately US\$80 p.a. (Republic of Botswana, Economic Snapshot, 2001). It should be realised however, that barter played a substantial role in Botswana life.

Diamonds have provided the capital for growth; Botswana is now the largest producer of diamonds, by value, in the world. The various policies to broaden and diversify the economy have had only a very limited success. Diamond mining is capital intensive and employs relatively few people. Since independence, cattle-ranching has become a smaller but still important industry, but, whilst many people own a few cattle, the larger ranches are concentrated in the hands of a relatively small number of farmers. These factors have had a knock-on effect, with the consequent development of high levels of income inequality and poverty:

Not everyone has benefited meaningfully from raised incomes or higher standards of living. Even today, less than a quarter of Botswana's work force is formally employed. Botswana has 47% of its population with an income below the poverty datum line and a GINI coefficient of 0.54. Countries with GINI coefficients of 0.5 and above are considered to have high levels of inequality (Taylor and Mokhawa, 2003: 263).

The People

Today the busy shopping mall of Gaborone, Botswana's capital city, is thronged with smartly dressed, sophisticated citizens, together with a sprinkling of street vendors and expatriates. In the banks, operators sit at their computers, the cash point screens respond to my entry code with 'Good morning / afternoon Mr. Kerton', on the streets people talk animatedly to their cell phones, in the restaurants (almost unique in Southern Africa for their tables of mixed nationalities) the clientele are increasingly local, but if you ask them, very few will admit that Gaborone is their home town. There still exists a very strong loyalty to the village community from which they originated. Gaborone did not exist thirty-five years ago, it was built from scratch when, at independence (1966) it was belatedly realised that the administrative capital, Mafikeng, lay inside South Africa! The close-knit pattern of life in a

¹ Republic of Botswana (1997) National Development Plan 8
Republic of Botswana (1998) Annual Economic Report

rural village, which has evolved over several centuries is still, because of Botswana's isolation, its dominant culture.

On first meeting the Batswana, one is immediately struck by their courteous and respectful manner which is devoid of any attitude of subservience. They place great value upon individual relationships. This is reflected in their careful use of the appropriate form of greeting, which varies according to the status of the individual concerned. Older members of the family, and elders in general, are accorded particular respect. Thus it is normal to accept instructions from one's elders, but not *vice versa*. It is considered insulting to contradict one's elder brother, even if he is incorrect. Fathers do not play with their children as this would show disrespect, on the part of the children, to their father. In my experience, Batswana students coming from an oral tradition, in which their parents are frequently illiterate, are much more at ease when speaking to an audience than are UK students, yet they are very uncomfortable when presenting and discussing their grievances with authority. The family and community are held in high regard, partly because they provide a traditional form of insurance. The extended family acts as a safety net for its members who are in trouble, jobless or require childcare whilst the mother studies abroad. In the extended family all members have specific responsibilities.

The Batswana are predominately a friendly, hospitable and tolerant people who have a good sense of humour and are generally very laid-back – this latter characteristic is alleged to arise from lengthy spells spent at the cattle posts! They are in some ways rather reserved, particularly in comparison with many of their West African counterparts. Like most Sub-Saharan Africans, they will try to avoid face-to-face conflict, even on some occasions, to the extent of what we might call lying.

It is widely claimed that the women, in general, work harder and are more reliable than the men. Consequently, more and more women are attaining posts of high responsibility in government and commerce. Girls are not sent to the cattle posts and, for the first ten years of schooling, are in the majority. However, the high rate of teenage pregnancy, domestic responsibilities and the traditional attitudes of parents result in more boys than girls completing the last years of school.

Society, Economy and Governance

Pre-Colonial

During this period, life in Botswana centred around cattle ranching and subsistence farming, and provides a good example of traditional African life. Society was hierarchical and male dominated. Ultimate authority rested with the chief, who delegated certain functions to village and ward headmen:

Traditional Tswana religion focused on the Chief: he was their religious representative on earth with magical powers and direct communication with the ancestors. As such he was a cohesive factor of enormous power ... When Khama III was baptised in 1862 it rocked the whole concept of Ngwato religion. (Campbell, 1980: 577)

Important decisions affecting the community were taken at the *kgotla* (village meeting place), where the meeting would be presided over by the chief or headman and his advisors. These advisors were village elders, older men of status and influence, often relatives of the headman. All the men in the village were given the opportunity of contributing to the discussion, although the headman made the decision. The most important issues were referred to the chief's *kgotla*. Custom dictated that the chiefs derived their power from these consultations. However, 'The Chief was the ultimate authority and recognised nobody above him' (*ibid*: 53).

The Protectorate

In 1885, the Bechuanaland Protectorate was created at the pressing request of its three most important chiefs, as a means of protection from the incursion of the Boers. Britain's role was largely defensive and was 'concerned to limit its activities in the territory to (1) the maintenance of law and order, and (2) ensuring that the territory's population absorbed the costs of colonial administration as quickly as possible' (Picard, 1987: 97). The authority of the chiefs was not directly threatened but, through the imposition of measures such as the hut-tax to pay for the administration, it was indirectly reduced. For a community of largely self-sufficient (cashless) agriculturists, this meant that many thousands of young men had to migrate to South Africa to work for cash in order to pay the tax.

Colonial Policy: Benign Neglect or Deliberate Underdevelopment? The supporters of the benign neglect theory, such as Dutfield (1990), claim that the benefits of preserving much of the traditional way of life outweigh the very real disadvantages of underdevelopment. The

opposition, represented by Picard (1987), believe that not only did the disadvantages outweigh the benefits but also the underdevelopment itself was deliberate:

Britain protected Botswana (Bechuanaland) from South African invasion and left an independent Botswana ... and the people of Botswana with their socio-economic system largely intact ... It remained free from Rhodes and the chiefs went on ruling their people as before. Apart from a narrow strip of land on which a railway to the north would be built with some farmland on the Transvaal border, no whites were allowed to settle in the protectorate.

After the South African Act of Union came into being in May 1910, the status of Botswana (Bechuanaland) and that of the other British Protectorates in southern Africa remained ambiguous. They continued to be administered from London, although officials in both Pretoria and London felt they were too poor and unskilled to ever make it alone. Eventually incorporation into South Africa seemed inevitable. (Dutfield, 1990: 18-19)

Thus, by isolation, neglect and underdevelopment, the Batswana have retained much of their traditional way of life:

Britain's parsimonious policy vis-à-vis Botswana (Bechuanaland) had a decisive impact upon Botswana and its' economic status within the region. As a result of Britain's colonial rule, what had been a vigorous pre-colonial African economy was subordinated to a minor role in the southern African region. Rather than being neutral economically, British colonial rule resulted in the "structural underdevelopment" of the Botswana economy and (via the hut tax breaking down the subsistence economy) coerced the nascent migrant labour into being with all of its socio-economic consequences within Botswana.

... In addition, Britain's regulatory policy locked Botswana (Bechuanaland) into a dependency relationship with South Africa. Both customs unions and the trade limitations "agreements" allowed South Africa to gain a dominant position within Botswana (Bechuanaland) and within the region. The situation in relation to South Africa was exacerbated by the ambiguous role played by the High Commissioner who was the final governing authority for Botswana (Bechuanaland) and Britain's diplomatic representative for South Africa (Picard, 1987: 96, 99).

Migrant Labour – a Result of Colonial Governance: This refers to the provision of unskilled labour by the countries of the southern African region who, for over one hundred years, have serviced the mines, the farms and homes of the Republic of South Africa. It was in the 1890s that the number of migrant labourers from Botswana (Bechuanaland) increased substantially. This was the disastrous period during which Botswana suffered from severe drought, locusts, famine and disease. In 1896 the Rinderpest epidemic destroyed most of the cattle, and the hut-tax was imposed in 1899. Cash was needed for the hut-tax and indeed for survival. At its

according to the 1999 government statistics,¹ this had reduced to 25,000 and has now stabilised at around 6,122:

The result was the development of a 'dual economy' ... in the sense of a transformed African. (more or less self-sufficient subsistence farming) society now changed into peasants and proletarians ... The 'peasantization' process created small agricultural producers who intend to make a living by selling part of their crops or herds. The proletarianization created wage earners in the hire of an employer ... Once established the system became self-reproducing, creating an oscillating pattern of migratory labour in combination with rural subsistence agriculture and cash cropping. Peasants and proletarians were structurally dependent on each other for survival (even though they may have been the same people in different roles) (Parsons in Picard (Ed.) 1985: 42).

Such contentions are supported by several high-profile experts, including: Halpern, 1965; Palmer and Parsons (Eds.) 1977; Campbell and Tlou, 1980; Parsons N. 1980 and Ramsey, Morton and Mgadla, 1989.

Schapera, (1947) in *Migrant Labour and Tribal Life*, adds that, during much of the colonial era, the chiefs and other elite Batswana were also discouraging development in order to frustrate the long-term (historical) claims of South Africans who wished to make Botswana their own. In fact, both underdevelopment and the institution of migrant labour made Botswana more dependent upon South Africa and therefore even more liable for take-over by South Africa.

Effects of Migrant Labour in Botswana: Schapera (1947) states that most authorities agreed that the wages from labourers in South Africa formed an indispensable source of cash for the Batswana (to this day it is still quantified in the annual Government of Botswana Labour Statistics). He cites the following detrimental effects which are wholly, or at least partially, attributable to the migrant labour system:

- the large number of migrant labourers involved make it very difficult for the community to keep contact with them;
- some stay away for many years, or even permanently, to the detriment of their families;
- medical officers have reported the spread of diseases attributed to the returning migrants, e.g. tuberculosis and syphilis;
- their absence (sometimes erratic) hampers the development of the cattle industry;
- tribal discipline suffers;
- they contribute to the growing laxity in the standards of sexual morals;

¹ Republic of Botswana (2001) Labour Statistics 1999

- broken homes;
- husbands deserting wives and sons deserting parents;
- wives unfaithful to absent husbands;
- reduced birth rates because husbands were absent for long periods during their wife's child-bearing years;
- loss of respect by young people for their parents.

These factors illustrate how strong and effective the original Batswana traditions must have been in order to have survived with so much still intact, for example respect for the individual, deference to elders and the continued use of the *kgotla* to settle disputes. Understanding this is an important factor in contemporary efforts towards development in general and to vocational education and training in particular.

Other Influences on Traditional Life

It should be remembered that, in addition to the effects of migrant labour, there have been other heavy blows to the traditional way of life. The missionaries introduced their new system of religion and campaigned successfully against traditional medicine, initiation ceremonies and, less successfully, against *lobola* (bride price). Botswana became overwhelmingly Christian, the two largest religious groups were the Anglicans and the Catholics and, even today, religion plays an important part in the life of most people, although many now attend the smaller, more recently developed, charismatic churches. Traders, other expatriates and the sale of firearms to all when the colonial rulers specifically forbade the possession of firearms to all, including the chiefs, enabled the chief's authority to be challenged and contributed to a reduction in the authority of the chiefs and the demise of local customs (*ibid*).

Governance: Post-Colonial Independence

The Kgotla:

Following independence (in 1966), the new government further diminished the chiefly powers ... in general these powers were surrendered to the newly elected central and district councils ... The village Kgotla's own traditional powers and authority were inadvertently reduced since the Headman or Chief had always acted as the Kgotla's executive (Odell, 1985: 66).

The chiefs were relegated to an almost powerless Upper House of Parliament (The House of Chiefs) and lost almost all of their local powers. It would appear that the *kgotlas* had also lost their powers to regulate and control many facets of everyday life in the village: the Tribal Land Act of 1970 transferred the statutory powers of the chiefs for allocating tribal land for residential, commercial, arable and grazing use to the newly constituted Land Boards.¹ However, Odell (1985: 66) states that: 'the general finding of recent research is that far from being ineffective or moribund in development-related matters, the *Kgotla* with its headman, is central to communications and government at the local level'. In an article written by the Government Rural Sociology Unit (1981) the following striking points were made:

- there are more *Kgotlas* than all other government institutions combined;
- more people attend and participate in *Kgotla* meetings in any one day than attend and participate in all the modern institutions in one year;
- more people understand *Kgotla* proceedings and voice their aspirations and grievances than in all the other forums put together.

Vengroff (1972: 128) supports the importance of the *kgotla*:

The main importance of the Kgotla lies in the fact that it represents the point of interaction of the traditional political system and the organisation of the central government and the district council. It offers a means of offering traditional legitimacy to the introduction of new ideas, ways of doing things and regulations issued by the elites at central and district level.

One of the important reforms to the *kgotlas* was the empowerment of women to participate on an equal footing to men at *kgotla* meetings. Some are now even included among the advisors to the headmen and chiefs. The issues discussed and decided upon include: disputes concerning grazing, rights and use of water sources for cattle, family disputes, the time for ploughing and sowing and the time for cutting grass for thatching, (it is important that the grass is allowed to seed first so that more grass will grow the following year). 'The *kgotla* and the chief, sitting as a customary court handle 85% of criminal cases and 90% of civil cases in Botswana (NDP8: 461²). They can issue fines and administer punishment, for example, three strokes of the cane. Their decisions are rarely, if ever, challenged, which indicates a satisfaction with, and acceptance of, the *kgotla* and, in particular, the continued

¹ Republic of Botswana (1997) National Development Plan 8

² Republic of Botswana (1997) National Development Plan 8

acceptance of the rights of village elders to administer and implement decisions affecting everyday details of life.

Central Government: Picard (1987: 219) stated that:

Although legally Botswana has a multi-party political system, in fact the country is dominated by the Botswana Democratic Party (BDP). ... The BDP lacks an overriding ideology ... Botswana's political elites are content to leave decision making mainly to administrators with whom they share a number of their socio-economic characteristics ... consequently much of the initiative rests with the upper and middle level civil servants.

Picard (1987: 269-270) also stated that:

The Botswana government has continued to build into its fabric a series of factors that have allowed advanced capitalism to develop. ... Despite its independence on South Africa and the West, Botswana can now be seen, in comparison to other African countries, as an example of state-planned economic growth.

Its success can be seen in the changing patterns of employment statistics. However, at independence, it was stated that: 'A major constraint upon the use of the state as an instrument of development in Botswana has been the extreme shortage of human resources. Few African states faced such shortages of trained managers and technicians.' (*ibid*: 272). In response to this situation, Botswana initially concentrated on producing secondary school and university graduates for its civil service and vestiges of this elitist approach still exist. For example, when the National Commission on Education and the Revised National Policy on Education approved recommendations for the revision of the primary and secondary school curricula were implemented, the secondary school changes were made and agreed before those of the primary were even started. This is typical of Botswana's civil service top down approach.

John D. Holm in Stedman (1993: 91), writing of democratic government claims that, 'Critical to making this system work is the energetic and substantial citizen participation in voting, political parties and interest groups,' and that, 'a general process of social mobilization accompanies the expansion of citizen participation in politics', the socially mobile in Botswana being, 'those who experience education, mass communication and employment in the market economy.' He described his investigations (which were carried out in 1987 and 1989) into, amongst other things, the political awareness of those whom he classifies as socially mobile and concludes that there is indeed a link.

He then uses the increasing turnout of voters in the general elections to support his conclusions: 21% in 1974, 37% in 1979 and over 50% in both of the 1980s general elections. However, he did not distinguish between the rural and the urban turnout, where in fact, as observed in more recent elections, there was not much difference. As he himself wrote: 'Effective political party mobilization at the grass roots is an alternative possibility and traditional leaders may use their prestige to spark a turnout of their followers.' (*ibid*: 92). Later, he stated that the Botswana Democratic Party – overwhelmingly the dominant party since independence – has made the *kgotla* one of the governments principal channels for interaction with the villagers. In the larger villages and towns the *kgotla* system has become less important, but this has been accompanied by an open and vibrant press.

Writing in Stedman (1993: 113), about Botswana as a shining example of democracy in Africa, Gloria Somolekae claims that it is mainly due to outstanding governance that it has maintained a strong and relatively autonomous bureaucracy, whilst many others in Africa have not. She states that it is very effective and has remained relatively free of corruption, and quotes a 1984 World Bank team's comment:

Public sector management is performed in Botswana with commendable attention to detail, discipline and dedication by the civil service. It is considered one of the most successful in Africa, if success is measured by the capacity of a system to formulate and implement effectively strategies and programs for social and economic development.

However, it should be noted that on key issues, such as those for which a National Commission has been set up, government procedure mirrors that of traditional practice. When the National Commission on Education was initiated, 'it had the guidance of the House of Chiefs and the All Party Caucus in determining the extent to which the Commission was to consult the nation' (NCE: iii¹). As the major part of this consultation we attended seventy-four *kgotla* meetings covering the whole of the country. This principle of seeking the opinions of the people via the traditional forum of the *kgotla* may help to explain the development of a very conservative government, the apparent paradox of an element of democratic accountability over government bureaucracy through 'traditional' means, and the measure of mutual trust that has been retained between a very traditional society and its government. It also illustrates how some traditional customs and culture have been transferred into the culture and practice of government, for example, the practice of internal political and bureaucratic decision making, which is based upon wide external consultation.

¹ Republic of Botswana (1993) Report of the National Commission on Education

Local Government: District councils were established by the Local Government Act of 1965. Their statutory responsibilities included primary education, basic health services, the development of rural roads and village water supplies. Initially, they faced severe budgetary limitations and staffing problems because of the lack of technically trained personnel, partly because such personnel were already employed by central government! Central government subsidies and extensive training programmes throughout the 1970s and 80s were required to eliminate most of these deficiencies. Botswana's district councils are now active, and often vocal organs of government, and are a major source of criticism of central government. However, in contrast to the internal political disagreements, there exists a strong administrative unity that encompasses both local and national civil servants. This has in many ways isolated local councils and councillors from much of the decision making process.

The Importance of Land and Cattle

Land, cattle and subsistence farming are the basis of village life. Much of Botswana's cultural heritage is related to these fundamentals, and illustrates some of the differences between the traditional and western ways of life. 'The main importance of cattle lay in the links that their ritual transfer established between families, wards or even tribes, to ensure mutual cooperation in almost every activity' (Campbell, 1980: 44). Respect for the individual, obedience, social cohesion within the village or tribe and the responsibilities of the extended family take precedence over individualism and advancement and, in part, result in the problems which sometimes arise when Batswana work in a western operated workplace.

Land: Land was held in trust, on behalf of the villagers, by the chief/headman. Permission to use the land was granted by the chief/headman, and each family would have the use of up to three plots of land:

1. land for their yard, with its huts, in the village – in the more isolated areas where it has remained in the family for several generations, ancestors may well be buried in the yard;
2. arable land, within a few kilometres of the village – this was mainly the concern of the women;
3. common land for cattle herding, which may be over fifty kilometres away from the village – because of the long distances involved, the herdsmen traditionally left their

village at the start of the rainy season, October/November, and returned from the cattle posts in July/August in time for harvesting the arable crops.

However, the Tribal Lands Act of 1970 transferred most of the powers over land use from the chiefs and vested them in land boards.¹ The chief's permission still has to be obtained for major changes on existing property, for instance if a villager wants to build a new hut for his/her son within a family plot, and many disputes concerning land or cattle, including grazing rights, are dealt with by the chief when the *kgotla* is used as a customary court. Other pronouncements concerning, for instance, when grass may be cut for thatching roofs are still given without the force of law, but with the weight of the continuing culture of respect for elders and obedience to authority, they are usually followed. This system favours social cohesion and subsistence farming. Over a period of time boreholes, clinics, schools and social services have been provided to, successfully, reduce the flow of people from rural to urban areas.

Cattle: Cattle still are central to the lives of most Sub-Saharan African, Bantu peoples. They are used as a measure of man's influence and importance (it should be remembered that the villager owns no land, only the right to use it.), 'A man is not truly a man unless he has cattle,' one of the elders of a village focus group stated. It was further explained that it was not just simply the number of cattle, 'A man was a fool if he believed that,' said another. Speaking of the prestige of cattle owners, it was said that a cattle owner would often help the less fortunate family members or neighbours in times of need, for example, by supplying a beast for a wedding feast or funeral. However, prestige would only be gained if the help was given and received in the right spirit.

Further examples were given of such practice in the recent past by another elder in the focus group:

In the past, if I did not have a cow to plough with, my uncle (an older person) would come with his cows to plough for me. My thanks to him would then be a part of the crop (sorghum) that he helped me to plant. Secondly, the chief used to have fields that were called 'masotla' (the poor ones). The tribe as a whole ploughed and planted these fields. The sorghum that was harvested was stored and used in droughts as seeds for those who didn't have enough seeds. In this way the sorghum was returned to the tribe as a whole (Focus Group: Village Elder).

¹ Chapter 2: 18

The moral norms of behaviour created by these examples of gift exchange indicate how the strength of the social cohesion within the villages was established. It also demonstrates the economic and social resources inherent in the traditional culture, parts of which are being lost in the effort to compete successfully in the wider capitalist market. This represents an important challenge to the western style model of development.

The Family

Within the traditional family there were clearly defined roles for men and women. The latter played the major role in arable farming and were also responsible for household maintenance, preparation of food, care of the sick and looking after the children. Men were responsible for care of the livestock and hunting – an important source of food in many areas. As heads of household, men held considerable authority over the women in the family. They took decisions concerning land, cattle, household property and took leading roles in such social occasions as those to mark births, marriages and deaths. It should be noted that, in the extended family of today, in addition to the husband and wife, several others have specific roles to play, for instance in the event of the early death of the mother or father, the eldest daughter or son respectively had to assume their responsibilities, foregoing any education, career or further educational ambitions of their own.

Because of the migrant labour system (which resourced the hut tax) men had to leave their families to work in the mines in South Africa, and women had to take over many of the traditionally male tasks. The remittance sent home did not adequately compensate for their added burden. In order to survive, an increasing number of women themselves became migrants, leaving their children with relatives, to take poorly paid work as domestic servants, or seasonal agricultural workers in South Africa. The migrant labour system was responsible for the initial increase in female-headed households - a phenomenon which, for a variety of reasons, is very prevalent today, with 49% of households headed by females.¹ Since women were assigned a lower legal and cultural status than men, female-headed households were, and often still are, a disadvantaged section of the community.²

Today the majority of Batswana women live in the villages where they have a very heavy workload. In addition to their role as arable, subsistence farmers, their everyday tasks are

¹ Republic of Botswana (1998) 1995/96 Labour Force Survey

² Republic of Botswana (1997) National Development Plan 8

much more time-consuming than in the west, particularly as many villages have no access to electricity. Preparation of a meal may involve walking several kilometres to collect firewood, the heavy job of stamping the maize, sorghum or millet, and fetching water. Even with standpipes, the water has to be carried some distance because of the policy of allocating large plots for each family. For reasons of hygiene, there are bye-laws forbidding the washing of people, pots or clothes near to the water source. Children are delegated to perform many of the daily chores as soon as they are able.

As many as 40% of children were born outside marriage (Howlett, 1983). Considerable status is attributed to child-bearing; childless women are not considered to be fully adult. Children are seen as a security for old age, although the government has now introduced a small old age pension for people over sixty five. Families tend to be large, especially in the village – the fertility rate is 3.8 children per woman.¹ Some 50% of the population are below the age of 16. However, the incidence of HIV/AIDS is one of the highest in the world, despite considerable openness and widespread health education. With just over 25% of adults (15 - 49) living with AIDS, it has become the leading cause of death and has reduced the life expectancy by an estimated twenty years (Mwaura, 1998). Its impact is expected to get worse.

Many women have taken advantage of their educational opportunities and, particularly in towns, more women both single and married are finding employment. Working women employ a housemaid to perform domestic duties and, if necessary, to look after their children. Children may also be left in the village with the grandmother or some other member of the extended family. Some of these working women are extremely successful and it is common to see them driving around town – frequently in cars that they own.

Most of the men in the town, who have left their village in search of work or training and have been successful, still hanker after their cattle and will return to their cattle posts whenever possible. Family occasions, such as weddings and funerals, are rarely missed and are normally accepted as justification for taking a few days off work! Thus, the advantages of the village are envied and utilised when convenient, and the realisation that the traditional

¹ Republic of Botswana (1997) National Development Plan 8

life style has enabled their survival is cherished. Very few return to their village permanently, though the obligation to return for family events is cited when convenient.

Education

Pre-Colonial Era: At this time education and training were indistinguishable and were essential for survival in Batswana society:

Traditionally, Batswana received formal training during their initiation ceremonies and informal training from their parents and elders. Unless a man had undergone the initiation ceremony, he was not allowed to take part in public affairs, likewise a woman could not marry or start a family. Just as importantly, uneducated people were regarded as children no matter how old they were. To be taken seriously a person had to be "educated" (Ramsey, Morton and Mgadla, 1996: 50).

This 'education' promoted very conservative ideals: children had to respect their elders; adults were expected to act like their elders and ancestors. Everyone was also taught to respect the *kgosi's* (chiefs) authority and not to disturb the political order. All Batswana children received informal training from their parents from a young age. Mothers taught their daughters and fathers taught their sons their respective skills. The children were transformed into adults through the initiation ceremonies, which were very serious affairs, only then were they allowed to marry. The first primary school in Botswana was built at Kolobeng, in 1847 by the Bakwena and the London Missionary Society (LMS) missionary: David Livingstone.

Education: Colonial Era: Missionary education emphasised reading and writing so that people could read the Bible and spread the message. By 1900, the missionaries had established schools in the main towns and villages. Conditions were poor, classes were small with all pupils being taught in the same room.

In 1910, the Chief of the Ngwaketse formed a committee comprised of representatives of the mission, the tribe and the administration to administer the schools in his tribal area. It was so successful that other chiefs followed suit. This formed the basis for all schools administration until independence (1966) (Campbell, 1980). At that time there were two hundred and thirty nine primary schools, with a total of 54,845 pupils, for a country with an estimated population of 550,000 (UNESCO, 1964), seven non-governmental secondary schools (resourced by the missions, Batswana and outside donors) but only one government secondary school (Morton *et al*, 1989). They catered for a total of 1,565 pupils, with around

50% of the teachers untrained. A small trades school catering for 60 trainees was established in 1962 (Campbell, 1980).

Education: at Independence: Such was the shortage of school certificate and junior secondary certificate holders, for recruitment for the civil service, that the government initially gave top priority to the development of secondary education. This followed the recommendations of the UNESCO Educational Planning Mission of 1964 and the Transitional Plan for Social and Economic Development of 1966.¹ The National Development Plan for 1968-73 stated that the main aim of education was to provide, within the limits of finance and time, a pool of well trained manpower to serve the country.² Since the advent of a large income from the mining of diamonds in the mid 70s, there has been on-going high investment in most areas of education. Free nine years primary education was advocated by the 1977 National Commission on Education and was introduced during the following few years. However, recommendations on pre-school, vocational and technical education were not included in their recommendations.

'... it has been emphasised that the British rule left behind an efficient bureaucratic administrative system with a strong base of English, both of which became the centre piece of subsequent development in the post-independent Botswana' (Monkge, 2001: 121). Presumably, this helps to explain why English was retained as the language of instruction in all but the first four years of primary education, and why the Cambridge Overseas School Certificate was also retained. In Botswana, the civil service has always been the largest single employer. At that time there were few schools, especially in rural areas, and all schools were fee paying. Access was therefore limited and unevenly distributed (Campbell, 1980). With the government's desperate need to replace expatriate civil servants, the emphasis at independence was on the development of secondary education. All education was fee paying.

Education: Post-Independence: The recommendations of the first National Commission on Education of 1977 were incorporated into The National Policy on Education (NPE) 1977.³ In 1980, primary school fees were abolished and subsequently enrolment increased

¹ Colclough, 1976; Kann and Taylor, 1986

² Republic of Botswana (1968) National Development Plan 1968-1973

³ Republic of Botswana (1977) Education for Kagisano: Report of the National Commission on Education
Republic of Botswana (August 1977) Government Paper No. 1 of 1977: National Policy on Education

substantially. Alongside this large-scale expansion, a significant teacher training programme has led to a considerable drop in the percentage of untrained primary school teachers from 39% in 1978 to 9.8% in 1999.¹ This residual legacy of untrained teachers dates from the early years of independence and teacher shortage, when almost anyone who had obtained their Primary School Leaving Certificate could be (and often was) drafted in by the government to teach in a primary school. Because of the very large areas of sparse population, where it is not always viable to site schools, education is not compulsory in Botswana, nevertheless the 1991 census figures indicated that 83% of the 7-13 (primary school) age group had enrolled.²

Technical and vocational education was given little prominence, as compared to primary and secondary education, in the 1977 National Policy on Education. However, it was subsequently able to develop but in a rather piecemeal fashion. By 1993, when the second National Commission on Education (NCE) published its report, many people had begun to realise that the diamond revenues would not last for ever and that Botswana's business and industry would eventually have to compete on the global market for survival. The need for curricula modification in order to prepare young people for the world of work was in the forefront of the commissioners' terms of reference.³

The basis upon which vocational education and training is built is provided by the primary and secondary schools. Staff in these schools, together with the Vocational Training Centres and the technician level government training establishments, are all subject to the same annual performance review or appraisal. Foskett and Lumby (2003: 80) state that (in accordance with my own experience):

They have an uninspiring track record. In many parts of Africa the association between the appraiser and the appraisee seems to be based on a master-servant relationship. As a consequence Keitseng (1999) found that 70 per cent of teachers he surveyed in Botswana were either dissatisfied or unsure of the benefits of the system.

These comments reflect the traditional hierarchical structure which arises from the traditional hierarchical social structure between headteacher, teachers and pupils, and contributes little towards the professional development of the teacher or to their teaching skills.

¹ Republic of Botswana (2001) Education Statistics, 1999

² Republic of Botswana (1995) 1991 Population and Housing Census

³ Appendix A3: National Commission on Education 1993: Terms of Reference

It was recommended that all secondary school curricula should attempt to prepare pupils for the world of work, as part of their general preparation for life. More specifically, in view of the expected need for more production managers, engineering, finance and information technology workers, more skilled workers, technicians and professionals would be required. Emphasis was placed on mathematics and the sciences. It was also realised that more skills such as problem solving, creativity and initiative would be required in the future. New subjects such as Design and Technology and Information Technology were introduced, as and when computers became available.

By the late 1980s, with free universal education and automatic access to 7 years of primary school education and two years of community junior secondary school (CJSS), there were 9 years of free education for all. The 1993 Commission recommended that the time spent in the CJSS should be increased to 3 years, making 10 years of free education for all; this remarkable achievement was completed by 1995. The time spent in the senior secondary school (SSS) for selected pupils was then reduced to 2 years. A desire to increase the intake from the CJSS into the SSS from 20% to 50% had recently been accompanied by the reintroduction of fees for SSSs.¹ At the end of their time in the SSS, pupils sat their matriculation style 'O' level examinations. Entry to the University of Botswana was dependent upon the standard of the 'O' level passes and was state funded to the anticipated extent of the employers demand for knowledge/skills in the subject area concerned as indicated in the Grant/Loan Scheme.² Special financial assistance is available for members of poorer families.

The Botswana government has built up a relatively good general education system from a very low base over a comparatively short time, which has had to cater for a rapidly expanding school population. There are inevitably problems, some of which have been identified but, as is the case everywhere, educational changes take time to implement.

Possible Employment Problems Arising in the Urban Setting

There are many problems which villagers may face on taking up employment in an urban situation. They may be highly skilled within their own village context, where they are linked

¹ Fees were reintroduced for primary and CJSS levels of education in 2005 due to the high cost of the expanding HIV/AIDS treatment and associated care, bursaries are available for some pupils.

² Appendix: A4 The Grant/Loan Scheme

to the previous knowledge, experience and the conditions under which they were used.¹ The urban factory job is a far cry from the cattle ranch; in other words the ex-villager becomes unskilled. A new set of social skills will then have to be absorbed, as well as the technical skills required by the job.

The Fordist approach to production, which prevails in South African factories² and hence in Botswana, is based on the detailed division of labour, low skill and low trust relationships (Noble, 1977) and presents little scope for cooperation at work. Such conditions would be foreign to the villager where cooperation could be the pre-condition for survival. Many villagers make the transfer, and the substantial remainder return to their extended families, or never leave the village. However, productivity in factories generally remains low. The difficulty for many older workers would be their inability to accept instructions from their younger, but better qualified, supervisors. It may also be difficult for younger members of the community to disregard the feelings of their elders. This is perhaps best illustrated by the following account supplied by an expatriate member of the Ministry of Education who was building his own small house. He hired two labourers, and gave them basic instruction for laying the first course of concrete blocks in the form of a simple rectangle on an already cast concrete pad. When he returned later he found that the rectangle was not rectangular – one side was longer than the other! The procedure was repeated – again with assurances that his instructions had been understood and the results were the same. The third time that the instructions and assurances were exchanged, the threat of dismissal was included. Unfortunately, no improvement was forthcoming and one of the workers was dismissed. Then, inexplicably, the remaining worker proceeded to follow all instructions to the letter, with no mistakes. He was asked how, when he so obviously knew how to do the job alone, he was unable to do it correctly with his mate. He replied that the dismissed worker was his elder brother and that, in their culture, he could not question his brother's actions or instructions! This behaviour is in accord with the observation in Schapera 'The Tswana', (1991: 30):

In the relationship terms, and in the associated patterns of behaviour, a man distinguishes clearly between his older brother and younger brothers, and he invariably takes precedence over the latter ... The regard for one's elders is extended beyond the family and kin to the tribe as a whole. In general, people are expected to respect and obey those older than themselves ... and a breach of this rule is (in colonial times) a penal offence in tribal law.

¹ Meegan, 1988; Arwell, 1990

² Orpen, 1976; Roome and Staude, 1978

Concepts of time differ between urban and rural dwellers. Distances are great in Botswana and modes of travel are limited, consequently it is not uncommon to meet a person who has no idea how far they have to travel or how long it will take to get there – they take a blanket and some water and, stopping overnight for food and shelter at someone's house (sometimes unknown) they just travel until they arrive at their destination. Some students from the furthest parts of Botswana took three days to travel from their home to the Polytechnic. Farmers travelling to their cattle posts have little concept of distance or time. Whilst this is a pragmatic approach to life in the Kalahari it is not a concept that transfers easily to the westernised style of work.

Great importance is given to greetings throughout Botswana. Failure to follow the approved format is considered to be extremely discourteous as it is an essential part of social relationships. However, it can be a time consuming process and workers can be penalised by time conscious employers. I know of a receptionist who was dismissed from her job because she responded correctly to the traditional greetings on the telephone.

Summary

In this chapter it is shown how an agrarian people with very limited resources coped with life in a very harsh environment. Cattle became prized as a great resource so that even today a village elder will claim that 'cattle are better than money in the bank – their worth is unaffected by the value of currency', and cattle still form the basis of many acts of assistance and exchange between villagers. The villagers achieved a close-knit society in which the exchange of 'gifts' was used, often to answer the exigencies of agriculture and to create moral norms of behaviour and social cohesion within the village. The village chief or headman took all major decisions on behalf of the villagers after consultation had occurred at the village *kgotla*, where all villagers had the right to speak, and a consensus had normally been achieved. Thus a participatory democracy and a conservative society developed, the good of the village or tribe was placed above that of the individual. In this way much of the strength of the traditional culture is still maintained.

The next chapter charts the development of Botswana from a traditional agricultural country to a self-sustaining economy. It will review the meagre resources available at independence and explain how education, skills training and industrial development were implemented by the judicious use of development aid, SACU revenue, the remitted income from Botswana

miners working in South African gold mines and, from the late seventies onwards, the major revenue from the diamond mines developed in Botswana. With a small, but growing cadre of educated and skilled citizens it became feasible to stimulate the development of new and existing industries, in order to create employment to reduce poverty and the dependence upon diamond revenue. Important problems, such as the effects of globalisation, low productivity, trade agreements and their consequences, will be discussed and, finally, the growth of skills training in Botswana where its problems and purpose will be analysed.

CHAPTER 3

Post-Independent Botswana: Industrial and VET Development

Introduction

The progress of Botswana from independence (1966) to the present is considered in this chapter. In particular, it is concerned with the economic and industrial development, from being classified as one of the poorest counties in the world, with an average *per capita* income of approximately 60 Pula p.a. (equivalent to \$80.00 at 1985/86 prices) to a middle income country (Monkge, 2001). However, many of the very poor subsistence farmers of the 1960s have been replaced in this diamond supported, middle income country, by high youth unemployment. The rise in job opportunities did not materialise as expected as the diamond mines developed, because they are highly efficient and do not require many employees.

Among the many difficulties that faced the Botswana Government was that of creating more employment for their farmers, especially after the severe drought of the late 1960s. Other difficulties, included Botswana's isolated location, lack of internal transport infra-structure, bore holes, clinics and schools for the villages and reservoirs and water pipelines for the towns. In the medium term, the construction of these facilities provided much needed employment. However, the development of modern labour intensive enterprises, staffed by third world subsistence farmers provided more complex problems, which were not helped by low productivity and high wage expectations and reflected the strong connection between wage levels and the phenomenal growth of the diamond industry.¹

Initially, Botswana's survival depended upon outside factors, such as help from foreign donor agencies, the British Government and members of the Southern African Customs Union (SACU). Later however, such agreements and membership of trade pacts resulted in limits as well as opportunities for some of Botswana's enterprises on a global scale. It should be noted that it was as a result of their efforts to industrialise and the employers' consequent need for skills that the skill training facilities in Botswana gradually developed.

Post-Independence

Economic development after independence was not expected to be easy. Besides the deficiencies already mentioned, there was a lack of an educated and skilled workforce in

¹ World Bank Report, 1993

general. Initially, the income remitted by the migrant labour working in South Africa was considered to be an essential part of the economy and was not discouraged, even though their conditions of work were hazardous and repugnant. Some further revenue was derived from SACU, as illustrated in Table 3.1. Other than farming, the country's employment opportunities were therefore substantially dependant upon South Africa. Even today, when the number of migrant workers has been reduced from around 25,000 to 6,122, the number of migrant mine workers is always reported in Botswana's Annual Labour Statistics Reports.¹

The first step was to re-negotiate the SACU agreement of 1910. This was an agreement to share the revenues for import and excise duties (excluding South African beers, wines and spirits) in the customs area comprising South Africa, Botswana, Lesotho and Swaziland. It should be noted that in the 1960s over 85% of Botswana's imports entered via South Africa. The Southern African Customs Union Agreement (SACUA) was renegotiated in 1969 to provide a new improved basis for Botswana, Lesotho and Swaziland (BLS) to ensure their effective participation in the growth of the regional economy.² Following its independence in 1990, Namibia also joined SACU.

Table 3.1: Botswana's Revenues from Customs Union (in millions of Pula)

Year	1969-70	1971-72	1973-74	1975-76	1977-78	1980-81
Revenue	5.14	8.29	20.94	24.61	37.8	102.75

Source: Mogae (1983) A Review of the Performance of Botswana's Economy, in Monkge (2001): 53

Table 3.1 shows how the benefits from the SACUA accruing in favour of Botswana increased from P5.14 millions in the period 1969-70 to P102.75 millions in the period 1980-81. They were vital to the economy in 1969 but much less so in 1981. Another perceived advantage was that other members of the SACUA could invest in Botswana and sell their produce on the South African market, however the scope for the BLS countries to protect 'infant industries' against competition from South Africa was deliberately limited. In practice these limitations, and Botswana's weak infrastructure and expensive utilities, deterred any

¹ Republic of Botswana (2001) Labour Statistics 1999

² World Bank Report, 1993

such investment.¹ Some years later, in the 1990s, when major non-SACU investors were attracted by incentives to invest in Botswana, they were not allowed to sell their goods in South Africa. As a result SACU agreement has been re-negotiated, and was signed in Gaborone on October 21st 2002 (McCarthy, 2003).

Agriculture

Serious attempts were made to stimulate the rural economy during the early years of independence, when agriculture was the main resource of the country and, with the exception of Zambia, all of Botswana's neighbours were at some stage of their freedom struggle. Botswana and Zambia shared a border of just a few hundred metres in length along the banks of the Zambezi, so that, in an emergency, it could have been the only entry for food and other essentials. Self-sufficiency in food was an understandable strategy, and therefore agriculture was subsidised by various policies. One of the first such policies was the Arable Lands Development Programme (ALDEP) which was intended to generate additional food and employment in the arable agriculture area and increase productivity. Another was the Tribal Grazing Land Policy (TGLP) of 1975, which promoted a more commercial approach to cattle ranching. This was a more tempting venture since, under the Lomé Convention, the EEC had given its contribution of aid to Botswana in the form of access to the European beef market at guaranteed returns of 95% of the EEC prices for beef. However: 'in practice, the TGLP intensified the development of a property owning elite – the medium and large scale cattle owners, displaced large numbers of people with little or no compensation, and did not reduce (as intended) the adverse ecological impact of over-grazing' (Picard, 1987: 253). The same author claimed that in 1987: 'the cattle industry is still the most important in terms of impact on population, even though ownership is very uneven with 45% of the population owning no cattle and 5% owning half the national herd' (*ibid*: 239). The relative contributions of agriculture between independence in 1966 and 1994/95 were 42.7% and 4.6% respectively of the Gross Domestic Product (GDP) at 1993/94 prices.²

Other measures designed to stimulate the rural economy and stem the tide of migrants to the urban areas concentrated on improving the infrastructure by the construction of boreholes, clinics, schools, roads, veterinary fences (to control spread of disease amongst cattle – hence satisfying the conditions for the export of subsidised meat to the EEC). During the 1960s

¹ Mogae, 1983; World Bank Report, 1993

² Republic of Botswana (1997) National Development Plan 8

Botswana made little effort to attract foreign investors in the industrial sector as there were more pressing needs for the development of the basic social and physical infrastructure.¹

Rural industries were also set up in order to service those previously mentioned policies, such as the ALDEP and the TGLP. They were aimed at developing local productive activities including the production of agricultural implements and water tanks, and appropriate occupations, for instance, rural blacksmiths. Labour intensive Public Works Programmes, including road building and maintenance were introduced in rural areas. They catered especially for the lower waged, unskilled workers. Their use in a drought relief package was also intended to inject some cash incomes into rural areas, some of which were still using mainly barter systems.²

In order to diversify the rural economy, the government introduced various assistance measures as a means of providing productive enterprises which would also result in employment. This policy was backed up by the establishment of institutions such as the Botswana Development Corporation (BDC) and the Bank of Botswana as sources of venture capital for industrial and commercial development. This framework was completed by the introduction of the Botswana Enterprise Development Unit (BEDU) and the Business Advisory Services. These latter two organisations were ultimately merged under the Integrated Field Services (IFS) in 1987.³ The IFS provides some financial support, but its main assistance is in providing training for small-scale entrepreneurs in a variety of skills, including craft skills, such as metalwork and carpentry, or business skills such as marketing. Many of their graduates worked in the informal sector of the economy, which numbered 57,240⁴, and at 16.6% was the third largest employer.

Mining

During the first ten years of independence, agriculture provided a significant input to the Gross Domestic Product (GDP) and for several years afterwards remained a major employer of labour. However, during the late 1970s, the contribution of mining to the GDP rose dramatically from zero in 1966 to 33.8% in 1994/95 (*ibid*).⁵ This was mainly due to the

¹ World Bank Report, 1993

² Republic of Botswana (1991) National Development Plan 7

³ World Bank Report, 1993

⁴ Republic of Botswana (1998) 1996/97 Labour Force Survey

⁵ Colclough and McCarthy, 1980

diamond mines in Orapa, Letlakane (the smallest) and Jwaneng, which began production in 1971, 1977 and 1981 respectively.¹ The latter is claimed to be the richest in the world because of its output of high quality gemstone diamonds. All three mines are open-cast and provide only a relatively small source of employment. By contrast the copper/nickel mine at Selebi Phikwe is a deep mine, contributes a much higher source of employment but is much less profitable. However, in 1990 and 1991 diamond cutting factories were opened in Serowe and Molepolole respectively, providing a total of 860 jobs, and produced a value-added product.² Smaller exploitations of other mineral deposits have also occurred, including coal, soda-ash and gold. Recently a new nickel mine has been opened near Francistown which is likely to be the largest in Africa.³ A further diamond mine has been opened in the Tuli Block and a copper mine near Francistown.⁴ The estimated total number of citizens employed in mining was 8,417 in March, 1996. As a percentage of the total workforce this was 3.6%, the comparable figure for agriculture was 1.7%.⁵ This represented a dramatic change in the contribution of agriculture and of mining to the GDP. For agriculture this had fallen from 42.7% in 1965 to 4.1% in 1999, whereas for mining it had risen over the same period from zero to 33.8% (*ibid*). The performances of both of these industries, and therefore the economy, continue to be dependent upon factors largely outside Botswana's control: agriculture depends on the low, unpredictable rainfall, and diamonds depend on the taste in jewellery and the prosperity of an external market.

General

Since independence, three strands can be distinguished in Botswana's economic development policies once the diamond revenue came on stream, these were security, the diversification of industry (latterly, to reduce the reliance on diamonds) to create more jobs, and the creation of a modern infrastructure, that is: boreholes, clinics, schools and roads throughout the country. By the 1980s, because of the wealth arising from the mining of diamonds and the settlement and change of regime in Zimbabwe in 1981, some of these dreams were becoming possible. During the first ten years of independence Botswana had no armed forces. Over the following ten years the Botswana Defence Force was established.

¹ Republic of Botswana (2002) Diamonds for Development

² World Bank Report, 1993

³ UK Botswana Society Newsletter, May 2003

⁴ Botswana High Commissioner to UK, addressing UK Botswana Society AGM, May 17th 2006

⁵ Republic of Botswana (2001) Labour Statistics 1999

In the case of agriculture, the South African government granted high subsidies to their farmers, which made their arable produce much cheaper than that of Botswana, so that many of the Botswana farmers were, under more difficult conditions, unable to compete, in spite of the subsidies provided by the Botswana government. Policies, such as the Arable Lands Development Programme (ALDEP), which were intended to generate additional food and employment in arable agriculture, as well as increase productivity failed, and farmers left their land in search of jobs. Far from helping to reduce unemployment, agriculture actually contributed to the problem (*ibid*).

Poverty

Poverty is often measured solely by an individual's income. However, Jeffries (1997) identifies a number of other conditions by which poverty is manifested, including: high mortality or morbidity, malnutrition, child vulnerability and lack of economic and social mobility: 'Poverty is somewhat less serious if those affected or at least their children have a realistic chance of getting out of poverty' (Jeffries, 1997: 476). Consequently, there are several different ways in which poverty has been measured and a 'poverty line' established.

Jeffries based his paper upon Household Income and Expenditure Surveys (HIES) used by the Rural Income Distribution Surveys of the Government of Botswana, 1985/86 and 1993/94. These surveys showed that 39% of Botswana's households had incomes below the poverty line in 1993/94, a significant decline from the 49% of 1985/86. For rural households alone the corresponding decline from 44% to 33%, a sharp and welcome reduction. This, Jeffries claimed, is what should be expected following substantial migration from a rural to an urban area. At the same time however, the richest 10% of the population enjoyed 42% of the total income (Monkge, 2001).

On further investigation, Jeffries identified three immediate causes of poverty: Economic Failure (employment and income); Inadequate Social Provision (safety nets and public services); Individual and Family Roles (spending patterns, family size, high population growth rate, dependency and AIDS). The 'immediate' causes arise, in turn, from several underlying causes which include:

- the weak rural economy (the most important factor) due to the harsh, unpredictable climate, poor soil fertility, sparse population density and the remoteness of many settlements;
- the narrowly based economic structure with its over-reliance on mining;
- the inadequate capabilities of the poor, resulting from poor health, nutrition, education, social and cultural values.

These are all important factors which closely relate to features of this study, for instance the rural/urban divide, the economy, unemployment and employability, and education and training.

Apart from these factors identified by Jeffries, which explain the weakness of the rural economy, there are other influences to be considered. The EEC 'subsidy' of the Botswana beef market had the effect of concentrating the ownership of cattle into a limited number of medium and large scale cattle owners. By 1987, 45% of the population owned no cattle, 5% owned half the national herd and a large number of people had been displaced (Picard, 1987). This is a process which has continued, but at a lesser pace. In addition, the physical infrastructure of some rural areas: water, roads, telecommunications and electricity, were often underdeveloped, or non-existent. Total enrolments in primary schools were 145,459 in 1978, rising to 298,812 in 1991, and for junior secondary schools the corresponding figures were 14,165 in 1979 to 52,866 in 1991.¹ As may be deduced from the above data, neither the skills nor the infrastructure were present in the rural areas to encourage commerce and industry, other than on a very small scale. The net result has been a substantial, though reluctant, migration to the towns and larger villages, or the mines, with the now ageing, unskilled cohorts of rural migrants, finding it increasingly difficult to find employment, despite the expected benefits from the wealth provided by diamonds.

Employment

By the early 1980s, it had become evident that the diamonds had created enormous wealth for the nation, and yet there was unprecedented unemployment. The spill-over effects of the mining activities, in terms of stimulating other related activities and providing jobs, had been greatly overestimated.² The responsibility of the African extended family to care for its

¹ Republic of Botswana (1993) Report of the National Commission on Education

² Colclough and McCarthy, 1980

members when they are in difficulty, and the problem of identifying who was, and who was not, employed in a subsistence farming situation, led to difficulties in obtaining unemployment data from both the major villages and urban areas (Peat, 1983). This meant that the magnitude of the problem was not always accurately obtainable. However, unemployment rates for men of 18% and for women of 48% were obtained for three urban areas: Botshabelo (Selebi Phikwe), Old Naledi (Gaborone) and Francistown.¹ A major growth in formal sector employment was achieved by 1980,² but with only a little increase in the share of jobs was attained in the manufacturing sector (Mayo, 1983). The 1995/96 Labour Force Survey showed that there were 345,405 formal sector employees and 57,240 informal sector employees, this indicated that at least one in six did not have formal employment.³

The problem of unemployment became more evident among primary school leavers in the mid 1980s (Monkge, 2001). Primary school fees were abolished in 1980, leading to many more primary school graduates. Many of those who failed to be selected for secondary education were often unemployable. This situation provides a graphic illustration of the dangers of increasing the supply side of human capital without also increasing the demand. Lipton (1978) had forecast that Botswana was likely to face high levels of unemployment during the 1980s and beyond, unless some major effort was made to address the problem of balancing the supply and demand of labour. Without such an adjustment, he also forecast, the anticipated increase in population growth, especially in rural areas. The failure of the agricultural sector to absorb the rural labour force, has led to a massive drift from the rural to the urban areas in search of employment. To address these problems, the government introduced Labour Intensive Public Works programmes in some rural areas, to help low wage, low skilled, unemployed workers. These, together with drought relief programmes, provided temporary employment and also injected cash, via the workers' incomes, into the rural economy (*ibid*).

Industrial Development

Diversification and expansion of the private sector became increasingly the government's solution to unemployment. With its expansion and diversification it was anticipated that the private sector would create many more jobs. The Right Honourable Peter Mmusi, the former

¹ Republic of Botswana (1974) A Social and Economic Survey in Three Peri-Urban Areas

² Republic of Botswana (1980) National Development Plan 4

³ Republic of Botswana (1998) 1995/96 Labour Force Survey

Vice President and Minister of Finance and Development Planning outlined the government's approach as follows:

from the very beginning, the government has taken the view that it must intervene in the economy in various ways, not to frustrate the initiative of private individuals and companies, but rather to assist, guide, and direct them in ways which are consistent with the objectives of national development (in Oommen et al 1983: xvi).

The previous statement illustrates the overall cohesion and direction that was developing in the early 1980s, which aimed to promote and/or diversify the private sector industry and hence create more jobs. Policies, which had previously been designed for the promotion of agriculture, were modified for application to other areas of the economy and new policies were drawn up with this same objective in mind. Policies such as that resulting from the Presidential Commission on Equal Opportunities,¹ and the Industrial Development Policy promoted the full participation of all Batswana, including women, in pursuit of an entrepreneurial culture.² New policies put the ownership and control of certain areas of expertise much more directly into the hands of Batswana, with long-term strategy of promoting citizen ownership of companies. These changes were intended to stimulate and re-direct business interest from agriculture to commerce and industry. They were reinforced by the Local Preference Schemes (1976 and 1986) which gave local producers and suppliers advantage over foreign companies in qualifying for projects from government or parastatals (state-owned enterprises). The Industrial Development Policy, Government Act (1984) was developed to ensure that industrialisation would include job creation and to diversify the economy away from mining and agriculture.

The land tenure system in Botswana is a sensitive issue involving deep traditional values. They embody the right of every Motswana to the use of land, and are superior to other countries land tenure systems which have created a class of landless, extremely poor, rural people. However, in tribal areas there are difficulties in raising loans. Because the land is held communally, the land cannot be used collaterally for raising loans for development projects unless its legal status is changed. This is difficult, time consuming and leads to artificial scarcities, very high prices and requires lengthy procedures (World Bank, Dec. 1992: 110).

Recommendations from this report have been adopted, for example for the Accelerated Land Servicing Programme, but delays and prices are still greater than is necessary, making industrial development slower than is desirable.

¹ Republic of Botswana (1982) Report of the Presidential Commission on Economic Opportunities

² Republic of Botswana (1984) Industrial Policy: Government Paper No. 2, 1984

Financial Support

Since its introduction in 1982, the Financial Assistance Policy (FAP) has been the main incentive programme aimed at stimulating investment, job creation and diversification. It provided financial start-up support and tax holidays for new industries establishing themselves, or for the expansion of existing enterprises in manufacturing, agriculture, small-scale mining, mineral processing and tourism, and provided for essential training where these ventures generated new income and created new jobs. The 1995 review concluded that the FAP had been reasonably successful, and made some recommendations for adjustments.¹ The maximum levels of assistance for small and medium sized firms were raised because of the impact of inflation. However, because of abuse and lack of sustainability, the improved policy is now reviewed every four or five years. The Local Procurement Programme was set up in 1997 as an alternative measure to assist local manufacturers. It is not as restrictive as the FAP, and allows for the concurrent use of both programmes.

Projects which aid the development of commerce, industry or agriculture and which require financial assistance, as well as FAP, may also be eligible for loans from either the Botswana Development Corporation (BDC) or the National Development Bank (NDB). The BDC is the main financial institution for industrial development. Its role is to identify investment opportunities for commercial and industrial development for both foreign and domestic investors. It then takes part in financing the projects with a combination of equity and loan funds. The NDB is a parastatal for the development financing institutions, providing long-term financial development loans to all three categories.²

Diversification

In the mid eighties a further refinement aimed at diversification was the setting up an industrial centre, was the establishment of the Selebi Phikwe Regional Development Project (SPRDP) with a Special Incentive Programme (SIP) for investors whose products went for export outside the SACU region, as an alternative to FAP. Some of these exported products made use of unused quotas which had originally been granted to Botswana under trade pacts such as the Lomé convention. Land tenure problems had been resolved and factory shells had already been erected at Selebi Phikwe, which is situated near the site of the copper/nickel mine, and which has relatively good road and rail access to the industrial centres of South

¹ Republic of Botswana (1997) National Development Plan 8

² *ibid*

Africa in Johannesburg and Durban. It was anticipated that the proximity between manufacturers, both inside and outside the country would assist the diffusion of good practice.

The type of products manufactured by the SPRDP companies included textiles, clothing, sportswear, travel bags, suitcases, jewellery, mining equipment, plastic tanks and sanitary ware – a total of around 7,000 jobs in 1997. The jobs were almost all of the low skill, low pay variety. The view of the Botswana government's full commitment to globalisation was expressed by the Right Honourable Festus Mogae, as Vice President and Minister of Finance and Planning, on February 9th, 1998, namely that Botswana would:

take advantage of the opportunities offered by globalisation, [and] respond creatively to its challenges, it also demanded a more productive labour force, and high quality, adaptable human resources and thus "quality education and training [and] improved on-the-job skill formation" (Republic of Botswana, Budget Speech 1998: 1- 2).

Implementation Problems: Good and Hughes (2002), who had been strongly critical of the FAP, also claimed that the whole project was a challenge that was either ignored or unmet. They claimed that the government did not choose to enforce either its selection criteria for new investors, which included a cost-benefit analysis of their proposals, or to enforce rigorous monitoring of their performance in practice. Of the seventeen companies which existed in the SPRDP by 1995 only four stayed longer than the life of their FAP or SIP loans. Several disappeared over the border without notice and in possession of valuable equipment. Some SPRDP companies complained that their workforce was unstable which rendered them untrainable, but nevertheless they kept that part of the SIP incentive which was earmarked for training. Other fraud was also identified. The Director of the Botswana Development Corporation (BDC) with developmental parastatal responsibilities said that, 'we at BDC, technically speaking, do not have the experience in running any business other than issuing loans' (*ibid*: 44).

However:

training and skills enhancement is precisely what SortsLine and Seemac did not offer their workers in Selebi Phikwe in the 1990s, the latter company even declaring that its labour force was incapable of learning. FAP (and SIP) provided grants for job creation and training, but no agency apparently ensured that this was properly carried out (Good and Hughes, 2002: 45).

The overriding emphasis by employers and by government was placed on what an executive of the SPRDP called 'controlling the girls'. This expression is taken to refer *inter alia* to the seventeen work stoppages which had occurred within SPRDP companies during the eighteen months prior to June 1997, mentioned elsewhere by Good and Hughes. The most common job was that of sewing machine operator. The low wages paid to women textile workers (P1.59 to P1.65 per hour, i.e. around £0.20), it was claimed, did not adequately reflect or reward the skill required. Experienced women who had worked for five years with a company that had closed, such as SportsLine, were paid the same starting wage by the subsequent employer as those with no work experience (*ibid*). The fragmentation of production, characteristic of the Fordist assembly line in the textile factories, together with long working hours and little training, prevented workers from being able to master a range of skills. Interviews by Good and Hughes within their project, indicated that workers were motivated to keep their jobs, but their working conditions, and the potential for their company to collapse at any time, made such aspirations unrealistic, 'The racism of some foreign owners, exhausting conditions, and the widespread experience of arbitrary decisions made by the management regarding all aspects of the job, were widely cited by workers'. (*ibid*: 46) This style of management would have been an anathema to most Batswana.¹ Successful survival within global competition depends *inter alia* upon good management and skills training.

Quill Hermans, Governor of the Bank of Botswana speaking publicly in June 1995, indicated factors which help to explain why the challenges of globalisation at SPRDP were handled inadequately by the state. The efficiency of the public service in managing the development process, he stated:

had diminished, while the government could still generate good policies, its record on policy implementation had become lamentable, the planning of projects was no longer well co-ordinated, and partly as a result, economic diversification had not occurred. (Mmegi, June 30th, 1995, quoted in Good and Hughes, 2002: 47).

The deficiencies which arose during the implementation phase of the Botswana government's policies and regulations, may be explained by the lack of relevant experience held by the government officers, and the very limited commercial and industrial base from which to obtain the experience necessary to deal with the situations and malpractice itemised in the previous pages.

¹ Orpen, 1976; Roome and Staude, 1978

Apart from his above comments, Quill Hermans also claims that manufacturing remains ‘a very small and fragile, foreignly owned sector heavily dependent upon government grants under the FAP’ (*ibid*: 47). It is otherwise difficult to comment constructively on the problems encountered in the implementation of the SPRDP. However, from the stand point of VET, the lack of any skills training, even low skills, is the single most important long-term failure in a project such as the SPRDP, in a country which is eager to respond to the challenge of globalisation in the manner implied by the Right Honourable Festus Mogae in his budget speech of 1998. The challenge of balancing the supply and demand of skills should feature prominently in this policy. When considering the benefits of allowing foreign manufacturers to operate in the country, their skills training potential should be closely evaluated: a manufacturer can leave a country but cannot take all of the skills with him.

Manufacturing Performance and Productivity

In the fiscal year 1994/95 output in manufacturing rose to its highest level of P293.2 million, in spite of the sharp adjustment in the exchange rate with Zimbabwe, an unsettled period in South African market and the earlier world economic recession. However, the employment in the manufacturing industries also rose sharply from 21,700 in March, 1994 to 23,4000 in March 1995, and the output per employee dropped by 3.3%. This reflects the concern about low productivity levels expressed in the World Bank Report (1993) and quoted in Jeffries (1994: A7-7) ‘... workers in Botswana could produce about 7 pairs of jeans per day. The comparable figure in southern China is 24, while in Zimbabwe and South Africa it is 14 ...’. The financial implications are shown in Table 3.2.

Table 3.2: Botswana’s Comparative Manufacturing Wages and Productivity (Estimate)

Country	Hourly Wage US\$ (garment industry)	Production Time (T-shirts) Hrs.	Labour Cost per T-shirt US\$
Botswana	0.62	21.5	13.33
South Africa	1.61	6.0	9.66
Philippines	0.67	5.0*	3.35
Indonesia	0.25	5.0*	1.25
Thailand	0.92	5.0*	4.6

Source: (Modified) World Bank Report, National Clothing Federation of South Africa, 1993: 83.
Lonhro.

It should also be noted that:

Most factory workers in Botswana are first generation industrial/urban workers, in contrast to their compatriots in for instance South Africa and Zimbabwe, who may be second and third generation workers ... This has an important impact on work attitudes, motivation and familiarity with industrial processes (Jeffries, 1994:A7).

At independence Botswana lacked skilled personnel and entrepreneurs, which hindered the development of industry. This deficiency, it was claimed, was exacerbated by the emphasis placed on expanding the academic primary and secondary education rather than technical education and training (Monkge, 2001). Many decision makers do not appreciate the importance of the practical application aspect of vocational and technical training.

Industrial policy itself can affect two other major determinants of economic growth: 'learning by doing' and entrepreneurial 'rewards'. The learning by doing has been identified as crucial in many developing countries as it takes time for both management and workers to become fully effective at their tasks (World Bank Report 11276-BT, 1993: 10).

However, on the positive side, the good levels of productivity of the 860 Batswana employed at the two diamond cutting factories show that low productivity is not necessarily inevitable.

The relative economic importance of the various sectors in terms of their percentage distribution of GDP at 1993/94 prices shows that 5.7% of the GDP was accounted for by manufacturing in 1966 and 4.6% in 1994/95 – an apparent shrinkage, but when related to the GDP for 1966 and 1994 respectively it may be seen that a very real expansion in the output and growth in the manufacturing industry has taken place, although not up to government expectations.¹

External Influences on Industrial Development

Trade Agreements

Botswana's industrial products and services are subject to several trading agreements, each of which is evolving in response to the global and regional markets. The Southern African Customs Union (SACU), ties Botswana, Lesotho, Namibia, South Africa and Swaziland to a common customs union. It also regulates factors which influence competition. Recent negotiations have concerned industrialisation issues as well as amendments to the common customs revenue sharing formula.

¹ Republic of Botswana (1997) National Development Plan 8

SADC (Southern African Development Community) has a similar basis in which revenue from regional customs tariffs are distributed to the advantage of its smaller and poorer members. It is now in the process of forming a free trade area within eight years, providing access to a much larger market than that of SACU.¹ Members will be allowed to set their own tariff levels against third country imports. This will require an effective and enforceable certificate of origin system to prevent imports flowing into the region via the lowest tariff country. A similar requirement would also be needed for the SACU region when negotiations to allow South Africa access to the EU free trade region have been successfully completed.²

Traditionally, most of Botswana's exports (diamonds, beef and copper/nickel) go to hard currency countries for dollars, pounds or euros. In 1994, only 13.9% of exports went to SACU countries whilst most of the imports (78.9%) came from SACUA countries and were paid for in Pula, which is closely linked to the South African Rand. The gradual and continuous devaluation of the Pula and Rand against the US\$ and other hard currencies has served to indirectly create substantial additional revenue for Botswana.³

Much of the economy has low productivity and, because of the great distances involved, it also has high transport costs for the South African market. Zimbabwe devalued their currency in 1991, and has since, priced Botswana's goods out of the market. The size of the domestic market in Botswana (population 1.6 million) is too small to sustain most large-scale, competitive industrial plant. Therefore, in order to obtain the access and benefits of the much larger international markets, it formally joined the World Trade Organisation (WTO) in 1994.⁴

Under the WTO agreement of 1994, agriculture did not receive the same degree of deregulation as industry. However, the net effect will form a central issue in the coming SACU negotiations. Similarly, as a result of the WTO agreement, the previous control of trade in the textile and clothing market is being phased out, which means that Botswana's textile and clothing industries will have to become more efficient and competitive. The agreement also affects some of the more favourable incentives which Botswana's citizens

¹ Republic of Botswana (1998) Annual Economic Report 1998

² Good and Hughes, January 2002; Harsch, September 2002

³ Republic of Botswana (1997) National Development Plan 8

⁴ *ibid*

have but which foreign service providers for tourism, for example, lack.¹ The latest (2003) WTO round of negotiations in Cancún, Mexico failed to improve access and trade both within the region and with developed country's markets.

Economic changes within the area are also important:

Including the movement by several countries away from command economics to market based systems ... Although Botswana has a market orientated economy, the emergence of other regional market directed economies will bring changes to market prices and competitive relationships that may follow (World Bank Report, 1992: 5).

It is important to note that such instability could also result from conflict in other countries in the Southern African region.

The Renegotiated SACU Agreement

Following almost eight years of negotiation, the new SACU agreement was signed, on October 21st 2002 in Gaborone, by the heads of state of Botswana, Lesotho, Namibia and Swaziland (BLNS) and South Africa. This became possible because of the democratisation of South Africa in 1994, following the demise of apartheid. Apart from being an efficient method of collecting and distributing customs and excise revenue, the previous agreement was aimed at protecting the industries of South Africa from import competition and hence at fostering its economic growth and industrial development:

Initially this mechanism was seen to operate primarily through a geographically extended version of import substituting industrialisation. A single market larger than that of the national economy is created, which allows room for scale economics in production, more production and thus greater efficiency. Development in this scheme is driven by exports to countries that participate in the regional integration arrangement by substituting regional production and investment as the dynamic consequence of greater competition and economics of scale are considered better than no production at all. The growth in income and jobs could be regarded as sufficient compensation (McCarthy, 2003: 607-608).

Such an arrangement could allow protection for 'infant industries' in order that they could gain export experience and competitive advantage in the protected environment of the SACU, which would stand them in good stead in the world market. In the 2002 SACU agreement this approach is intended as a complement, not an alternative, to multi-trade liberalisation, which is the opposite approach to the inward looking protectionism of the apartheid era.

¹ Good and Hughes, 2002

Revenue collected from customs and excise is distributed to the BLNS countries by means of a formula, which is based upon the amount of trade that each member has within the SACU region. The residue passes to South Africa. In addition, a separate amount is ear-marked specifically for industrial (not agricultural) development in each BLNS country. In order to 'democratise' the new SADC, away from the previously almost complete control of South Africa, any significant changes must receive unanimous agreement. However, a special tribunal has been specified to mediate in situations where this is not possible (*ibid*).

Globalisation: the Hyundai Car Assembly Plant

Hyundai, an established and reputable international corporation, represented the most attractive face of globalisation. As a South Korean franchise, training was at the heart of its operation. Hyundai considered locating in Botswana because of the enabling environment: the strong currency, no foreign exchange restrictions, the country's political and social stability, tax holidays and 'Botswana's actual socio-economic weakness in the form of its poorly organised workforce, as Brian Sims, Hyundai's technical executive, described Botswana's infant trade union movement', (Good and Hughes, 2002: 47). Access to South Africa from within the tariff framework of SACU was an additional bonus.¹ Under the then current SACU rules, it was believed that the export of cars assembled in Botswana to South Africa was permitted under almost duty free conditions. Wages in Botswana are about one-third of those in South Africa. Studies indicated that the Botswana school-leavers were, on average, more literate and more numerate than their South African counterparts, therefore productivity could be expected to rise over time, given proper training.

Brown *et al* (2001) have argued that with respect to the concept of the global labour market:

it is the capital that is mobile rather than workers. Workers from different countries come into competition based on market rules of inclusion and exclusion, when companies make decisions about where to invest in new plants, offices or research capability. These decisions will include a number of considerations such as proximity to markets, political stability, transportation networks, social overheads, wage costs, incentives in the form of cheap rents, tax holidays, grants as well as skills levels and the quality of education and training (Brown *et al* 2001: 26-27).

Hyundai's Semi Knocked Down (SKD) car assembly plant was built in Gaborone in 1993. By 1995 it employed 450 workers and was second only to diamonds as the largest foreign

¹ Botswana Daily News, Gaborone, March 12th 1996

currency earner. A Completely Knocked Down (CKD) car assembly plant was opened in 1998, by which time Volvo had also become involved.

The first Gaborone plant was operated by the Motor Company of Botswana (MCB) under licence from Hyundai, in tandem with Hyundai Motor Distributors. The CKD was described as being one of the most modern in Africa, utilising the latest technology, but with the minimum use of robotics - specifically in order to create jobs. It required almost three times the number in its workforce as the original SKD plant, with a higher proportion of skilled personnel – high skill training was given. In February 1996, Volvo announced that they would begin assembling their mid-range cars, the S40 and V40, utilising the MCB/Hyundai CKD factory. By the end of year 1999, Hyundai exports had, ‘narrowed the balance of trade ratio between Botswana and South Africa from 1:25 to 1:6’.¹

The South African National Congress (ANC) had held a positive attitude towards the development in neighbouring countries. Walter Sisulu, Deputy President of the ANC, stated that he firmly rejected the previous regime’s policy of South African economic hegemony in the region;² in the same year Cyril Ramaphosa, the party’s secretary general, re-emphasised that position.³ Alec Erwin, the Trade and Industry Minister, addressing the Mozambique Development Forum in Johannesburg in July, 1999 stated that the growth of South Africa’s manufacturing capacity was dependent upon the economic development of its neighbours. As regards the car assembly plant in Gaborone however, the ANC government stood behind South Africa’s established, long-protected auto-manufacturers.

The South African government took, or considered taking, various measures against the car assembly plant in Gaborone, amongst which were the following: in late 1998, it was reported by Dlodlu and Maphologela that the ANC government considered asking Botswana to close down the SKD plant, on the grounds that Hyundai’s operations might set a precedent for other states to emulate.⁴ It then sought to tighten the existing tariff structures in SACU (the Customs Union). There were disputes over Rules of Origin designed to prevent the importation into South Africa of goods originating in third-party countries which were also

¹ ‘The MCB Mud Bath’, Midweek Sun, Gaborone, November 22nd 2000

² South African Business Day, January 31st 1992

³ Hopwood G. Weekly Mail, August 21st 1992

⁴ South African Business Day, December 21st 1998

manufactured in a SACU country.¹ South African trade unionists visited Botswana to persuade Batswana not to work for the MCB. They were, according to *The Economist*,² fearful that their own car industry could move to Botswana on the same basis as Hyundai had done (Good and Hughes, 2002).

However, the Botswana Government had not entered into a direct partnership with the Hyundai corporation in 1993, nor with Volvo. They were linked to Hyundai only indirectly through the licensed subsidiary, Motor Company of Botswana (MCB), the assembler, which was owned and managed by two Zimbabwean entrepreneurs, Billy Rautenbach and Nissin Franco. The MCB together with Hyundai Motor Distributors (HMD) were in turn fully owned by the Rautenbach family firm 'Wheels of Africa' based in Johannesburg. On November 18th 1999, the South African Office for Serious Economic Offences raided Rautenbach's premises in Johannesburg, and soon afterwards the National Director of Public Prosecution stated that the South African government had acted because of Rautenbach's "involvement in serious crime". Rautenbach left South Africa.³ In January 2000, MCB and HMD were liquidated in the Botswana High Court by the Botswana Development Corporation. The companies' assets were sold to South Africans, and are currently used for car assembly in Kimberly. Volvo, having been bought out earlier, moved its production to form a new organisation within the Ford Empire, South Africa (Good and Hughes, 2002).

The loss of the car assembly plant was a profoundly serious blow to Botswana's economic aspirations and its loss of manufacturing capacity, skilled jobs, foreign exchange earnings and economic diversification. Perhaps, even more seriously, it could threaten future attempts to attract quality, international investors into the country and hence, the government's whole strategy of diversifying the economy. Botswana's ability to plan, implement and manipulate changes in direction of development was exposed as being inadequate in the planning, implementation and consolidation stages (a procedure for resolving or preventing such issues within the SACU region in future is contained in the agreement of October 21st 2002). It also exposed globalisation in general as being a much easier option for the more powerful, developed countries, and the pressing need to agree some workable rules in order to

¹ *The Economist*, October 20th 1998: London

² *ibid*

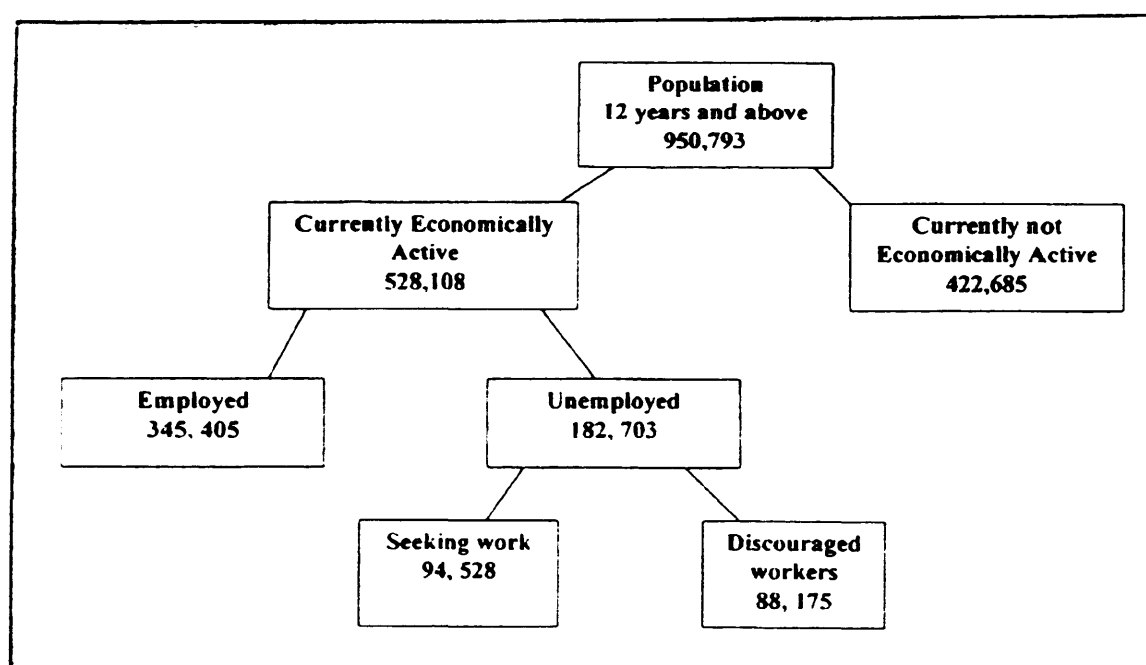
³ *Sunday Times*, November 21st 1999: Johannesburg

regularise globalisation and to prevent the issue of such inter-national pressures in its implementation.

Overall View of Employment in Botswana

The most detailed and revealing Republic of Botswana Labour Force Survey of recent years is that of 1995/96. Figure 3.1, Population 12 Years and Above, illustrates the distribution of the different categories of employment /unemployment of the population. The figures which most concerned the government were those which referred to unemployment. These were the main driving force behind their globalisation and diversification of industry policy.

Figure 3.1: Population 12 Years and Above



Source: Republic of Botswana, 1995/96 Labour Force Survey, 1998: 1.

According to the most used and internationally accepted measure of unemployment, i.e. those actively seeking work, the unemployment rate stood at 94,528 (17.9%). The report stated that those most affected were the 15-19 year old age group with 35.4% and the 20-24 year old age group with 38.9% unemployment rates respectively: 'As may have been expected, most of those (of all ages) now unemployed, who at one stage in their lifetime had had previous employment (35.5%), had worked in traditional agriculture' (Republic of

Table 3.3: Employed Population by Industry and Occupation

Industry	Occupation										Total
	Managers/ Administrators	Professionals	Technicians	Clerks	Service & Sales Workers	Skilled Agric Workers	Craft & Related Workers	Plant/Machine Operators	Elementary Occupations	Other	
Agriculture	244	19	22	116	49	70,367	243	736	18,173	2	89,971
Mining & Quarrying	439	637	558	834	659	..	2,465	4,159	3,214	76	13,041
Manufacturing	2,117	373	696	2,995	2,869	303	25,468	4,625	7,613	101	47,158
Electricity & Water	31	193	183	218	44	..	1,003	255	1,101	..	3,027
Construction	1,079	600	339	1,315	289	..	20,707	2,111	6,998	32	33,471
Wholesale & Retail Trade	4,127	430	819	5,614	17,817	72	5,079	2,136	12,361	228	48,685
Hotels & Restaurants	470	21	75	2,042	5,198	10	1,480	151	1,626	68	11,142
Transport & Communications	537	379	397	1,703	673	..	479	4,244	2,322	33	10,768
Finance	759	276	679	1,681	182	102	437	..	4,115
Real Estate	655	501	763	1,136	4,613	111	524	738	1,986	33	11,059
Public Administration	1,685	2,450	7,784	10,529	7,122	515	9,863	6,042	22,011	1,717	69,719
Education	111	11,292	18,360	1,365	5,005	102	596	683	7,670	..	45,184
Health & Social Work	125	681	5,709	276	2,219	5	248	600	3,595	..	13,459
Other community Activities	596	93	1,161	..	413	221	1,048	..	3,532
Private Households	72	25	..	72	157	243	1,735	138	26,645	..	29,088
Foreign Missions	40	32	..	111	87	73	159	71	573
Not Stated	81	..	234	46	26	..	72	28	371	6,337	7,195
Total	12,572	17,909	37,214	30,146	48,170	71,728	70,375	27,042	117,330	8,698	441,187
% Distribution	2.8	4.1	8.4	6.8	10.9	16.3	16.0	6.1	26.6	2.0	100.0

Source: Republic of Botswana (2001) Labour Statistics 1999

Botswana, 1995/96 Labour Force Survey, 1998: 10). Unfortunately, the problem of unemployment still remains.

The variety of industries and occupations in Botswana is illustrated in Table 3.3. It shows that the government is the major employer in Botswana, this includes occupations such as Public Administration, Education and Health and Social Work. This table indicates the range of possible skills required and also shows that many jobs are categorised as elementary occupations (Labourers) who account for over a quarter (26.2%) of those in employment. Craftworkers, service workers and technicians accounted for 16.0%, 10.9% and 8.4% respectively. There were very few administrators/managers (2.85%) or professionals (4.1%).

The Development of Skills Training Policies and Facilities in Botswana

Background

The 1977 National Commission on Education stated that:

some of the recommendations in this report have appeared in other papers concerned with vocational education and training, going back nearly the whole of the ten years of Botswana's independence (1966). It is therefore recommended that the time has come to make stronger efforts to implement these recommendations. (Report of the National Commission on Education, 1993: 194¹)

However, the Government Paper No. 1 of 1977, National Policy on Education, included only a few paragraphs on vocational education and did not define any strategy for its development. Some significant recommendations of the Commission were deferred ... to a proposed White Paper on Non Formal Education, but this was never produced ... As a result, the subsequent development of the sector continued to be piecemeal and unevenly resourced (Report of the National Commission on Education, 1993: 194).

Meanwhile, from 1984 until the mid 1990s, industrial development in Botswana had been undertaken within strategies laid down in the Government Paper No. 2 of 1984, with the priorities determined in the four yearly National Development Plans. All of these documents had a common theme, the need to diversify the economy away from dependence upon mining and agriculture (the SPRDP was an example of this policy) to produce for the domestic market and to substitute for imports, a strategy which was appropriate for the closed economies of Southern Africa of those times.

During the 1990s, considerable changes took place in the world economic order due to the growing intensity of international competition, the advent of globalisation and the associated

¹ Republic of Botswana (1993) Report of the National Commission on Education

concurrent reduction on trade barriers.¹ Secondly, the rapid introduction of more productive technology and improved operating procedures had increased competitiveness in business enterprises throughout the world. This increased competition came in two parts: firstly, through the new more efficient equipment and processes; and secondly through the introduction of more highly trained technical, scientific and management personnel. The technology is mainly knowledge-based, some of which can be embodied in the equipment, but most is carried by people. Thus the dominant factor in competitiveness in this area is a good supply of appropriately trained personnel.²

Skills Training Facilities in Botswana

By the early 1980s, and in the light of the anticipated revenue from diamonds, the aspirations for building a basic national infrastructure were becoming more realisable. Many more trained artisans, tradesmen and technicians would be required to construct and maintain the increasing numbers of boreholes, houses, clinics, schools, hospitals, roads and motor vehicles. Training institutes were set up, for instance the National Health Institute (1973), the Centre for Vocational Training (1974) – which became the Botswana Polytechnic in 1979, Botswana Institute of Administration and Commerce and the Roads Training Centre.

Ashton and Green (1996:15) summed up the requirements of such development in this way:

Once industrialisation is under way then the establishment of modern forms of production necessitate a number of structured changes which follow as an inevitable consequence ... a workforce must be educated in order to receive instruction, follow directions and keep records.

Vocational and Technician Training

The term vocational education and training is used here to refer to organised learning designed to prepare people for particular occupations or groups of occupations. The term VET has been adopted as an umbrella expression for both vocational and technician training.

Vocational training: applies to the development of skills to the level of craftworker or 'skilled worker', terms which are often used synonymously. The aim is the acquisition of the competence for doing the job to the standard required by industry.

Technician training: best described by the following quotation:

¹ Chapter 3: 46

² Republic of Botswana (1998) Government Paper No.1 of 1998: Industrial Development Policy for Botswana 1998

is the preparation for middle or lower level technical employment. Technicians are the middle level of technical workers who control production-based processes during their operation. They are the technical workers who assist and enable the break through from the theory to its practical application through the adoption of information technology-based production equipment. Their training is of necessity, more theoretically based, and is particularly important during periods of rapid technological change. Meeting a demand for technicians will be critical for much of future economic development. (Republic of Botswana: National Commission on Education 1993: 211).

In Botswana vocational and technician training is undertaken by three main categories of training: the Brigades, involved in training with production; the Vocational Training Institutions (VTCs), which caters for apprenticeship training and technician training providing diploma courses in a wide range of subjects.

The Brigades

With the initial education system emphasising academic, rather than science, technology or vocational education, a policy which was reinforced by the 1977 National Commission on Education, it should not be surprising that the development of technical and vocational education progressed more slowly than that of primary and secondary education.¹ One of the earliest attempts to provide practical training was that of the Brigades. The first brigade was founded in 1965 by Patrick van Rensburg, a South African refugee from apartheid and the Principal of Swaneng Hill Primary School in Serowe. He had become acutely conscious that a large number of children were leaving primary school with few skills for living (universal education was just a dream at that time). He initiated a centre which offered theoretical and practical training which was combined with, and reinforced by production, to form the Serowe Builders Brigade. Gradually other brigades were opened, offering a wider range of skills training and services. Any profits from the sale of the artefacts of production, or from the services provided, were used as revenue for the running costs. This expansion was motivated by three factors:

- (a) the increasing number of primary school leavers without employment prospects;
- (b) the growing demand for semi-skilled labour, especially in the construction sector;
- (c) the local need for the goods and services produced by the brigades.

¹ Republic of Botswana (1977) *Education for Kagisano*: Report of the National Commission on Education

The number of brigades has risen consistently since 1966, and in 2001 there were 41 brigades (Table 3.4) which are located predominantly in villages across the country.¹ They are each responsible to a Board of Trustees who are the sole owners of the brigades on behalf of the communities they represent. The Trustees are elected every three years by the community at the *kgotla* (village meeting place). The Government is now also represented on the Board of Trustees and now provides financial and technical support.²

Table 3.4: Growth of Brigade Centres 1966-2001

	1966	1970	1976	1985	1993	1997	2001
No of Brigade Centres	1	5	12	20	27	32	41
No of Trainees	n/a	n/a	n/a	1,127	2,128	2,935	5,863

Source: Ministry of Education (2001). A Comprehensive Evaluation of the Botswana Brigades: Draft Final Report: FAS International Consulting Ltd. Nov. 2001: 11.

Originally, the brigades were usually set up at the instigation of the villagers for the benefit of their sons and daughters. Action to authorise the project and to appoint trustees was made through the *kgotla*, the village decision making body.³ This process utilised the social capital which arose from the social structure of the village. It provided the necessary norms, expectations, information, effective sanctions and authority relations necessary to activate the project (Coleman, 1994). It also recognised that the use of this social capital depended upon the specific social context within which the social capital was found (Foley and Edwards, 1999).

However, because many of the villagers were themselves illiterate, mistakes were made in the running of some brigades and rules were introduced to avoid them. For instance, prospective trustees had to show that they had obtained at least a junior secondary school leavers certificate to be eligible for election. The government established the Brigades Development Centre (BRIDEC) as an advisory and training centre which provided short courses in subjects such as management and accountancy. A greater change occurred

¹ Republic of Botswana (1993) Report of the National Commission on Education

² Republic of Botswana (1993) Report of the National Commission on Education

³ Chapter 2: 17

when the government decided to subsidise certain of the brigades costs. In return, the brigades agreed to increase their intakes of students and for the appointment of a government officer to the board of trustees. These changes, it is claimed, have somewhat distanced some of the brigades from their villages. Anecdotal evidence also suggests that the relative failure of the brigades to thrive in urban areas has been due to their more nebulous social structure, and the consequent reduction in the social and cultural capital compared to that of the more isolated village.¹ This partial take-over of the brigade system by the civil service also represents the belief, expressed in Max Weber on Bureaucracy and Tradition (Gerth and Mills, 1967), that bureaucracy will always prevail over tradition.

Similar examples of training with production projects may be found in some other African countries, but none has such a nationwide dimension and none have lasted as long – over 40 years.² For the production side of their activities, they are registered as non-profit-making co-operatives and are thus permitted to engage in commercial and developmental activities. This may have contributed to their longevity, since this allows a wide variety of locally useful activities to be undertaken and provides an asset to the village concerned.

One of the problems of education-with-production was the difficulty of obtaining suitable on-the-job work on which the students can practice, which was both profitable and which fits in with the scheduling of the syllabus. In each brigade a commercial manager (responsible to the Ministry of Commerce and Industry) was employed to organise the production aspect of the training.

However, for most purposes the system usually worked well and gave the student practical experience of ‘real life’ production situations. Information concerning the courses, number and sex of the students for the brigades in 1999 is compiled annually by the Central Statistics Office.³ Of the 4,184 students involved in 1999, it may be seen that Building, Carpentry and Auto Mechanics far outstrip the number of trainees for any other

¹ Halsey *et al*, 1997

² FAS International Consulting Limited, November 2001

³ Appendix A5: Brigades: Enrolment by Course, Sex and Year of Study

subject area, thus reflecting the enormous growth in construction projects and the ownership of cars.

Apprenticeships and the Vocational Training Centres (VTCs)

In 1983, in accord with the then current concern with industrialisation, the Apprenticeship and Industrial Training Act was passed. This established the tripartite (Government, Employers and Trades Unions) National Advisory Board for Apprenticeship and Industrial Training (NABAIT) and made provision for tripartite Trade Advisory Committees in each trade. It provided for an apprenticeship scheme based on the German dual-system and commenced operation in 1987. Students spent three months a year in a VTC and the remaining nine months on on-the-job training in industry; the course lasted for four years. The scheme was run under the auspices of the Directorate for Apprenticeship and Industrial Training (DAIT) at the Madirelo Training and Testing Centre (MTTC) in the Department of Labour in the Ministry of Labour and Home Affairs. This Act was replaced by the Vocational Training Act No.22 of 1998.

The institutional training is provided by the Department for Vocational Education and Training of the Ministry of Education. Four VTCs were erected for this purpose between 1986 and 1988 in some of the larger towns/villages around the country.¹ Apprentice students were also instructed at the Automotive Trades Training School (ATTS) and, until the new Gaborone VTC was completed in 2001, at the Botswana Polytechnic. In 1989 the training centre at the Orapa diamond mine was registered as a private VTC.²

Table 3.5: Number of New Apprentice Contracts per Year

1987	1988	1989	1990	1991	1992
100	133	387	389	392	429

Source: Republic of Botswana, Report of the National Commission 1993: 195

¹ Appendix A6: Location of Brigades and VTCs

² Republic of Botswana (1993) Report of the National Commission on Education

There were initial problems with the uptake of apprenticeship contracts by employers, but the scheme has grown steadily and there are now said to be over 300 employers participating. Table 3.5 gives details of the growth in the number of new apprentice contracts over the early years. The annual intake of new apprentices was expected to rise to 800 p.a. eventually (*ibid*). Parallel, college-based NCCs courses were initiated in order to fill the vacant capacity due to low apprenticeship numbers when the anticipated industrial training places could not be found.

Technician Education and Training

Technicians typically deliver modern technical services, often using information and technology-based equipment to provide sophisticated control services at the point of production. They normally work with little or no supervision. Their training is knowledge-based in the technical skills that are needed to apply that knowledge and which focuses on the application of that knowledge. The formal training normally takes place in a technical institution and is often followed by the employer's induction course for the actual sector of employment concerned. This is usually in one, or more, of the integrated engineering, applied science or information technology disciplines.

Table 3.6: Total Technician Enrolment, 1994

Institution	Number of Students	Course Length
Botswana College of Agriculture	332	2, 2½ or 3 years
Botswana Institute of Administration and Commerce	392	1 year
Roads Training College	93	2 or 3 years
Botswana Polytechnic	1,056	1 or 2 years

Source: Republic of Botswana, Central Statistics Office: Education Statistics, 1994: 51 (modified)

The former National Centre for Vocational Training was upgraded to become the Polytechnic of Botswana in 1979. This became the major institution for technician and craft training, which was then expanded during the 1980s and early 1990s. Most of the technical technician training, which had previously been carried out on a smaller *ad hoc*

basis within each department of the civil service, was transferred to the appropriate City and Guilds of London certificate or diploma course at the Polytechnic, and the secretarial and administration courses to the Botswana Institute of Administration and Commerce.

The technician programme providers are shown in Table 3.6. The Polytechnic technician programmes were transferred to the University of Botswana in 1995. Entry to these courses required at least an 'O' level matriculation which included mathematics and science, or its equivalent. However, unless the student was sponsored, the provision of appropriate on-the-job, practical work experience remained largely inadequate or absent until the graduate started work. Technicians are now subject to the University Grant/Loan Scheme.¹

VET Overview

Figure 3.2: Overview of Vocational and Technician Education

Level	Entry Requirement	Skills	Outcome
Vocational			
Trade Test C	Basic education (Junior Certificate)	Basic vocational training (Brigade)	Low level craftworker
Trade Test B	Trade Test C	Routine skills, able to work under supervision (Brigade)	Medium level craftworker
Trade Test A	Trade Test B	Limited practical experience, require supervision (VTC)	Medium level, partially skilled craftworker
National Craft Certificate (NCC)	Trade Test B + apprenticeship agreement	Fully skilled, capable of independent work. (VTC, completion of all apprenticeship requirements)	Fully skilled craftworker
Technician			
Certificate	Very good NCC or basic 'O' levels	Applies theory to practise, under supervision	Lower level technical worker
Diploma	Very good 'O' levels	Applies theory to practise, works independently	Middle level technical worker

Source: National Commission on Education 1993: 233 (modified)

¹ Appendix A4: The Grant/Loan Scheme

The range of categories of VET qualifications are shown in ascending order in Figure 3.2. The entry requirement for each course indicates the lowest qualification necessary for admission to a specific course. Increasingly, prospective students are beginning to realise that school qualifications are not sufficient to obtain work and are applying for courses below their qualification level, thus raising the standard of the intake, but depriving less able candidates of training places. The figure also indicates the expected level of skill to be achieved by the end of the training and the possible outcome as far as job prospects are concerned. Figure 3.3 indicates the expected level of industrial experience required to achieve the appropriate qualification.

Figure 3.3: Industrial Placements

Level	Industrial Experience
Brigade students (Trade Test B & C)	In own production units or local contracts
VTC students (Apprentices)	3 months in college (theory), 9 months on industrial placement per annum, for 4 years
Technicians	Varies, about 60% return to their employer during college vacations

N.B. Anecdotal evidence indicated that many lecturers/instructors did not have sufficient industrial experience to adequately monitor student placements in industry.

Problems arise when it is attempted to fit many other vocational/technical qualifications, for instance, nurses and commerce, into a National Vocational Awards format. However, a framework has been developed to cover other national qualifications where appropriate.¹ In an initiative to improve general employability all craft/technician students on a Botswana Technical Education Programme (BTEP) will undertake Key Skills, i.e. Communications, Personal and Interpersonal Skills, Numeracy and Information and Communication Technology as an integral part of each course.

Split Responsibilities

The problem of split responsibilities was identified as long ago as 1982 in the Report of the Presidential Commission on Economic Opportunities:

To date there has been a failure to recognise the importance of craft and technician level training; liaison between government and the private sector (and sometimes even within government) has been poor; and disputes between two of

¹ Appendix: A7 BTEP Qualification Framework

the Ministries involved (Education and Home Affairs) have been allowed to impede progress far too long ... It is understandable that there should be dispute over jurisdiction and policy between the Ministry of Education (with its general responsibility for education and training institutions) and the Ministry of Home Affairs (with its responsibility for training at work and for localisation). But it is not acceptable that such disputes should be allowed to drag on unresolved for years (Republic of Botswana, Report of the Presidential Commission on Economic Opportunities, 1982: 35-36).

As a result of this long running dispute, the National Commission on Education (1993) recommended that a Botswana Training Authority (BOTA) should be established by legislation as a body corporate, governed by a statutory board of tripartite composition on which all major bodies with an interest in skills training should be represented. An interim board was set up in 2002 with the remit to establish the details, the responsibilities, authority and accountability of this authority within twelve months. BOTA itself is now in place (2003).¹ The responsibility for effective industrial placements for students should be of prime importance.

Construction Industry Trust Fund

Another training body, whose qualifications do not fit the National Vocational Awards scheme format, is the Construction Industry Trust Fund (CITF). This operates under the auspices of the Ministry of Labour and Home Affairs and is jointly funded by the government and the construction industry. It was set up in 1993 to meet the extreme shortage of skills within the industry. Trainees are normally previously unskilled or unemployed. The aims are to add value to the industry's performance, improve productivity and reduce reliance on imported skills. It has always used four week modules and competency-based training and was copied directly from South Africa. Consequently it is recognised in that country's accreditation scheme, but not in Botswana's. However, CITF is well thought of by the employers. Difficulties were encountered during the survey because many of the students were illiterate and attempts to include many of them had to be abandoned. The task of mutual recognition and accreditation is a task which SADC has set itself. A copy of the CITF training statistics 1993/1998 is shown in Appendix 1.²

¹ Republic of Botswana (1994) Revised National Policy on Education

² Appendix A8: Construction Industry Trust Fund: Summary of Training Statistics 1993, October 1998

The Development of Knowledge and Skills at Work

Many large companies, in sectors such as banking and mining, have their own training schools and workshops. The satisfaction in learning from a well structured programme of relevant work in a workshop often emphasises the influence of social relations and the micro-culture of the workplace. It also makes clear the importance and significance of both the technical and social elements of the practical application of theory, and may start the process of growing mutual trust between the learner and the management upon whom the most effective use of high skills operate.

The high skill technology that is likely to be introduced into a company for the use of its managers is unlikely to be accessed by other members of staff. The usual procedure, at least in the early stages of its existence, is that the user will have to go to the vendor's in-house training facility. However, for less sophisticated equipment, the trainee would probably utilise on-the-job training, where one experienced worker would explain to the newcomer how a machine or a technique works.

Many relevant teaching and learning opportunities, which provide better explanations and applications than are found in the classroom, may be found in the workshop. Mutual cooperation could assist employers, lecturers and especially students. For a long time many have believed, without concrete evidence, that placing a student into a practical situation can substantially help their learning and understanding of a subject and its application. More recently this idea has been investigated, with very positive supporting results, by Eraut *et al* (1998).¹

Neither off-the-job learning nor on-the-job learning can compensate for weaknesses in the other. The use of off-the-job learning is highly dependent on consequent on-the-job learning. Without further constructive, on-the-job learning there will be little accommodation between new, and existing, knowledge and working practices. When off-the-job learning fails it is usually because no explanations of the workplace setting has been provided; policies which focus on off-the-job learning only, are doomed to failure.

¹ Coffield (Ed.) 1998: Learning to Work

Some of the problems which Botswana may have encountered whilst employed in Botswana's commerce and industry appear to have arisen due to the natural lack of experience and false expectations of an agricultural people on entering westernised, urban employment. The cultural differences affect not only many of the employees, but also many of those being prepared for employment and their trainers in the institutions of training.

In the context of vocational and technician training, it is essential that training methods should be used to maximise the benefits of their time in industry, where students should be developing their knowledge and skills – not simply completing the time required to satisfy their apprenticeship contracts. Maximum retention of a learning situation is attained if both theoretical and practical learning occur within a short period of time (Eraut *et al* 1998).

Conclusion

In the development of both technical and social skills, the workplace is an essential ingredient for almost every vocational subject. A well-structured programme of relevant work should make clear the importance and significance of both technical and social elements of the practical application of theories. This experience is probably even more important for many lecturers/instructors of vocational subjects in Botswana. My own observations (as acting principal of a VTC) suggested that lecturers/instructors own lack of industrial experience had often left them without the confidence to instruct their students effectively and even led to a loss of the student's confidence in them. These aspects may not apply to all parts of a training course, but their total omission makes for problems later.

New competitive pressures now surrounding Botswana make it very important that any industrial development should focus on achieving higher levels of productivity, using highly skilled employees and improved technology, if they are to compete in the global economy. In addition to providing such high skill training as is necessary, any future VET system should also be capable of providing training for lower skills needs.

Other factors may also impinge upon the demands of a modern VET system. In the government's efforts to reduce unemployment by the creation of new jobs, possibly by means of small and medium enterprises (SMEs), appropriate training may also be required. A common factor in modern commerce and industry are the comparatively rapid changes in the technology used. This market will also be demanding the services of VET. In both cases, training and retraining can be made easier if the employees have first received training in appropriate generic skills, such as: problem solving, teamwork, Design and Technology and communications, during their school or VET training. This will equip students with a wider range of related basic skills or occupations which are transferable in the ever-changing world of work, thus increasing their chances of adapting to new circumstances and increasing their prospects of a positive and effective input to the performance of the nation. Finally, an effective method of identifying trends in skill requirements should be developed, in cooperation with industry, so that adequate preparation time for training can be allowed.

Summary

The major factors concerning the purpose and consequences of the government's economic and industrial policies on the development of Botswana since independence have been presented in this chapter. During this period, the country has developed from having a very poor agricultural economy, with over 90% of the population living in rural areas, to a middle income state with the problems and successes of a partially developed industrial base, mainly as a result of the judicious use of the revenue from diamonds. Just over half of its population now live in urban areas, and there is a relatively high youth unemployment problem.

Globalisation, moves towards a free market economy, and the consequent changes in export quotas have produced strong new competitive pressures on Botswana, which will need to be matched by higher levels of productivity, new technology and highly skilled employees, all of which should be taken into account in future VET policies, along with appropriate provision for those working in lower skill occupations. Further demands will come from the need to train, or retrain workers for the expected general changes in technology, and from training for the requirements of companies which have responded to the government's inducements to set up business in Botswana, as part of its campaign to reduce unemployment.

A further point of concern relates to the motivation of an individual to become a skilled worker when they have never been inside a factory. It has different roots for someone brought up in the traditional, African, subsistence society as compared with a person from a western, industrial economy. In the next chapter the appropriateness of human and social capital theories in these cases, together with an alternative contextual approach will be analysed.

CHAPTER 4

Human Capital, Social Capital and VET

Introduction

The Government of Botswana has been strongly promoting vocational education and training in order to produce an educated and trainable workforce, attract industrial investment and hence create more jobs. It thereby hopes to reduce unemployment, to diversify the industry and to prepare the way towards a high skills economy. In order to evaluate the potential effectiveness of these ambitions, it is necessary to refer to the recognised theories and published research in this field and their relevance to Botswana. Both human capital and social capital theories will be analysed from the viewpoint of their motivation of the individual, and of the role of the state at different stages of development. This will enable relevant comments and conclusions to be examined against a wider background, as both of these theories have been considered, applied and analysed with respect to other countries.

Human Capital Theory

For many years the quality of a country's education and training system has been regarded as a very important factor in its economic development. It was not until the 1960s that the human capital theory was fully developed, and yet the idea that education and training could be regarded as an investment in people had been around for a long time. Adam Smith is thought to be the first classical economist to imply that education can help to increase the productivity capacity of workers:

When any expensive machine is erected, the extraordinary work to be performed by it ... and will replace the capital laid out on it, with at least the ordinary profits. A man educated at the expense of much labour and time to any of those employments which require extraordinary dexterity and skill may be compared with one of those expensive machines (Smith in Raphael, 1985: 46).

After Adam Smith's 'Wealth of Nations' (1776), labour was treated as a homogeneous category. What counted was the numbers of workers. The possibility that differences in the skills of workers would have an impact on productivity and economic growth was largely ignored (Brown *et al*, 2001). Smith also claimed that the most 'civilised' nations of the time had the most complex division of labour. This detailed splitting of work tasks into simple operations, he argued, was the driving force for economic growth. Much of the industry in Britain and the United States followed Smith's model of economic efficiency, which was ably refined and extended by Babbage (1835) and Taylor (1947). Such wide-scale:

development of industrial capitalism was seen to destroy the long tradition of craft production and the reproduction of craft skills across the generations ... It was not until the 1980s that the detailed division of labour based on low skilled, low trust relations (Fordism) was successfully challenged in Britain and the United States (Brown et al, 2001: 4).

When human capital theory was developed in the 1960s, its proponents claimed that labour could no longer be treated as an undifferentiated homogeneous mass, and postulated the need for a broader concept of capital that included the skills of the workers and recognised their various categories of skill.¹ In addition, they asserted that knowledge and skills that increase the capital yields of human labour result from systematic investment in education and training, and that much of the unexplained increase in productivity, wages and economic growth, recognised by economists, could be explained by investment in human capital.

An analogy is drawn in human capital theory between the investment in physical capital, that is, machinery, equipment or buildings, and the investment in human capital, i.e. the education and training of a person. Using this premise, the human capital economist makes the assumption that every individual is motivated, and acts rationally, to maximise their own returns from investment in their own VET. It is assumed that, on the micro-scale, the individual should earn more as a result of their training, and that, on the macro-scale, productivity should improve, the employers should increase their profits and the government should obtain more revenue from taxes.²

Rates of Return

Psacharopoulos (1973, 1975) analysed the rate of return to investment in education and training. The calculations involve reducing those extra earnings, which can only be attributed to the education and/or training concerned for each year, to present day values. These are then compared to the cost of the education or training, for instance fees, books and loss of wages. The cost of the education or training is known as the investment. Many economists assert 'that it is possible to measure the profitability of an investment in human capital using the same techniques of cost-benefit analysis and investment appraisal that are applied to physical capital' (Woodhall, 1997: 219-220). The *profitability* of such investment is a measure of its expected yield of the investment in the terms of the income stream which

¹ Schultz, 1961; Becker, 1964

² Schultz, 1961; Mincer, 1962; Becker, 1964; and Blaug, 1976

it generates. This is expressed in a single percentage figure, designed to express all costs and benefits associated with the investment.

Human capital theory was developed originally by neo-liberal economists who assumed that individuals act rationally to maximise utilities. However, although:

economists are actually aware that individuals are capable of acting irrationally or in pursuit of goals other than the maximisation of utility, the strategy of excluding these deviations from the rationality principle is justified by the effort to identify the core dynamics of an economy (Block, 1990: 22).

By excluding such deviations, an extremely powerful economic model has been developed in which utility is maximised and there is optimal use of resources, together with a self-regulating market. In real life however, 'economic transactions are shaped and influenced by social, political and cultural factors. The preference of individuals in maximising utilities is one example – how does an individual weigh the relative value of more money as against more leisure' (*ibid*: 23).

Human capital theory has remained the most influential ideological support underpinning the economic policy of western and other education and training systems since the 1960s. It has highlighted the link between school and work and between education, productivity and economic growth. Its supporters, mostly economists, have agreed that education represents an investment for both the individual who invests in it and for society which allocates considerable resources to it. Its critics are generally from other disciplines and claim that these assertions are unsubstantiated by empirical evidence. Further consideration of such evidence is undertaken in the following sections.

The rate of return (i.e. increased earnings) due to investment in education and training for an individual is known as the private rate of return. However, the costs and benefits of education and training also affect society as a whole, since it benefits from the increased productivity of the educated or trained person, who then pay more taxes to the government. Most western countries pay some or all of the costs of education and training, and the cost benefit analysis and investment analysis can be applied to the country as a whole, thus giving the *social* rate of return. Some examples and results of both are shown on the next page.

Psacharopoulos analysed the rates of return on investment in thirty-two countries in 1973, and forty-four countries in 1981. The average rates of return reviewed are summarised in Table 4.1, which shows average private and social rates of return for primary, secondary and higher education in less developed countries, intermediate countries and economically advanced countries.

Table 4.1: The Returns to Education by Region and Country Type (per cent)

Region or Country Type		Private			Social		
	N ^a	Prim. ^b	Sec. ^c	High ^d	Prim.	Sec.	High
Africa	9	29	22	32	29	17	12
Asia	8	32	17	19	16	12	11
Latin America	5	24	20	23	44	17	18
LDC average	22	29	19	24	27	16	13
Intermediate	8	20	17	17	16	14	10
Advanced	14	^e	14	12	^f	10	9

^a N: Number of countries in each group. ^b Prim: primary level education. ^c Sec: secondary education level. ^d High: higher educational level. ^e Not computable because of lack of a control group of illiterates. ^f Source: Psacharopoulos (1973:86) (Halsey *et al*, 1997)

From these estimates Psacharopoulos obtained the following general conclusions:

1. *the returns of primary education (both social and private) are the highest among all educational levels;*
2. *private returns are in excess of social returns, especially at the university level;*
3. *all rates of return to investment in education are well above the 10% common yardstick of the opportunity cost of capital;*
4. *the returns to education in less developed countries are higher relative to the corresponding returns in more advanced countries.*

(Woodhall in Halsey *et al*, 1997: 220)

In addition, Psacharopoulos examined estimates of returns to physical capital in both developing and developed countries and compared them with those of investments in human capital. He concluded that:

- (a) the returns of both forms of capital are higher in developing countries – reflecting the relative scarcity of capital;
- (b) investment in human capital is a superior investment in developing countries but not in developed countries (*ibid*).

Table 4.2 shows that the average earnings per month in Botswana 1995/96 almost always increased, sometimes quite substantially, with the duration of education received. These figures give apparent support to the human capital theory. They do not, however, indicate the cost of that education. Neither do they show the added capital required to obtain professional qualifications, or to buy the plant necessary for skilled agricultural workers to operate effectively, nor the working conditions and work organisation, or rates of unemployment, which are typical for each of the nine occupations,

Table 4.2: Botswana: Average Monthly Earnings (in Pula) by Occupation and Education Level

Occupation	Primary	Junior Sec.	Senior Sec.
Administration/Managers	1459	1773	4463
Professionals	566	2058	2720
Technicians/Assoc. Professionals	1540	1321	1922
Clerks	727	917	1269
Sales workers	512	667	961
Skilled Agricultural Work	365	624	1555
Craft workers	578	644	1934
Plant/Machine Operators	671	685	1497
Element & Others	320	411	967

N.B. £1 \approx 6 Pula

Source: Republic of Botswana (1998) 1995/96 Labour Force Survey: 161 (modified)

When considering the influence of human capital on the increase in the productivity of workers, it was soon claimed that many of those workers who had obtained high levels of human capital, had also high levels of ability and a background that enabled them to accumulate useful knowledge and skills:

It was argued that highly educated workers are more likely to come from higher social class groups in society and to work in urban rather than rural areas. Many estimates of rates of return to education therefore adjust the earnings differential of educated people to allow for the influence of other factors on earnings (Woodhall, 1997: 221-2).

The proportion of earnings, which is assumed to come from the workers' higher social background and education is called the 'ability adjustment' or 'alpha-coefficient'. Regression

analysis and earnings functions suggest an appropriate value for alpha lies between 0.66 and 0.8 (Psacharopoulos, 1975).

Validity of Rate of Return Calculations

In most of the rates of return estimates of Psacharopoulos, Blaug, Becker, Denison and others, references are made using data for single years and therefore do not show exactly how the rates of return vary with time.¹ This is generally because such data does not exist for most countries, the (limited) exceptions being the USA and Colombia. These show that in the USA, returns for secondary and higher education fell marginally between 1939 and 1976; data for Colombia between 1963 and 1974 similarly produced a small decline in returns to education, but still showed a profit (Woodhall, 1997). McMahon (1991) reported results that showed a declining rate of return on investment in junior secondary schools from 21% to 7%. Such results directly contradicted those indicated by the World Bank.

Other critics, such as Benell (1998), have argued that, because of the lack of reliable data and the methodological issues that are commonly encountered in many developing countries, rates of return on education should be abandoned. Official levels of primary, secondary and higher education vary from one country to another. For instance, most African university places are filled on the basis of 'O' instead of 'A' level results. In addition, large variations occur in the actual levels of educational achievement and quality of teaching. In many countries there are substantial differences in standards of attainment between different institutes of education supposedly of the 'same level'. Ashton and Green (1996), in discussing the contribution of education to productivity, seriously questioned the reliability of international comparisons.

It should be realised that the values of the parameters used in the rate of return calculations usually relate to data from just one year so that past trends over a period of several years are not discernable (Levin and Kelly, 1997). Future discount rates, annual earnings until retirement or until retraining (which is becoming less predictable as new technologies evolve more rapidly) are needed, and are dependent on the forecasts of experts. In addition, there are some problems which are within the scope of the human capital theory, but they have so many parameters that they can only be partially solved. Human capital calculations also

¹ Eckaus, 1973; Levin and Kelly, 1997; Woodhall, 1997

assume the availability of all the relevant details (*ibid*). However, such data is sometimes regarded as confidential, or has been lost.

Human capital theory also hypothesises a direct connection between the stock of skills that a company's employees possess and the productivity of the company (*ibid*). The stock of human capital is given the same status as that of physical capital, i.e. machinery, equipment and buildings. This is strongly criticised on ethical grounds by Marginson (1993) and others. It is also not a very good way of measuring productivity, a contention which is discussed in the following paragraph.

Education and Productivity

Initially, human capital theory proposed that education and training (ET) raised the productivity of workers, and hence their earnings, by providing them with useful knowledge and skills (Woodhall, 1997). Evidence that such improvements are in fact due to ET is more difficult to find. One study by Jamison and Lau (1982), reported that the level of Australian farmers productivity increased by 8.7% when the farmers had completed four years of primary education. This investigation was extended by Lau and Yotopoulos (1989), which estimated that every graduate who entered farming raised the productivity level by around 1%. However, critics claimed that the contribution of education to productivity is confined to agriculture, in other settings the link between education and productivity is invalid (Maglen, 1990). Other studies in the manufacturing industry reported an increase in productivity level of 6% and 10% respectively for those workers who had received vocational education in India and China.¹ The difference is more likely to arise from factors other than the ET of the workers which were not taken into account, for example, the way in which the work was managed, and the discretion allowed to workers to change that management. In many instances productivity may depend upon factors beyond the control of the workers. On the other hand, farmers (as owners) may well have that discretion, within the limits imposed by environmental restraints, such as droughts and floods.

Other studies have sought to justify the contribution of ET to productivity by making inter-country comparisons over a period of time. Bierhoff and Prais (1997), for instance, have claimed that German workers had surpassed British workers in their productivity mainly

¹ Fuller, 1976; Min and Tsang, 1990

because of the higher emphasis on mathematics and pre-vocational preparation in Germany. Similar claims were made that the higher level of both maths. and scientific competence of Japanese students made them more productive workers than those in Britain. However, the validity and reliability of these ET factors, and their relationship to increased productivity has been seriously questioned by Ashton and Green (1996). They claim that scholars have spent an enormous amount of time determining a positive relationship between ET, productivity and economic development whilst neglecting to obtain supporting evidence, and that an examination of other factors that underpin the interaction between education and economic development is essential.

To further complicate matters, Thurow (1983) reported that during the 1970s when the US economy received its highest share of educated labour (which was associated with higher earnings) this input failed to stimulate the already very low existing levels of productivity. Claims were made that excessive training did not necessarily raise productivity levels,¹ and some proponents went further and claimed that it may also lead to lower ones.² Maxwell (1987) established that different rates of return were realised from human capital investments made in the primary and secondary labour markets respectively. Structural constraints in the secondary labour market were found to impose limitations on demand to the extent that human capital investments were considered to be unconnected with individual salary and productivity gains. Grunberg (1980) and Johnstone (1993) suggested that this absence of any connection between earnings and productivity may have reflected workers' anticipation of improvement in their salaries and working conditions as a consequence of their training, and their disappointment when their expectations were beyond the limits which their employers could afford.

Investment, Management and Productivity

Revealing research was carried out on the productivity of a joint car manufacturing plant in California where Toyota was responsible for the manufacturing and General Motors (GM) for the marketing.³ The original GM plant was closed in 1982 because it had the lowest productivity of all GM plants, had absentee rates of 20% and a backlog of over a thousand grievances.

¹ Berg, 1970; Tsang and Levin, 1985 and Rumberger, 1987

² Tsang and Levin, 1985; Rumberger, 1987; Johnstone, 1993

³ Krafcik, 1986; Brown and Reich, 1989; NUMMI, 1991

The new joint venture was called the New United Motor Manufacturing Incorporated (NUMMI). By agreement with the United Auto Workers, over 80% hired by NUMMI were drawn from those workers laid off when the GM plant closed. The new plant began production in December 1984, and by the spring of 1986 had reached its full capacity of over 20,000 cars per month.

The NUMMI production process was based on teams of four to eight members. Each team agreed on the task allocation amongst their members, they met periodically to discuss how to improve the work process and the quality of the product. Whenever possible, teams were expected to solve production problems rather than call in engineering or management personnel. Emphasis was on worker flexibility, involvement and responsibility. The management of the plant was based on a flattened hierarchy, in which supervisory and quality control functions were handled by the teams rather than by the line supervisors. There was a great incentive for specific training because, when the employment contracts are long-term, the training is looked upon as an investment. All workers received considerable on-the-job training.

As a result of these arrangements, productivity was 50% higher than in the old GM plant, with absences of only about 0.5%, and the quality level was comparable with that of the imported Toyota cars. All of these gains in productivity were not due to a more educated labour force. The old GM workforce, from the plant that GM considered to have the worst productivity of all of its plants, provided 80% of the workers for NUMMI (Levin and Kelly, 1997). Clearly the contribution of education and training to productivity cannot be evaluated if such major complementary inputs as capital investment and work organisation are ignored. The example given here is not unique and illustrates a serious defect in some of the original claims of human capital theory. This 'experiment' strongly indicates that neither education or training, nor management alone, affects production.

Education, Earnings and Productivity

In the absence of a simple, direct relationship which related the influence of education and training on productivity some researchers looked for evidence of such a relationship between education and training with earnings, which could be used (indirectly) as the relationship between ET and productivity. This possibility arises from considerations of neo-liberal

economic theory under which it is assumed that where the labour markets are competitive, the wages paid to employees should reflect the marginal productivity of its labour force. On that basis all workers with the same educational background should earn the same salary, and this would indicate that they have the same productivity: those with a higher level of education would have a higher level of productivity and would, therefore, earn more. These assumptions were strongly disputed by Maglen (1990) on the grounds that there are different categories of workers, each with the same educational background, each of which earns a different wage. Maglen therefore argued that the education level was not a sufficient measure of the homogeneity of the workers to justify such claims. This concept is related to the 'ability adjustment' or 'alpha-factor' which was introduced earlier in this section. It was developed in order to allow for the influence of factors other than education, for instance, social background, experience and innate ability. However, Park (1996) working on a cross-sectional analysis of fifty-nine countries noted that a similar level of educational attainment in the labour force produced an equalising impact on the income distribution, whereas the larger dispersion of educational attainment within the labour force produced a more unequal income distribution. Thus, the effect on income caused by education levels appears to be small and is often masked by secondary factors.

Carnoy and Levin (1985) and Bailey (1991) observed that the number of college graduates had increased faster than the number of jobs requiring college level training. This finding implied that many college graduates were compelled to take jobs that failed to maximise their skill potential. Carnoy and Levin also found that most other job holders (non-college graduates) were also over-educated for the requirements of their jobs. This absence of intrinsic connection between training and earnings not only defeats attempts to measure productivity indirectly via earnings, it also removes the simplistic version of the 'rational economic motivation' of the individual as the driving force for the individual to invest in their human capital development.

However, in a capitalist economy an important motivation for the acquisition of skill is the economic return. Skilled jobs need to provide greater pay, or other forms of job satisfaction than unskilled jobs, if the supply of skilled workers is not to dry up (Ashton, Felstead and Green in Coffield, 2000: Vol. 2):

... economists regard skills as acquired faculties that generate higher productivity and hence higher wages or better employment prospects ... It treats the concept of skills as

relatively unproblematic and it is used to refer to those technical attributes of individuals which are rewarded in the labour market. Owing to this relatively narrow conceptualisation and to a preference for 'hard' (i.e. quantitative) data, economists have typically used proxies for skill for which such data is easily available. These proxies include qualifications and years of education, of training, of job tenure and of general work experience (ibid: 196).

This 'economists' approach to data, described above, does not allow for comparisons of standards or relevance of the education for the context in which the worker is employed:

Skill is a notoriously difficult concept to define, let alone to measure (US Department of Labor, 1999). It has been variously defined in terms of the expertise, ability or competence required to undertake specific activities often acquired through formal instruction or work experience (Brown et al, 2001: 34).

But this passes the problem on to the measurement of skill levels required in each different job. Such problems of definitions and measurement have now been compounded by the importance attached to teamwork, creativity and self-management skills. What should be included or left out of any classification of the skill level requirements of any job?

Hitherto our knowledge of skills has been derived from three main sources: the discipline of economics, with its concerns with measuring incentives to acquire skills; sociology, with its concern for locating the functions of skill in a social context; and psychology with its concern to understand the process of acquisition of skills. Our aim was to draw on these three disciplines in order to create a genuine interdisciplinary approach to many of the issues surrounding the acquisition and use of skills (Ashton et al, 2000: 196).

In the analysis of skill measurement it has been shown that skill is involved with production and therefore, it is claimed, with the social relationships and interactions involved with production. Thus, skill is socially and historically constructed.¹ On this basis, skill is relative in terms of the specific context and conditions in which it is used and is linked to previous knowledge and experience. It has also been argued that, on the basis of empirical evidence, that the use of skill varied depending upon who used the skill: male or female, adult or youth and how they were obtained, whether by experience or training, and under what circumstances the skills were used.² Such considerations make the absolute measurement of many skill levels inevitably difficult.

This obsession with measurable outcomes has led human capital theorists to treat the processes of skills formation as operations that occur mysteriously within a 'black box' and may therefore be ignored. Moreover, the rapid rate of change of technological innovation in

¹ Meegan, 1988; Atwell, 1990

² Faulkner and Lawson, 1991; Blackmore, 1997

modern knowledge driven societies has given special importance to the knowledge and understanding of the processes of skills formation. Therefore, it often cannot make meaningful comparisons between the rates of return of one form of human capital investment and another.

Skill Formation and Social Context

Human capital theorists have only a narrow understanding of skill. In human capital theory the concept of skill is concerned only with those technical attributes of an individual which are rewarded in the labour market. This approach, whilst successfully challenging the limited understanding of capital in classical economics, maintains a 'mechanistic' view of the individual worker. Investments in human beings are treated no differently from investments in land or machines, since they all represent part of the technological upgrading of the economy. Human capital theory assumes a model of technological progression from low to high skilled work, and that the investment in new (high) technology will create its own demand because employers will then have to upgrade their skills base (Kuttner, 2000). It would seem that, despite recognising the importance of human intelligence and skills upgrading for economic growth, the human capital theory's opinions of human beings has changed little since Adam Smith's view that they were 'expensive machines' (Smith, 1776; in Raphael, 1985).

Under neo-liberal economic theory, from which human capital theory is drawn, it is argued that the impact of globalisation seriously limits the state's responsibilities: 'the logic of globalisation, so the argument goes, is forcing all governments to adopt neo-liberal market policies' (Brown *et al* 2001:10), under which the responsibilities of the national state for skills formation are limited to the: 'supply side policies' (*ibid*: 11) and that: 'vocational training should be driven by employers because they are the best placed to make judgements about the demand specific kinds of skill' (*ibid*: 11). Such training opportunities should lead to marketable skills, but the individuals themselves are held responsible for obtaining their own employment.

There are limitations to this approach which are acknowledged by Block (1990: 75):

... in treating the major inputs into production – labor, capital and raw materials – in parallel fashion, economists tend to analyse labor in isolation from the social relations in which individuals are embedded. It is not actual human beings who are the input into the production process, but one of their characteristics – their capacity to do work. But this

is an inherently paradoxical strategy since the individual's capacity to do work is not innate; it is socially created and sustained.

Further, as an economy becomes more knowledge-based, the more that social and cultural issues of identity, motivation and high trust have become important in relation to the effective application of skills, productivity and economic competitiveness.

Human Capital Theory and Developing Countries

Human capital theory is essentially an economist's explanation of social action in western society. It assumes that individuals develop their own (self-centred) goals, and that their social action is not constrained by social norms or obligations. In the sociologist's explanation of social action however, the individual's actions are governed by social norms and obligations (Coleman, 1997). Human capital theory assumed that individuals will always try to maximise financial return for their skills. This is not necessarily the case in developing countries (Block, 1990). In Botswana for example, the roles of the extended family and of the village community are still important and are strongly entrenched. The social norms and obligations consequently strongly influence an individual's actions.

An example of norms and obligations of social behaviour in Botswana is the respect in which older people are held. However, when poverty due to a disaster, such as crop failure, leads to the migration of population from rural to urban areas, employment may produce unforeseen problems. Older, rural men can, on taking up their first job in town, resist taking instruction from their younger, but well trained supervisors, on the grounds that they are not receiving the respect which they believe is due to their age. Here is an example in which the economic and social relationships and practices of the urban workplace have clashed with those of the more traditional village. By the tenets of human capital theory rules: (a) this workplace reaction should not occur, because human capital is based upon the model of economic self-interest, which should preclude such actions, and (b) the financial investment in training the supervisor is not being returned.

The absence of an industrial base, with its existing technologically skilled workforce and understanding of the social relationships in the workplace, as a source of skills transfer, has been a weakness in Botswana's industrialisation endeavours. It has reduced the opportunities for the transfer of both technical skills, and of skills in understanding workshop relationships

and practices. These are acquired as a function of situational factors, such as the organisation of the workplace, especially its personnell.¹ It is therefore to be expected that in global terms, the financial returns on investment in education and training in a developing country may not be immediately as easily identified, or as great, as that for a developed country. The social skills of the workplace are not usually measured, do not have an easily calculated value although they contribute to the level of productivity, and may well be hidden in the financial gain due to the low (by global standards) wage levels.

Skill Formation, Motivation and Productivity

Motivation is addressed by human capital theorists mainly as a matter of getting the incentives right between rewards (increased pay, promotion and status), or punishment (pay cuts and unemployment), based on a model of economic rationality (Becker, 1964). However, this assumption that human beings are driven solely by economic self-interest and individual optimisation has been strongly criticised for, amongst other things, its one dimensional view of human nature.² In addition, the motivation to learn and acquire new skills is only partially explained in terms of economic incentives: 'Research on working class youth in Britain has shown how cultural understandings of 'being' and 'becoming' can lead young people to restrict their commitment to education and training irrespective of a cost-benefit analysis of whether it is in their self-interest (Brown, 1987; Rees *et al*, 1997)' (Brown *et al* 2001: 14). Similarly, other authorities state that investments in human capital involve making investment in the self rather than being simply a response to an economic bait (Rose, 1989).

On balance, evidence suggests that issues of motivation and commitment are tied to social and cultural questions of involvement and to what Goleman (1996) calls 'emotional intelligence'. People who have a sense of involvement or commitment to their job, the company, their craft or profession, will be more willing to use their creative energy and work effectively in a team than those who do not share such a commitment. The 'problem' facing management involves replacing the large numbers of line managers and supervisors and releasing the potential of those creative energies of the labour force into the effective production of innovative, quality goods or services. This involves understanding the social

¹ Meegan, 1988; Atwell, 1990; Cockrill and Scott, 1997d; Eraut *et al*, 1998, 2001; Ashton, Felstead and Green, 2000

² Ashton and Green, 1996; Fevre *et al*, 1999

context of motivation. Trainers and managers have to win the commitment of the employees to do a good job through the internalisation of corporate culture, pride in their work or commitment to team work (Peters and Waterman, 1982). This is symbolised by the Japanese approach to quality control where quality is no longer simply the assurance of durability and reliability, but the involvement of the ceaseless improvement and continuing incorporation of new features that want the consumers to feel that they need the finished product (Landes, 1998).

Screening

This refers to the action of many employers who use the educational records of job applicants as an instrument for sifting out unwanted applicants. It is used to identify relevant information about an applicant's potential aptitudes, behavioural and background characteristics (Middleton *et al*, 1993). Despite weaknesses it is considered that the concept in general supports human capital theory, since the proficient development of cognitive and psychomotor skills are integral parts of both education and industrial training and therefore contributes to a person's human capital (*ibid*).

Segmentation

The relationship between gender bias and the financial worth of a job in the modern labour market is often socially determined, so that, despite the numerical expansion of women's role in the labour markets of advanced capitalist countries, they often remain horizontally segregated at the lower levels of some occupations and industries:

The label 'skilled' has been utilised by males as an aid to sustaining higher status and earnings (Cockburn, 1983; Coyle, 1982). That such labels are not objective is revealed in the re-evaluation of skills (and pay) brought about in the US by the comparative worth political strategy (Ashton and Green, 1996: 20-1).

Blackmore, in Halsey *et al* (1997), states that several studies have shown how professional associations, trade unions and employers are involved in power struggles over definitions of 'skill', and the way skill levels are used to legitimise differences in remuneration, which may disadvantage women, young workers, blacks or ethnic minorities (Dex, 1985).

Pay discrimination against a section of the population is known as segmentation. It does not accord with the human capital theory assumption of free competition within a homogeneous labour market. It is also irrational, and possibly unprofitable, since the most qualified

candidate would not necessarily be employed, since, at the macro-level of human capital theory, a linear relationship is assumed between the level of education, economic growth and productivity.¹ An example of discrimination against female workers is shown in Table 4.3. It shows that in every occupation, male earnings are greater than those of females. The occupations requiring physical strength, where males traditionally have been considered to have the greatest relative advantage, are skilled agricultural work, which requires a great deal of capital; craft-workers and plant/machine operators. In a situation where there are more female workers than male, it is claimed that the ratio between salaries is likely to be much nearer unity.

Table 4.3: Botswana: Average Monthly Earnings (in Pula): Male v Female

Occupation	Male	Female
Administration/Managers	3255	1926
Professionals	2961	2304
Technicians/ Assoc. Professionals	1919	1358
Clerks	1181	929
Sales workers	839	439
Skilled agricultural workers	775	336
Craft-work	862	361
Plant/machine operators	762	324
Element & others	353	253

N.B. £1 ≈ 6 Pula

Source: Republic of Botswana (1998): 1995/96 Labour Force Survey: 160 (modified)

Segmentation, like the ability factor, originates socially and reduces the accuracy and validity of human capital theory. The application of human capital theory to global economic trends further justifies the argument that incomes should reflect the market value of labour as judged by international, rather than domestic standards. Failure to do this would, it is claimed, lead multi-national companies to transfer operations to countries with lower wages and lower social overheads. It was calculated by Wood (1994), that changes in global trade had reduced the demand for unskilled labour by approximately 20% due to the transfer of low skilled jobs to Newly Industrialised Countries. However, the effect of globalisation on

¹ Rumberger, 1987; Blackmore, 1997

low skilled workers has been challenged by Esping-Anderson (1999); the substantial increase in the number of low skilled jobs in the 1990s in the United States in the service industries were very localised and were not subject to the rules of international trade.

Assumptions

Human capital theory assumes that job applicants compete freely in the labour market on the basis of skills as measured by their education and training credentials. In addition, where the labour markets are competitive, the wages paid to employees should reflect the marginal productivity of the labour force. However, other factors often have a greater influence on productivity and wages, such as type of management, experience and innate ability. Similarly, it is claimed that the labour market is 'neutral', whereas in real life some employers are biased against certain 'segments' of the population on important grounds, such as gender, race, colour, tribe or ethnicity. From the precepts of neo-liberal economics, of which human capital theory is an integral part, it follows that a government's involvement in skill formation should be limited to the 'supply side' since labour market forces are better able to deal with the 'demand side' (Brown *et al*, 2001).

The claims of human capital advocates are often justified by appeals to the analogy between investment in machinery and investment in trainees. This is a helpful first approximation to the concept and potential of human capital, but can also be misleading and confusing if taken too literally. A machine for example, cannot of its own volition train itself or be retrained; it is not subject to gender or ethnic discrimination; it has a pre-set capacity and flexibility; it is not subject to unforeseeable illnesses and is not influenced by its relationships with its fellow machines. In such instances the analogy breaks down as no allowances can be made for this in human capital theory. It is indifferent to national history, culture and identities, and it conforms to the universal laws of economic development (Becker, 1964). On the other hand, a manufacturing company when seeking to increase its profitability, would not simply invest in more machines. It would first of all initiate a comprehensive review of all relevant factors, such as the market potential for its products and the amount and quality of labour required. In this case the analogy between investment in machines and investment in training is much more relevant but appears to be ignored by human capital theory. It assumes that a supply of vocational education and training *alone* will produce full employment and prosperity *irrespective* of the saleability of the goods or services produced. Vocational training programmes in many countries, including Botswana, have been expanded on this basis.

Human Capital Theory: Summary

Human capital theory was originally developed by economists in the USA in the 1960s, for application to western economies. However, it was very soon considered to have universal application, outside the command economies of the Communist countries. The most serious criticisms have come from non-economic disciplines, and yet, probably because of the dominance of western capitalist economies and economists, it has remained the major influence on education and training policies for several decades. Perhaps a greater criticism of human capital theorists is that their obsession with measurable outcomes has led them to treat the process of skill formation as a 'black box' operation. At a time of rapid technological changes however, special importance should be assigned to the knowledge, understanding and practice of the processes of skill formation, and no attempt appears to have been made by planners and economists to equate the creation of skilled personnel to their demand.

Critics of human capital theory claim that it is both empirically and historically flawed as it does not give an accurate reflection of the choices, experiences and options open to individuals. However, in the context of Botswana, there has been, until recently, very little industry from which to choose one's employment. Consequently, the Batswana have had little experience, and hence little understanding, of the expectations of employers, the needs of industry, the needs of trainees and the role of their government.

Social Capital Theory

Social capital is a resource which may be used to create human capital for many different, and often voluntary, services and enterprises. In Britain, for example, neighbourhood watch schemes allow people to sleep more securely at night and may offer cost effective benefit to the community. In such schemes, volunteers from a neighbourhood band together and, with police instruction and agreement, patrol the area concerned to look for signs of actual or potential illegal activity, which are then reported to the police. Thus, a resource, peculiar to that neighbourhood has been created out of the relationships between the people of that neighbourhood i.e. using social capital. It is assumed that, under human capital assumptions the motivation to obtain saleable skills through VET would be aroused by the economic self-interest of the individual, whereas in Africa, the motivation is more likely to originate from allegiance to the family or community. The concept of social capital may therefore be a

useful analytic tool in the context of this research, because of the importance attached to close family and community ties in Botswana, especially in the rural villages.

There are some instances in which the successful outcome of a project requires the use of both social capital and human capital. However:

although Coleman does not view human and social capital as competing concepts, they can lead to significant differences in policy terms. Whereas the emphasis on human capital leads to investment in education, training and lifelong learning, the emphasis on social capital extends the policy framework to include urban regeneration and community networks (Brown and Lauder, 2000: 228).¹

Baron, Field and Schuller (2000) agree with Coleman that social capital is important in the creation of human capital, but claim that he seriously underestimates the complexity of the relationship. They also agree that there is a major problem with trying to operationalise social capital, given its lack of a clear definition, however, it has a potentially important place in VET. There are three major proponents of social capital, but they see the concept in different ways, each of which will now be considered.

Putnam's Social Capital

Putnam's interpretation of social capital is in keeping with his concept of the collective production of goods by individuals and communities. He defined social capital as consisting of features of social life, networks, norms and trust, which have enabled participants to act together more effectively to pursue shared objectives.²

For Putnam, associations, particularly those featuring face-to-face, horizontal relations among individuals, generate trust, norms of reciprocity and a capacity for civic engagement which are essential to the functioning of modern democracy. In the absence of a strong associational life, citizens would lack the skills and inclinations to work together on economic and political projects ... (Foley and Edwards, 1999: 144-5).

Putnam and other political scientists advocate a version of social capital, the evidence for which is based mainly upon large scale survey research, for example, national voting patterns. They see social capital as being a quality of, for instance, trust that inheres in the individuals (as opposed to the social context). It is also considered to be an individuals' attribute, which is fully portable and does not vary from one context to another. Foley and Edwards (1999) also claim that the political culture theorists themselves consider the norms and values which they espouse to be exogenous to any social structure, and that attempts to relate social capital to civic engagement and trust in government have not been proven (*ibid*):

¹Brown and Lauder, in Baron *et al*, Social Capital, 2000

² Putnam, 1995b

... sociologists and applied scientists in general, have adopted versions of the social capital concept more in keeping with the social structural versions enunciated by Coleman and Bourdieu, in that they emphasise individual and organisational social ties in predicting individual advancement and collective action (ibid: 143).

Putnam is also criticised for failing to specify the conditions under which he claimed that face-to-face interaction might promote the desirable cooperation of associations to produce networks, trust and norms of reciprocity which, in turn, promotes civic engagement. Foley and Edwards (1999) also report that:

Minkoff (1995,1997) and Smith (1997, 1998) using longitudinal data, dating back to the 1950s track the emergence of national and international social movements, organisations and their production of social resources and means of making them available to dispersed participants, independent of face-to-face interactions ... These studies demonstrate that the production of social capital is not, in practice, restricted to areas where face-to-face interaction predominates (ibid: 160-1)

Bourdieu and Coleman place no such face-to-face constraints on making social capital available.

Foley and Edwards (1999: 145) state that Putnam had: ‘under emphasised the role of large-scale economic changes in undermining civic engagement in the United States and elsewhere (Skocpol, 1996)’. However, in his own book ‘Making Democracy Work, Civic Tradition in Modern Italy’ (1993), Putnam states that:

... our research focused on continuity and change ... Gradually, it became clear that the difference among the regions had astonishingly deep roots ... These historic continuities raised theoretical issues of import ... touching fundamental questions about democracy, economic development and civic life (ibid: XIV).

Further, he comments that: ‘What changed in our research design were environmental factors, such as the economic context and political tradition’ (*ibid*: 10). These and similar comments imply that Putnam was clearly aware of the importance of economic changes in modifying changes in civic engagement.

Finally, Putnam is criticised for under-emphasizing the negative aspects of social capital:

The difficulty of achieving lasting peace in Belfast and Beirut should warn us against assuming that associational density has the same meaning in all social and political contexts ... Social networks and institutions may limit members connections with the wider community: they may include some and exclude others; they may serve selfish and/or anti-social as well as public ends (Portes and Landolt) (ibid: 155).

Coleman's Social Capital

Coleman (1997) presents social capital as a rational explanation which combines and transcends the two existing, major explanations of social action. These are:

- (i) the sociological explanation, in which the individual's actions are governed by social norms, rules and obligations and are shaped, directed and constrained by their social contexts;
- (ii) the economists' explanation, in which the individual develops their own goals, acts independently, and is entirely self motivated, i.e. is not constrained by social norms or obligations.

In Coleman's explanation, social capital constitutes a resource which is available for use by the individual, it is defined by its function and consists of a variety of different entities, each of which has two elements in common:

- (a) all consist of some aspect of social structure;
- (b) all facilitate certain actions of individuals (or corporate bodies) within that structure:

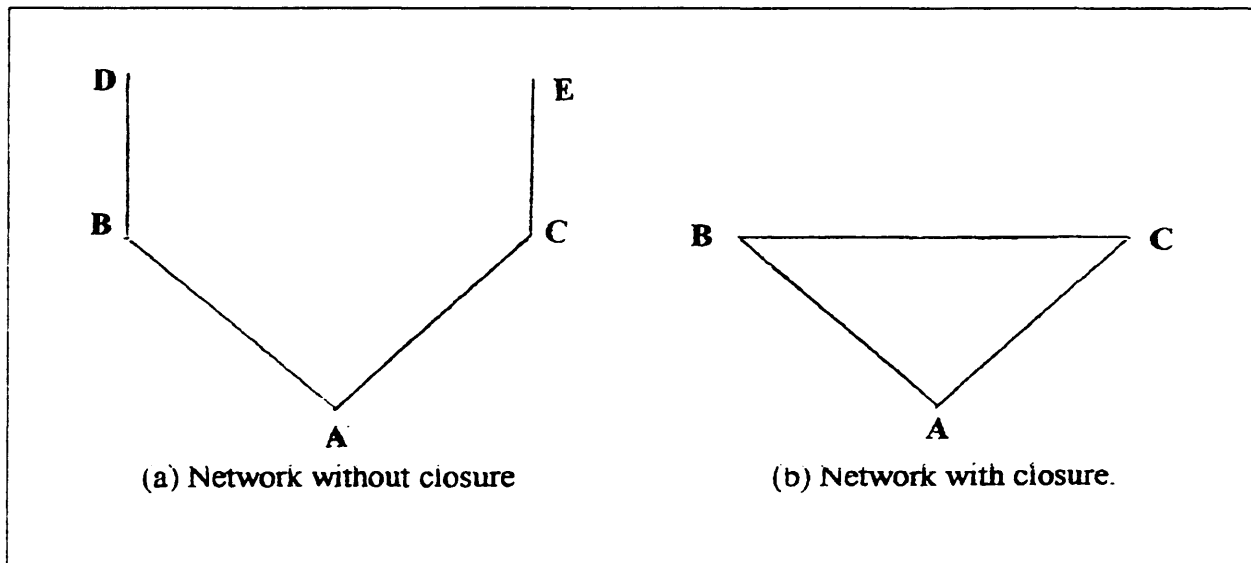
Unlike other forms of capital, social capital inheres in the structure of relationships between persons (or between persons and/or corporate bodies). It is lodged in neither the individuals nor the physical implements of productivity ... and may be specific to some actions but not of others ... The forms of social capital include obligations, expectations, information potential, norms and effective sanctions, authority relations, appropriable organisations – understood as direct investment in social capital (Coleman, 1994: 143-4).

Foley and Edwards (1999:146) argue that: 'the key to understanding how social relations facilitate individual and collective actions lies in the conception of social capital that recognises the dependence of its use, value and liquidity on the specific social contexts in which it is found'.

Coleman insists that social capital is embedded in relationships and is not automatically transferred with the individual into other situations, wherever they might be. He also insists that subjective attributes such as trust, expectations and norms are generated from within specific social relations. This is neither the generalised trust of the political science literature and the followers of Putnam, nor the consciously and continually generated trust of Bourdieu's institutions, the membership of which may, for instance, be formed from the existing, continuously generated trust of a family and its connections.

Social capital may be used in conjunction with human and/or financial capital to facilitate productive activities. It should be noted however, that any form of social capital may be useful in one context, but harmful in another. All social relations and social structures facilitate the creation of some form of social capital. One property of social relations which is a necessary, though not sufficient, condition for the creation of effective forms of social structures is what Coleman calls ‘closure’. This is necessary to enable the effective spread of information throughout a social community. For example:

Figure 4.1: Networks Involving Adults A, B and C



Source: Coleman in Halsey *et al*, 1997: 86

In the case (a), A, having relationships with B and C, can impose its opinions on B and/or C, because they have no relationship with each other (only with D and E), they cannot combine forces to question or to sanction A, and thus constrain its actions. In the case with closure, as in (b), B and C can combine to provide collective sanctions on A, or, either can reward the other for imposing sanctions on A.

Coleman observes that, in a structure without closure, norms can only be imposed by the person to whom the obligation is owed, reputations cannot rise and fall and trustworthiness cannot be created. In a typical Botswana village where everyone knows everyone else, ‘closure’ exists. With the harsh climate and the large distances between villages survival has depended on the existence of closure to create effective social structures necessary for their continued existence. These conditions form potentially fertile ground for the development of

the three broad areas of social capital identified by Coleman (1997) from which other forms of social capital can be formed:

1. obligations, expectations and trustworthiness of social structures.
2. information channels: information often provides the basis for action but its acquisition, other than by social relations, can be costly.
3. norms and effective sanctions: an especially important form of social capital within a community, is the prescriptive norm that the individual should forego self interest for the benefit of the community. These may be reinforced by a system of rewards, sanctions, social support, status and honour, alternatively they may be internalised (i.e. assimilated) from society by the individuals:

Norms are often intentionally established as a means of reducing externalities, and their benefits are ordinarily captured by those who are responsible for establishing them. But the capability of establishing and maintaining effective norms depends upon the properties of the social structure (such as closure) (ibid: 93).

They constitute a powerful form of social capital but, not only can they facilitate some actions, they can also inhibit others.

Bourdieu's Social Capital

Bourdieu (1997) agrees with Coleman that there are important resources available to the individual, which are convertible into financial capital under certain conditions and which are dependent upon social structures and social relationships. In Coleman's concept however, the social relationships are endogenously generated within an existing social structure and context. In both cases, social capital is analogous to financial capital and is instrumental in enabling the flow of goods and services between individuals and/or groups:

Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintances and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectively owned capital, a 'credential' which entitles them to credit, in the various senses of the word. These relationships may exist only in the practical state, in material and/or symbolic exchanges which help to maintain them. They may also be socially instituted and guaranteed by the application of a common name (the name of a family, a class, or a tribe or of a school, a party etc.) and by a whole set of instituting acts designed simultaneously to form and inform those who undergo them (Bourdieu in Halsey et al, 1997: 51).

Further potential examples of: 'a durable network of more or less institutionalised relationships of mutual acquaintances and recognition' include clubs, families, associations and community volunteer projects.

In Bourdieu and Passeron (1977), the concept of cultural capital, for example, qualifications, was developed as one of several forms of inter-related capital. It was 'used to explain how the cultural 'judgement' of the dominant group was presented as universal and selectively endowed, allowing it to legitimise its domination' (Schuller, Baron and Field, 2000: 3). This, historically, is typical of the dominating influence of many traditional Tswana villages by the chief and his 'cabinet' of elders. The daily use of greetings of the style appropriate to their high status helps to maintain their dominant status within the village's social structure. This group is the apex of the social hierarchy within the village. At the base are the children. They must show respect to all of their elders, this establishes the respect to which all older men feel they are entitled.

Bourdieu differs from Coleman in his notion of cultural capital. For Bourdieu, social capital was not reducible to economic or cultural capital, nor was it independent of them. Social capital acted as a multiplier for economic and cultural capital whilst being created and maintained by the conversion of economic and cultural capital in the 'increasing effort of sociability'.¹ Primacy was reserved for economic capital, which was considered to be the root of all other types of capital in the final analysis, and as the home to which all accumulation will eventually return.² In Botswana this resource (social capital) was used as a multiplier for financing the original facility which provided vocational education and training for young people in many villages where no other such option was available. The organisation which provides this service is called a brigade.

The original brigade was built in the village of Serowe to provide vocational education and training for unemployed primary school leavers, whilst at the same time producing goods and services for the village. Thus a resource was created out of the relationship between the brigade and the villagers (social capital), whereby goods and services had been made available to the villagers, and training had been provided for their children (human capital). Here, social capital (the relationship with the villagers) has created human capital

¹ Baron et al, 2000

² Halsey *et al*, 1997

(employable skills). Up to 1999, some 4,184 young people have been trained in such institutions since their inception.¹

In Botswana, this framework is extended to provide basic skills of adults training for small, medium and micro enterprises, when required. This is provided by the government's Integrated Field Services (IFS). In the five years up to 1997, some 8,424 entrepreneurs were given training in subjects such as: Textiles, Metalwork, Woodwork, Pottery, Business Units and Leatherwork, from which some 4,600 jobs were created.² The IFS operates under the Ministry of Commerce and Industry through twenty-three centres throughout the country. Usually the clients of this training have themselves received very little education, are very poor and are often family groups, or small groups of similar interests suitable for micro-finance support.³

Finally, Fevre (2000) introduces 'identity' as 'the neglected component of social capital'. He claims that: 'it is doubtful whether either norms or networks can work properly, or indeed at all, without identities ... In fact, identities solve the problem of finding a reliable mechanism by which social capital can take effect' (Baron, Field and Schuller, 2000: 92-93). He also quotes from A.J. Brown (1997: 7), that:

in Germany people learn as a part of their 'entry into a community of practice' and 'becoming skilled ... within a wider process of identity formation' where 'recognition of significant achievement (and attainment of the status of experienced practitioner) is itself a socially mediated (or contested) process, dependent on others and a sense of self-worth.

In order to legitimately assume these identities, German workers have to undergo some degree of self-transformation. It is suggested that one must become a different person to be admitted to the occupational community. Historically, such inauguration practices may represent echoes of African initiation ceremonies through which children had to pass in order to be recognised as being an adult with a strong sense of identity with their community.

Social Capital: Summary

The concept of social capital was developed by three major proponents, Putnam, Coleman and Bourdieu, each of whom gives it a different definition. Social capital is a resource which may be used to create human or other forms of capital for a variety of enterprises. It is a

¹ Appendix A5: Brigades: Enrolment by Course, Sex and Year of Study ???

² Republic of Botswana (1997) National Development Plan 8

³ Senior Development Officer: MCI

resource which is peculiar to a community and is created out of the relationships of the people of that community. The norms, sanctions, identity and trust between the members enable participants to more effectively achieve their shared objectives. There are several features and relationships in social capital which are, by their nature abstruse, diffuse and elusive. The effectiveness of a network, for instance, may vary with the different sizes and the *qualiiesy* of its members' attachments. However, there is more than enough common ground to illustrate that real and impressive achievements can be made by members working as a *team*, rather than as individuals, as in the brigade system in Botswana.

Summary

Human capital theory has been described and analysed, and its various shortcomings revealed. It was originally developed by economists in order to understand and explain the substantial increase in real term prosperity and income due to education over the first sixty years or so of the twentieth century in the USA. When analysed more closely however, and applied to a wider range of society, situations and changing conditions several important defects were revealed, and claims of its universal application discredited. Nevertheless it has remained the major economic tool in the planning of education and training as an economic resource of the future. Social capital on the other hand is more elusive, and is restricted to the area within which social action may apply. In Botswana, the rural population generally live in isolated villages, each with Bourdieu's 'more or less institutionalised relationships'. Social capital is widespread, and has been used as a multiplier (*inter alia*) to provide vocational education and training in the form of the village brigades. Both human and social capital theories ignore the basic problem of the harmonization of the demand and supply of skills.

In the next chapter, a contextual approach to skill formation will be considered and, in the context of Botswana's current and future potential economic and industrial policies, the consequences for VET examined. These conclusions, where appropriate, will be subject to further appraisal and evaluation during the analyses of the empirical, quantitative survey of the opinions of those currently involved in Botswana's education and training system. Only when all of these results have been collated, will an evaluation of Botswana's skill formation system be made.

CHAPTER 5

The Political Economy of Skill Formation Policies

Introduction

The explanations and analyses provided by the human capital theory and social capital concerning skill formation were found to be either incomplete or inappropriate. For example, neither theory shows any satisfactory linkage between VET and the supply and demand of skilled personnel. Human capital theory, under neo-liberal economic theory, considers that the training and supply of skilled personnel is the responsibility of the government, or the individual, but, because employers' demands are dependent upon market forces, vocational education should be driven by employers (with government funding), as they are best placed to judge specific skills demand.

Skill formation has become a greater issue during the last decade due to the rapid increase in technological developments, together with the intensification of global economic competition. In order to maintain profitability in the global market, it has become essential to raise productivity levels. However, raising productivity levels almost inevitably reduces the number of personnel employed. Therefore, to maintain or increase employment, more high skill, highly productive jobs and higher value-added products will be required, together with the necessary skill training.

There are variations between each country's economy which have developed because of differences between their respective histories, cultures and economic conditions. These differences are reflected in the various responses taken to globalisation by each state. Such considerations are not taken into account in human capital theory or social capital evaluations, which were not initially devised for developing countries. Some of these countries, such as Botswana, have assumed that a copious supply of ready-trained personnel (within the government's remit based on human capital theory) would be a major factor in attracting investment in various new or existing enterprises, which would reduce unemployment. This policy has not been very successful and many trained personnel are underemployed, or unemployed, and disillusioned.

In this chapter an alternative, more holistic approach to the political economy of skill formation policies is examined. It considers a wider range of relevant factors, such as the

dynamic nature of skill formation and how their implementation may be used to determine a country's skill formation needs, and provide a more positive linkage between the supply and demand of skilled labour.

Context for Skill Formation Theories

Globalisation and the Role of the State

Because of globalisation, many changes affecting manufacturing and services have occurred, which are reflected in the changes in employment. There has been a reduction in demand for unskilled labour in developed countries, due to the transfer of jobs (not always personnel) to the Newly Industrialised Countries, by approximately 20% (up to 1990) (Ward, 1994). However, these figures have been challenged as being too high by Esping-Anderson (1999). Those job seekers who have acquired human capital with sufficient global appeal to obtain jobs abroad are called 'symbolic analysts' by Reich (1991). They are engaged in problem identifying, problem solving and strategic brokering in the global economy, accounting for about 20% of the workforce in the United States. They include design, civil and biotechnical engineers, management, financial and legal consultants, marketing executives and research scientists (Brown *et al*, 2001).

The neo-liberal economic theory, from which human capital theory springs, is often presented as a necessity which governments must adopt. Among the implications of the neo-liberal approach to skill formation are the claims that the role of the state should be limited to encouraging people to invest in their own human capital so that they can find their own employment, and that state involvement should be limited to the supply side policies, such as the provision of schools, colleges and other training institutions. However, there are still many young people in Botswana, and other countries, with good qualifications and no jobs.

Consequently, if the government's involvement is limited to the supply side issues then, it is claimed, global convergence in policy is inevitable and, as part of that convergence, would be obliged to abandon policies such as those based on social partnerships based on tight market regulations for vocational education and training (VET), for example, the dual-system of apprenticeship in Germany and Botswana,¹ the internal labour markets of major companies in Japan and South Korea, and the top down state directives of Singapore.

¹ Chapter 3: 58

Globalisation can threaten some, but facilitate other forms of skill formation (this will be discussed later). However, it has been shown that national economies can remain competitive without upgrading the skills of large sections of the workforce, and that the route of high skills formation policies are subject to major variations between one country and another (Brown *et al*, 2001).

In the context of the global economy, national governments have lost some of their powers. A sign of their weakness has been the establishment of economic cooperation and trade agreements, such as, the European Union (EU) and the Southern African Development Community (SADC) (Elliott and Atkinson, 1998). They can no longer, for example, control market forces in areas such as exchange rates (Hutton and Giddens, 2000). However, obvious differences in their policies and objectives in many areas indicate that national governments still possess, and use, a great deal of power. Their strategies in shaping skill formation policies may well differ from each other and yet take into account the challenges of globalisation. The success of Japan and the Asian Tiger economies in the 1970s and 1980s can be explained by the role of their government agencies acting in a 'developmental' capacity to achieve rapid industrialisation and international competitiveness.¹ Singapore's policy, on the other hand, was to deliberately attract Multi-National Companies (MNCs) to establish businesses in Singapore, in order to provide high-tech training, so that it now has the highest proportion of any workforce in the world working for foreign MNCs, (Ashton *et al*, 1999). The education and training policies of various governments often have the same economic and political goals, for instance, full employment and prosperity, even though their methods may be different.

The Political Economy of Upgrading Skills

Skills upgrading is as much a political as an economic goal and the commitment to a high skill economy is often hidden under the guise of competitiveness. However, there are other ways of becoming more competitive and making profit, for instance, down-sizing, lower labour costs and reduced spending on training, research and development. 'High skill' countries may also have many low skill, low waged workers as, for example, in the case of the United States, which is also judged to be one of the most competitive countries. A high skill economy is not the automatic outcome of technology based, knowledge driven

¹ Johnson, 1982; Castells, 1998



capitalism; not all countries will shift to a high skills policy (Brown and Lauder, 2001). The political and economic goals cannot be separated from each other.

Earlier, important economists such as Marshall (1925) believed that technology changes and the subsequent increased skills of the working classes could lead to major improvements in their social, economic and cultural status: that is, economic policies could be instruments for social progress, yet the increased prosperity in most Anglo-Saxon nations has left a significant minority in poverty. However, there are few current economists, such as Marshall (1961: 3) to state that: 'the study of the causes of poverty is the study of the degradation of a large part of mankind', and that the roots of the poverty lie in the political economic system. However, the political economy of skill formation is concerned with skill upgrading and the distribution of expected increases in prosperity. Therefore, it is concerned with issues of gross inequalities of social justice and economic opportunities, the beneficiaries of technological innovation and gains in productivity. Such issues are vital in shaping the economic opportunity and social welfare of a nation's citizens. In a country, such as Botswana, where 38% of households were living in poverty in a 1993/94 survey,¹ social inequality and polarisation were seen to be widening and to act as an impediment to the creation of high skills, since non-polarised states are: 'more likely to be socially cohesive, have a stronger community life and suffer fewer of the corrosive effects of inequality' (Wilkinson, 1996: 32).² The provision of an adequate education for all children, to the extent that they can attain their full potential, if they so wish, is one of the essential measures of the success of the political economy of skill formation for a nation. Another is the provision of sufficient jobs, so that all of the population can feed and clothe themselves. This is especially the case when the divide between rich and poor is already great, as the political economy of a nation is essential in giving direction to the development of its skill formation policies and employment opportunities.

Many states have shaped their own economies, both implicitly (for example, in relationships with employer organisations and trade unions) and explicitly (including legal frameworks, tax action and training budgets) to support their training systems, even when their sphere of governance and influence is highly circumscribed on other fronts. Such consensus is essential for the successful operation of VET. These considerations go directly, beyond the

¹ Jeffries, 1997

² Brown *et al*, 2001

distinctions between market versus state, to the question of how to reform the social formation and economic institutions for skill formation. A holistic approach is required, one which reconnects the economy, politics and society to globalisation and the changing nature of work.

A Holistic Approach to Skill Formation Analysis

An alternative approach to human capital theory of skill formation for studying high skill economies, is based on a political economy of skills formation. It provides a broader conceptual framework and locates the study of skill formation in a global perspective. This approach to harmonising the demand and supply of skilled personnel requires that important factors, such as the effects of globalisation and the societal context, are taken into account.

The analysis of the high degree of divergence and variability in the production systems and economic performance of many similar advanced national economies of the world has led to the high-skills thesis.¹ The key to these differences, it has been argued, lies in the differing historic, social and cultural factors upon which each economy has developed. Finegold (1989) further advanced this concept by proposing a combination of conditions that must be in place if an economy is to reach and maintain a high skills (or low skills) equilibrium. This equilibrium is defined as a self reinforcing network of institutional pressures, that act to strengthen the continuation of a given skill formation or economic growth path. A change in any one of these variables (for instance, a nation's VET) without corresponding changes in other institutional variables (such as, a nation's long-term human resources planning) would be unlikely to lead to long-term change in the existing social and economic system as a whole. These institutional pressures represent further factors which have to be taken into account when developing a nation's skill formation policy. Finegold lists specific low-skill-equilibrium (LSE) institutional factors that discourage and constrain any movement towards the high-skill-equilibrium (HSE) alternative, which would result from the reversal of the LSE factors.² With this institutional approach, changes in VET are no longer considered in isolation from institutional factors which could alter characteristics of VET itself.³

¹ Finegold and Soskice, 1988; Finegold, 1991; Ashton and Green, 1996; Crouch, Finegold and Sako, 1999; Brown, Green and Lauder, 2001

² Appendix A9: Finegold's Low-Skills-Equilibrium Institutional Factors

³ Kraak, Lauder, Brown and Ashton (2006)

Such an approach is further developed by Brown, Green and Lauder (2001), based on the authors' detailed study of skill formation strategies and policies in Britain, Germany, Japan, Singapore, South Korea and USA. They reject the idea of a global convergence in which the skill formation policies of all the developed nations will respond to globalisation issues in the same way:

Globalisation presents important challenges to all of these countries in their common commitment to generate high skill societies but this is understood in different ways that reflect the historical cultural, social political and economic conditions of each country. An important 'societal effect' is discernable that will shape the direction of skill formation policies and the prospects for 'success' in each country (Brown et al, 2001: 3).

Their approach is contextual, emphasises the importance of studying the social foundation, rather than the narrower focus of the national economy and rejecting the universalism claimed by human capital theory protagonists.

A high skill economy may be defined as having a wide distribution of workforce skills, which are fully utilised to achieve high productivity across a wide range of sectors, producing high wages and relative income equality, whilst gaining respect for the relevant skills and ability rather than for age (Green and Sakamoto, 2001). The usefulness of key skills, such as problem solving, teamwork, initiative and communication, are closely associated with a high skill economy, such as definition centres upon the argument that a country needs to build a 'societal capacity' for skills rather than simply a stock of individual skills (Brown et al, 2001). It flows from the dynamic nature of skills formation, particularly during the current rapid pace of technological change, and the concomitant need for job updating and retraining. It is centred upon VET, and should therefore concentrate on providing good, general education and training that includes relevant generic skills upon which new skills or skills' updating can be based. It also contends that skill acquisition and utilisation are social acts which are predicated on workplace relationships of trust and are themselves embedded in an historical context. These acts may have many more consequences than would appear to be the case simply from their technical content. The importance of societal capacity in the development of a skilled society is reflected by the need for a conceptual framework that is sensitive to the supply and demand for skills. In the German dual system of apprenticeship, for instance, the skills training is shared between the government, the employers and trade unions, in order to provide relevant training and to integrate supply and demand.

It should be noted that there are essential differences between traditional society in Botswana, where cultural factors may present resistance to change, and those found in the six countries investigated by Brown *et al* (2001), because of their differing resources, cultures and stages of development. Nevertheless, even with these differences, an analysis of Botswana's skill formation policies would benefit from a more relevant and holistic evaluation approach.

Skills and Productivity

It is contended that global economic competitiveness rests upon the knowledge and skills of the workforce. The U.S. 1999 summit report '21st Century Skills for 21st Century Jobs' reported that: 'America's competitiveness and the prosperity of our people in a changing economy depends increasingly on high-skill, high wage jobs. Realising our potential will require investing in education and learning for all of our people throughout their lifetimes' (Brown *et al*, 2001:1). In a further quotation, Castells (1998: 345) claims that: 'If the developed nations are to fully benefit from the impact of the global labour market significant efforts will need to be made to lift the skill base'.

Raising productivity levels in the twenty-first century depends, not only on the new technologies, research and development, or the level of funding devoted to education and training, but also on how these are embedded in institutional relationships of high or low trust, a factor which is not considered under human capital theory. It involves a social and political aspiration that requires a national commitment to its creation and maintenance (*ibid*). The existence of group skills (not recognised in human capital theory), motivation and intelligence should be recognised as resources which must be harnessed. If workplace learning, innovation and increasing productivity are to depend on more than technical upgrading and development of individual skills, the workplace will also require a social transformation (Brown and Lauder, 2001). A high skills strategy depends upon building societal and workplace trust. In any one of the six countries investigated by Brown *et al* (2001) the maximum proportion employed in high skill occupations was approximately 40%.

Skill Formation Considerations

Many of the employees who would be needed to achieve the ambitious targets in the Botswana Government's 'Industrial Development Policies'¹ will depend upon the development of an appropriate high skill formation system. This will apply particularly to potential VET and foreign investors and, according to Castells (1998) and Brown *et al* (2001), it will also require the raising of the skill base of the working population as a whole. This could prove especially difficult for Botswana because:

- much of Botswana's limited existing range of industry is part of, or is highly dependent upon, the industry and commerce of South Africa, where the Fordist approach to management is strong and relationships of trust are often non-existent:
- a large proportion of Botswana's workforce has been brought up in traditional villages but, because of high unemployment has migrated to the towns in search of employment.

Skill acquisition and utilisation are in themselves social acts (Brown *et al*, 2001), which are dependent upon workplace relationships of trust. These relationships are embedded in the individual's historical identity and work experience. First generation, urban workers should therefore receive careful guidance if their productivity levels are to reach their maximum potential in both high and low skill jobs. The strong relationship of the villagers with their villages, is derived from their sense of identity with their village, and forms part of their social capital which, if threatened, may influence their reactions to urban industrial employment.

Skill Formation: Areas of Concern

In order to obtain a holistic evaluation of a country's skill formation prospects, seven areas of concern, first identified by Brown, Green and Lauder (2001) are considered.

Consensus: Skill formation policies of both government and employers may appear to hold different concepts when setting up and operating skills courses, for instance, it is possible that the ethos of a skills programme may lie at any point between being very practical or very academic. A firm commitment and consensus on the most desirable and effective combination of these two qualities, together with a mechanism for change to accommodate high skills and the rapid changes in technology, are essential for its successful

¹ Chapter 3: 39

implementation. Some of the measures which can assist training require an effective consensus between the major stakeholders, were referred to earlier in this chapter. These should be addressed by the use of joined-up policies, if they are to be effective in practice. In terms of the Botswana dual system of apprenticeship, it had been claimed that since its inception many employers have reneged on their commitment to provide a suitable environment of opportunity for students to practice the applications of their theoretical curricula. This, coupled with the long-term failure of effective monitoring by the appropriate ministry, highlights the importance of understanding and implementing predetermined agreements if Botswana is to form an effective consensus through joined-up policies which accommodates its stakeholders, for instance to allow some sectors to progress more rapidly than others, and capitalises on its investment in training.

Competitive Capacity: This is another area in which a part of the context in which skill formation features is not considered by human capital theory, yet it refers to a country's potential for profitable, productive innovation and change. For example, among the Batswana, especially in the traditional villages, obedience and respect are much more highly praised virtues than in the west, and children are trained accordingly. For example, a father will not normally play with his children since that might induce a lack of respect for the father. Thus, expatriate secondary teachers and lecturers have found that children generally appear to be much more 'docile' in school than their western counterparts, as teaching in Botswana's schools has been generally didactic.¹ The children, having missed out on some western learning and socializing experiences at home with their parents, and following the discipline of their upbringing, are 'programmed' not to ask questions in school.

From my own experience, and that of my colleagues when working with VET students, it was obvious that, for many, this attitude persisted into higher education and employment. Students on the first year of a degree programme at the University of Botswana reported an eminent American Professor for giving them a list of questions and instructing them to find the answers in the library instead of 'teaching' them. They felt that it was her job simply to give them the information! A Dutch lady, attending evening classes at the University in order to obtain her Masters degree, was taken aside by her classmates and told that she must stop questioning the lecturer's comments, because the lecturer was the expert who knew

¹ Monkge, 2001

everything! These attitudes are embedded in their beliefs during their upbringing and appear to result in a demand for 'spoon-feeding', and can become a hindrance to education, training and high skill employment as we know them. Initiative and creativity can be very difficult to inspire in the face of such beliefs and attitudes.

A high skills society may depend upon a large number of entrepreneurial and risk taking activities, including starting new businesses and expanding existing enterprises. It may feature new technologies, research and development, targeting greater value-added products, or new ways of organising the work and/or the workforce. The Botswana government has had a mixed record in this area. The Hyundai car assembly plant was not a success.¹ However, the three diamond cutting factories, employing a total of 930 are working well and are good examples of value-added enterprises.² A similarly mixed record of achievement exists for the Financial Assistance Policy (FAP) scheme enterprises.³ The small and micro scale FAP enterprises however, which were aimed primarily at the rural economy and usually included an element of training, were considered to be successful. During the 1991-95 period they accounted for 34% of FAP funding and were planned to create 3,800 jobs (*ibid*).

Capability: This refers to the way that people think about their own abilities and those of other people. In the west, it is assumed by many that only a minority are capable of doing high skill work (Brown *et al*, 2001). Much of education is therefore organised around their talent for their benefit. However, elsewhere it is argued, the vast majority of individuals are capable of benefiting from skills upgrading and lifelong learning.⁴ This would imply that a high standard of education should be available for all, and that, in order to cope with many of current and future industrial and commercial requirements, much greater emphasis should be placed upon 'soft' skills: teamwork, communications, problem solving, inter-personal qualities, self-management and numeracy, together with computer, e-mail and internet skills. Hopefully, an emphasis on such skills should prepare students for the possibility of a high skill society, and enhance a culture of greater personal responsibility in individuals.

¹ Chapter 3: 48

² Republic of Botswana (1997) National Development Plan 8: 269

³ Republic of Botswana (1997) National Development Plan 8

⁴ Goleman. 1996

The current rapid changes in technology, highlights the need for schools to emphasise knowledge and information, which are of enduring value and flexible applicability, together with abilities required, such as 'soft' skills, which can be used to adapt such knowledge and information. During their investigation of six developed countries, Brown *et al* visited factories and spoke to employers, who were unanimous in the view that, if technical upgrading was a requirement, it could be provided by the companies without great difficulty, but that when developing a culture of personal responsibility, teamworking, and learning was required, it became more difficult. In Botswana, how can this aspect of training be accommodated to incorporate the different concepts and understanding of the purpose of education and training that are held by students and teachers on the one hand, and the employers, on the other?

Coordination (of the Supply and Demand of Skills): It is claimed that investment in human capital will create its own demand, because employers will readily upgrade their skills base when qualified labour becomes available (Kuttner, 2000)). However, this is an explanation of the history of employers' requirements not a plan or forecast of future skills requirements. It ignores many extraneous factors, which include segmentation on the grounds of gender, race or religion, the type of management used, and the content of certain jobs. A major problem in Botswana since independence has been the lack of qualified and experienced, knowledge workers, such as scientists, engineers and accountants. The supply of other degree level graduates in most other disciplines, such as humanities, has overwhelmed the demand. However, the current main problem for those with lesser, or no qualifications, is the high level of unemployment, which is compounded in some areas by the employment of expatriates.

Coordination refers to the way in which the supply of skilled labour is coordinated with the demand for specific skills. Under the precepts of a neo-liberal economy, a government should restrict its input to the supply side. Making VET graduates employable over a range of jobs, for example Mechatronics (a combination of mechanical and electronic engineering), has experienced varying degrees of success in some countries. However, there is a need for the government, in its development capacity, to provide the conditions to create the jobs, and hence the demand for those skills. The Botswana government's Financial Assistance Policy

(FAP) and the Selebi Phikwe Regional Development Programme (SPRDP) were intended to develop this coordination. Under the latter, the government provided training grants for the first five years of a company's operation, which covered 50% of the costs of training. The intention was to provide the required skill at the point of need. However, in practice, the grant was used for other purposes by the employers, and no training was provided (Good and Hughes, 2002). A major opportunity was wasted because the conditions laid down for receiving the grant were not implemented.

Circulation (Diffusion) of Skills: The concern here is about the diffusion of skills, especially high skills, between nations, leading edge industrial clusters and research centres. Where information, knowledge, technology and skills change rapidly, this can assume added importance when this is needed in order to maintain competitive advantage. The circulation of skills is best achieved within a culture of learning that is not restricted to leading edge commercial companies (Coffield, 2000), but includes institutes such as the Botswana Technology Centre, and the Botswana National Productivity Centre so that a mismatch between the rhetoric of high skills and its implementation is less likely to develop.

Cooperation and Trust: Cooperation depends upon trust relationships that are embedded in the institutional fabric of society, this includes the education and training systems, labour market, industrial relations and social welfare. Because such relationships of trust may appear to be unlikely in conditions of inherent competition and conflict between post-industrial economies, great care should be taken to ensure that the common interest takes precedence over individual or sectional interests (Brown and Lauder, 2001a). However, gains in productivity are dependent upon trust and cooperation and a sense of identity.

Many of the interactions which have taken place in the workplace have arisen because of factors, such as the relationship of high or low trust between individuals and/or groups. In most cases, the essential conditions required for both increased productivity and for high skills formation require high trust between people in the workplace. The importance of such non-technical factors, and their role in creating the ways in which people organise, regulate and reward themselves for the production and distribution of goods and services (concerns which are not considered under human capital theory), and the effects of these methods on the wider relationships of trust and productivity in the workplace will be considered.

Jaques (1956 and 1967) distinguished between 'prescribed' and 'discretionary' work. This distinction is concerned with the qualities of 'specificity' and 'diffusiveness' in the 'discretionary-content' of work sense. The behaviour called for by the work-role may be either (a) specifically defined – thereby offering little choice to the worker, or (b) diffusely defined – thereby requiring the exercise of discretion by the worker (Fox, 1974). In order to illustrate the potential effect of this wide range most clearly, only the observed consequences of the two extremes will be described.

- (a) Low discretion employees are seen by employers as: 'usually offering no commitment whatsoever and as being, at best, passive and indifferent, and at worst, actively hostile and disaffected' (Fox, 1974: 32). Employers, therefore, believe that such employees generally require close supervision. Low discretion workers are likely to see themselves as less competent members of an essentially indifferent or threatening society (*ibid.*) Such relationships are typical of many Fordist style enterprises. Between the two extremes of high and low discretion, craftsmen, lower grade technicians and supervisors hold the middle ground. The trust, sense of identity and cooperation between the older migrants from the villages has been created and embedded in the social structure of the village, so that employers and supervisors often find it difficult to gain their cooperation when the factory jobs on offer leave very little discretion to the employees who consequently share very little of their embedded social backgrounds with their supervisors. Fox (1974) considers that the more that employees cooperate, communicate and share common goals, the more they will be able to learn, to achieve and to change the nature of their involvement in the organisation of their work.
- (b) In contrast high discretion roles indicate situations in which workers are deemed to have commitment and moral involvement with the organisational goals and values. March and Simon (1974) assert that: 'the more the participation in making policy decisions the stronger is the tendency ... to identify with the organisation'. While Fox (1974: 30) contends that 'the exercise of discretion lies in individuals making decisions as against conforming to prescriptive rules, it follows that high discretion roles encourage their occupants to make this identification'. In their work, professionals such as scientists, engineers and accountants are bound by the proven rules and relationships of their various disciplines. In order to operate effectively they require support, not orders from

their colleagues and managers: 'This indicates a pattern of interaction in which communication is open, free and unfettered by hierarchical distinctions; the emphasis being on "problem solving" rather than externally imposed coordination' (Blau and Scott, 1963: 124). The need for these qualities becomes apparent in the emphasis on such things as the free flow of ideas, suggestions and criticisms, which are characteristic of high discretion work structures, the ability to generate self-direction where that means the use of thought, initiative and independent judgement in their work.¹

The extent to which high trust relationships are woven into the fabric of society will indicate the degree of individual discretion and empowerment, as well as the collective commitment to skills upgrading. If cooperation is to facilitate increasing access to knowledge and collective intelligence, nations will need change in their social and political institutions to cater for the skilled workforce of the future.²

The distribution of skill is shaped by the social groups to which an individual belongs, as well as to society in general. For instance, a socially polarised society is more likely to contain a low trust society. Increased productivity depends, not only on technological advances, but also how these are embedded in institutional relationships of high or low trust (Fox, 1974). However, innovation and higher productivity levels are increasingly seen to depend upon technical, interpersonal self-management and the discretionary commitment to acquire skills.

Closure (Social Inclusion and Exclusion with Education, Training and Labour Market): 'In a high skills society we would expect to find inclusive skill formation policies aimed at reducing the social closure that has traditionally confronted women, ethnic minorities and those from lower socio-economic backgrounds' (Brown *et al*, 2001: 49). This highlights the relatively easier path of developing an elite of high skill workers to which any high skills society might espouse, and it addresses the question of whether opportunities to enter a good job are open equally to all social groups. They also suggest that at least 50% of a 'high skill' society would be in occupations, such as technical, managerial or professional, with the vast majority of the remainder requiring formal skills training, so that only a minority of the

¹ Fox, 1974; Kohn and Schooler, 1969

² Fox, 1974; Jaques, 1967; Meegan, 1988; Atwell, 1990

workforce will not be in relatively high skilled jobs. In many African countries, however, significant illegal immigration occurs across the often unguarded borders which colonialists imposed, sometimes dividing previously existing tribal nations, such that, over time, they became large enough to impact on the operation of a high skill society. Often (always, according to human capital theory) from an individual's view point, the primary goal in education and training is to obtain better qualifications than other individuals in order to improve one's positional competitiveness and so obtain a better job. However, in western society, social worth is often reflected in the market value of one's employment, so that those on low pay or unemployed may easily become socially excluded, whereas in traditional African society other credentials may claim precedence, for instance, age or the number of cattle owned, while the extended family acted as a buffer against destitution.

Some governments have defined the problem of equality of opportunity based on class, gender or race, as one of raising absolute standards of educational achievements, so as to enable all to take advantage of new opportunities for skilled work which the globalisation of labour is seen to present (Reich, 1991). High skill formation depends on the educational foundation required for high skilled employment being supplied for the many rather than the few. This may be best achieved through a 'meritocratic', rather than a 'market' model of competition which depends upon the parent's wealth. Botswana had opted for the former method by providing free education for seven years of primary and the first three years of secondary education. In 2005, these educational establishments reverted to charging fees due to the excessive cost to the country of HIV/AIDS programmes, although bursaries for school fees are available for children from financially disadvantaged backgrounds.

Pressure Points

Over recent years, access to information and technology has accelerated to become a major feature of global capitalism, however, within each country, scope remains within which to unite economic efficiency and social justice. This is unlikely to appear without conscious forward planning: 'the creation of a high skills society depends upon building the societal capacity that harnesses social and economic institutions to upgrading the skills as a source of efficiency, justice and social cohesion' (Brown *et al*, 2001: 240). If a government functions with 'joined up thinking', education and training policies should take account of the market for its successful trainees. Such markets do not exist in the abstract but are embedded within

a country's economic and social institutions, which can be shaped in different ways (as Singapore and Germany have shown) in order to achieve improvements in productivity and growth. The next section explains the use of pressure points to enable a realistic agenda to be developed, from which the concerns expressed earlier in this chapter can be analysed and continually reviewed according to their relative importance, degree of urgency and implementation.

It is claimed by Brown *et al* (2001: 242) during their investigations in six different developed countries, that the way in which countries respond to four systemic 'pressure points' will shape their skill formation policy agenda:

the future of skill formation policies will be shaped by the way countries respond to a number of systemic 'pressure points'. These will be identified in all of our comparator countries and they converged around issues of globalization, skills upgrading, social inclusion and 'model' workers of the future.

The term 'pressure points' does not necessarily mean contradiction, though some is inevitable, and may vary in content from country to country. However, pressure points often involve conflict and political struggles, which have to be resolved. The possibilities of pressure points which arise need to be analysed within the context of existing limitations, such as political inertia, low educational standards, or the pressure between forces of global capitalism and economic nationalism that depend upon 'walled' economies, which insulate companies from international competition. These possibilities and limitations involve 'trade-offs' (or compromises) between interest groups that will shape a policy framework. The analysis of the factors influencing skill formation policies, and the possibilities of a high skill society for Botswana can therefore be based on the framework of the responses to the four systemic pressure points proposed by Brown *et al* (2001). This is a much more relevant and holistic approach than human capital theory, as it allows a much wider range of important issues to be discussed.

1. The Impact of Globalisation

The first pressure point focuses on the national response to the impact of globalisation. It relates to the need and purpose of improving the skills of the human resources and the most efficient methods of application in order to increase productivity and competitiveness. In addition, it involves the relationship between the role of the government and that of the labour market place and society: 'Consensus is the extent to

which the major stakeholders, government, employers and trade unions are signed up to a commitment to upgrade the skills of the workforce' (Brown *et al*: 35). The extent of any general upgrading of the skills of the workforce will depend upon the strength of a national consensus which binds the major stakeholders together in a commitment to skill upgrading throughout the economy. The strength of purpose required of this consensus makes it one of the most important indicators of the likely success of the government's decision to follow a new policy such as high skills. The pressure under which it may have to operate also makes it one of the most important pressure points to be considered.

New technologies have had a substantial impact on the demand for good education and generic skills training. They have permitted the integration of global business, although capitalism has continued to shape its application. The nature of capitalism has also changed in terms of the importance now attached to knowledge and information: 'It is informational capitalism, relying on innovation induced by increased productivity, and globalisation-orientated competitiveness to generate wealth and to appropriate it selectively. It is more than ever embedded in culture and tooled by technology' (Castells, 1998: 338-9). These tools of technology offer greater flexibility and discretion to senior managers in deciding how to organise production and services. This 'flexibility' can have a big effect on the level of skill requirements, especially when aggregated over the world as a whole.

Human capital ideas have also increased in significance, not only with the belief that the quality of human resources lies at the centre of economic competitiveness, but also as a result of many aspects of economic globalisation (Spring, 1998). Previously, skill formation issues were considered in the context of 'walled' national economies which served to limit international competition through controls over national currencies, trade barriers and tariffs on imports. In the leading economies of post-war North America and Europe, relatively high wage settlements to low skilled workers were sanctioned, these enabled the majority to engage in the emerging consumer culture. Human capital theory was then limited to justifying why further investments should be made in education and training to meet the technological sophistication of the new consumer goods and services.

In countries where there are already vast differences between rich and poor, any increase in such inequities could lead to deep resentment between the individual and society. This argument also claims that those who have remained tied to local or national labour markets have failed to acquire the necessary skills and credentials to compete successfully on the global market and will see their incomes stagnate or decline (Murnane and Levy, 1993).

However, the contention that most workers have to operate in a global, rather than a national labour market, is an over simplification. Contrary to many human capital theorists' deliberations, the global labour market does not always operate as a 'free' market.¹ Nationality continues to operate as an effective method for restricting the competition for jobs, by excluding millions of well qualified workers from other parts of the world, for example, skilled software engineers from India have been denied IT jobs within the European Union or in North America (Kobrin, 2000). Such restrictions have been lifted, however, during periods of acute national skill shortages. Similarly, at the other end of the labour market 'guest workers' may be permitted to undertake jobs that the indigenous workforce are unwilling to take because of low pay and poor working conditions, for example the Gulf States, Singapore and Germany. The impact of globalisation is affected by the role of government in the market place and the position taken up by the state, the trade unions and the employers with respect to skill formation policies. The relationship between the state and the market can vary greatly.

The German and Botswana dual system of apprenticeship is a form of social partnership. It guarantees theoretical and practical training; employment and salary, the tuition and the cost are shared between the state and the employer. Globalisation here is seen as a threat because it opens up German industry to greater international competition, and employers reduce their training commitments by reducing the number of apprentices as part of their cost cutting response to that competition. The state may feel the need to respond to the threat of competition posed by globalisation in order to protect its basic skill formation partnership (Streeck, 1997). The response of the stakeholders in Germany has been:

to maintain a market consensus, which on the one hand recognises the need to play by the rules of international competition, but on the other, to avoid the kind of

¹ Castells, 1996; Held *et al*, 1999

competition within society which can lead to greater inequality and polarisation
(Brown *et al*, 2001: 245).

Germany is also one example of the many countries whose membership of a trade association, such as the EU, affords them some protection from global competition.

In Japan and South Korea, the state provides good general education and large companies provide their own training. This is a part of an arrangement whereby the individual who obtains a job (for life) with one of the large companies is also given training as and when required. Salary differences are smaller than those found in British or US companies and there is a strong commitment to giving good quality opportunities to all. Some skill transfer occurs by the 'diffusion' of good practice to the smaller, associated supply companies. Women are rarely included, as they are expected to finish employment when they marry or have children. Globalisation is seen as a threat, since a job (plus training) for life can no longer be taken for granted because of the cost cutting and flexibility needed to meet competition, which might include redundancies. In South Korea the situation is similar but more volatile. Each country has experienced some effect due to globalisation. Singapore has embraced globalised capitalism. It has provided very good incentives to encourage the successful investment of Multi-National Companies (MNCs) in Singapore. At the same time it has placed strict controls and direction on the type and number of training places it provides, which are limited in line with the requirements of the MNCs. The MNCs provide training for their own specialist purposes. Globalisation is seen as a benefit and is welcomed.¹

It is claimed that many employers in Botswana are only interested in obtaining a quick return on their investment and are reluctant partners where training is concerned, and that the trade unions are weak and too ineffective to make much difference.² The government has clearly stated its intentions regarding globalisation on several occasions but has had limited success with its implementation, especially with skills development. It has greatly increased the supply side of skills development, and has only the Grant/Loan Scheme (for students at the university) as its policy which tenuously links supply with demand.³ The government's payment of students' university fee, plus keep, are estimated in accordance

¹ Ashton and Sung,, 1997

² Good and Hughes, 2002

³ Appendix A4: Grant/Loan Scheme

with the country's forecast of the demand and/or importance of the subject concerned. The role of the Botswana government would appear to be the key in organising the network of institutional pressures which act to establish, and maintain, its skill formation growth path in any effective response to the impact of globalisation.

2. Upgrading the Skills of the Workforce

This pressure point raises issues of how better to coordinate education and training, with the demand for labour, by revising industrial relations policies and practices, and developing a more positive attitude towards skill upgrading, and by making sure that high skill employees are placed where their talents will have the most positive impact, indirectly creating more jobs and thus reducing unemployment in Botswana. Many British and US employers are reluctant to upgrade their workforce skills when it is still possible to make good profits from price-cutting rather than on product or service innovation (Keep, 1999). In the UK, the government, or the individual, take on the responsibility of training. This trade-off between government and business has left large numbers of those entering the labour market better qualified but still unemployed or under-employed.

The dual system of apprenticeship has enabled training, earnings and the labour market to be linked in such a way that, in Germany, a positive attitude to training, related to the centuries old pride in skilled craftsmanship, together with a sense of identity between the old and new generations, has been developed.¹ In recent years, the time taken to produce and ratify new programmes of training has been significantly reduced, but growing concerns over labour costs remain in the face of strong global competition. A positive attitude to skill formation in schools, colleges and industry, should be an essential element in the overall upgrading of skills in the entire workforce (Brown *et al*, 2001).

The Government of Botswana pursues a neo-liberal economic policy. According to that theory, it should not intervene with the employers' demand side of the skills training, but should restrict its activities to the supply side by subsidising training. The type of education and especially training should be driven by the employers, who are considered to be best placed to give that advice. Once trained, the choice of jobs and recruitment are

¹ Fevre, Rees and Gorrard, 1999

left to the individual and the jobs' marketplace. The government is operating in the context of adversarial marketplace relationships. However, the policy signals emanating from government are mixed, with a variety of methods of payment for skills training in use, but with no obvious overall coordination or standardisation.

A key issue is how national governments seek to tailor their education and training systems to the perceived needs of the economy, and how they try to incorporate the expanding numbers from higher education into high skilled jobs. This refers to whether or not the 'supply and demand' of skills is coordinated towards upgrading skills *throughout* the economy. This may be left to chance, ways should be found to stimulate the demand for high skilled workers.

Many of the employees required by foreign investors will be recruited locally and will require further training, or retraining, according to the requirements of their jobs. The abilities of these prospective employees to successfully undertake such retraining represents a serious challenge to the trainees' earlier education and training. This requirement also illustrates the need for the high skills concept in their initial education and training, which would then facilitate their retraining.

The pace of change of technological innovation has changed the rate at which new skills must be acquired. It is now also necessary to 'learn how to learn'. The short life span of new knowledge and of skills makes the ability to grasp new information and acquire new skills rapidly an integral part of skill formation in post-industrial societies for all levels of workers. In recent years in the construction and engineering industries, many draughtsmen have had to retrain as Computer Aided Design (CAD) operators. Some drawings can take a little longer to produce, but alterations can more easily be made and hard copies of the modified drawings produced without having to redraw the whole of the original. Because the drawings are computerised and can be put on disc, they can be used, with appropriate software, to control workshop machines producing accurately machined artefacts. Similarly, they can be used to control robotics on assembly lines. In the construction industry they are used by quantity surveyors to provide costings of buildings, and other construction projects, in a fraction of the time previously required.

Manually skilled craftsmen are now used primarily for one-off specialist products. Zuboff (1988:395) states that:

Learning is no longer a separate study that occurs either before one enters the workplace or in remote classroom settings. Nor is it an activity reserved for a management group. The behaviour that defines learning and the behaviour that defines being productive are one and the same ... To put it simply, learning is the new form of labour.

National governments have a key role to play, other than continually increasing the supply of qualified personnel, in coordinating the perceived needs of the economy, local knowledge should also be utilised and decisions made locally so that small and medium enterprises (SMEs) gain maximum benefit and contribute to a national strategy of skills upgrading. Different nations have different historical cultural backgrounds and have therefore adopted different strategies, however, there is no universally applicable panacea under human capital theory, for equating the supply to the demand for skills, high or otherwise.

Productivity improvements depend not only upon the application of new technology, training and skills alone, but also upon how they are embedded in the institutional relations of high or low trust, (Brown *et al*, 2001). In conditions of high trust, for example, it is easier to take advantage of skills, such as teamwork, communications, self-management, problem solving, and creativity. Where skill is involved with production, it is also affected by social pressure and social interaction. It is thus socially and historically constructed, and is dependent upon the conditions of trust under which it is used.¹ The level of productivity in Botswana is poor when compared with other developing countries.²

3. Opportunity and Social Inclusion

The employment-generating power of improvements in skill levels is limited. The international trade sectors which use truly advanced skills are small in size and number become even less labour intensive as their skill levels increase. Employment policy cannot depend fully on education policies (Crouch, Finegold and Sako, 1999: vii).

In many countries, for a high proportion of workers, social worth is equated to the market value of their job, and that positional competition for education, training and employment

¹ Meegan, 1988; Atwell, 1990

² Chapter 3: 44

is therefore part of a very important pressure point. Not everyone will obtain high-skilled employment, some will become unemployed (Brown *et al*, 2001) and their social worth may therefore be reduced. The way in which competition for education, training and job opportunities is organised, is therefore closely linked to the social exclusion of the losers in that competition. In both Britain and the USA, a substantial divide exists between the employment, income and life-chances of high skilled workers and the unemployed. Poverty and social disadvantage are closely correlated to educational failure and subsequent unemployment (Halsey *et al*, 1980).

The competition for high skilled jobs and the way in which it is organised should be an important part of national skill formation strategies. The education and training system, and hence its qualifications, are often used for screening purposes. Access to the opportunities provided via these, however, may originate in the parents wealth and status rather than meritocratic abilities, rather than positively discriminating processes that attempt to reduce bias due to class, gender, race or ethnicity.¹ In addition, the state may prioritise access to training in strategic or specific shortage areas of national importance by the use of financial incentives,² or even quotas, as used in Singapore.

In both Japan and South Korea, equality of opportunity within the education system is an important part of their skill formation strategies. In the early years of education, this involves a high degree of social mix and, in general, an emphasis on collective achievement rather than the education of an elite cadre. Competition for access to the elite universities, however, is intense, as these feed the internal labour markets of the major companies. The societal commitment to narrow income differences and to the quality of opportunity remains strong, despite growing pressures from the middle classes to reproduce social advantages for their children (Dore, 2000).

‘Guest workers’ are used in Singapore to undertake unskilled or low status jobs. The general pattern of income inequality however, is more akin to that of the USA than to Japan or Korea (Low and Liang, 1999). By generally raising all incomes and maintaining

¹ Brown, 1995; Lauder, 1999

² Appendix A4: The Grant/Loan Scheme

full employment over a relatively long period of time, Singapore has succeeded in maintaining a high degree of social inclusion.

Post-Independent Botswana has created an education system with great potential, which it has developed from almost nothing. However, due to the nature of its geography and the pattern of its society, there remain several categories against whom bias is said to occur when searching for education, or training and jobs which depend upon education. These include females, as compared with males, frequently rural based; children attending many rural schools, as opposed to urban, many of lower socio-economic backgrounds who are living in poverty; and those who fail to obtain the academically based transfer from community junior secondary school (CJSS) to senior secondary school (SSS). These have been subject to quantitative investigation and analyses. Even though Botswana provides free education for the seven years of primary and the first three years of secondary (i.e. the CJSS), a substantial minority of families still live in poverty (Jeffries, 1997) and do not take up this option, as education is not compulsory, due to the isolation of some of the remote area dwellers (RADs). Children who do attend school from poor families are often disadvantaged as they have no place to do their homework, no light to read at home, little opportunity to hear English spoken and are expected to do more household chores, particularly in rural areas (Monkge, 2001). 'Decades of research have shown that children living in poverty lack material resources at home ... as well as the cultural capital attuned to the demands and expectations of the school system' (Bourdieu and Passeron, 1977: 52¹). The handicaps of poverty may be exacerbated by issues of gender and racial discrimination, which should be eliminated if social inclusion is to be achieved for all, and the growth of a socially divided country (urban and rural) is to be avoided in the long term.

In Botswana, the language of instruction was Setswana for the first four years but now it is in English from Year 2.² Again, children from urban areas have the advantage of a much greater exposure to English outside school (via radio, television, advertisements and newspapers) than their rural counterparts. Children from minority tribes whose mother tongue is not Setswana are doubly handicapped (Mautle, Konesappillai and Lungu, 1993). A substantial minority do not adequately master the English language

¹ Brown *et al*, 2001

² Republic of Botswana (1997) National Development Plan 8

before entering the community junior secondary school (CJSS), where the medium of instruction is English.

In all state education and training systems in Botswana, opportunities for entry and advancement are based on merit. There are, however, important differences as compared with conditions found in the average 'western' country, most of which militate against pupils in rural areas. For a small number of children in the very sparsely populated areas, the time taken to travel to and from the nearest school is too great for them to attend until they are old enough to board near the school. For this reason school attendance is not compulsory, but is free until senior secondary level.

An unusual feature of Botswana's rural schools is that there are significantly more girls than boys in the first few years of primary school. This is because many boys are used to assist at the cattle posts where they may live for several months at a time. These may be fifty or more kilometres from the village and even further from the nearest school. The ownership of cattle is still given great prestige by most Batswana – including many highly placed government officials. As such, the boy's time at the cattle post is seen as an important form of apprenticeship and an important part of his identity. Pride in activities, such as trades and professions, is rarely displayed to the same extent as pride in cattle ranching.

Fevre (2000) explains how young German males, under the strong pressure of social norms and obligations to identify with their social environment, will transform themselves in order to enter adulthood as a respectable graduate apprentice.¹ The recently graduated apprentice takes great pride in his skills, and receives much praise and respect for his new status as an adult.

Young German people learn as part of their 'entry into a community of practice' and 'becoming skilled ... within a wider process of identity formation' where recognition of significant achievement (and attainment of the status of experienced practitioner) is itself a socially mediated (or contested) process, dependent on others and a sense of self-worth (Brown A.J. 1997:7)

On graduating from the German dual system of apprenticeship in Botswana, many young Batswana appear to lack identity, this has been attributed to the limited industrial base of

¹ Baron, Field and Schuller (Eds.), 2000

Botswana, and that may well be responsible for an element of the blame. However, a young Motswana who has proved his skills as a cattle herdsman will take pride in these skills, identifying himself with the mainstream adults, and he receives much praise, status and respect for having the qualities of an adult.

4. Changing Models of the Worker-Citizen

The way that social, political and economic changes have challenged previously existing models of the worker-citizen is considered under this pressure point. It highlights the employability of the worker and the nature of relationship between the individual and society. New, more highly efficient industries, place more emphasis on key skills such as communication, teamwork, problem solving and creativity, more emphasis is also placed on individual initiative and self-reliance which challenges the routine, role following behaviour demanded in Fordist factories and corporate bureaucracies, as well as some practices and sanctions of traditional cultures.

Several experts state that the greater the level of trust between major stakeholders, the greater the chances of success.¹ Since independence in 1966, due to the revenue derived from diamond mining, the circumstances of most stakeholders in Botswana have changed dramatically. At that time 96% of the population were classified as rural with their dominant activity cattle ranching.² With the rapid growth in other economic activities since the mid-1970s however, their patterns of settlement and occupation have also changed rapidly. As a result, the dominant, traditional village culture and its occupations have been supplanted by those of the town. Whilst this in itself is not the only threat to a consensual approach to high skills development, the continuing unemployment, the spread of HIV/AIDS, poverty and loss of identity in the rural areas, where income distribution is most uneven (*ibid*), increases the level of envy between town and country and increases the difficulty in obtaining a consensual approach.

In the countries investigated by Brown *et al*, (2001) employability was a matter of concern because the new, more efficient industries were more closely concerned with the volatile nature of the consumer markets, the rate of change of technological innovation,

¹ Fox, 1974; March and Simon, 1974; Jacques; 1977; Streeck, 1992; Green and Sakamoto, in Brown *et al*, 2001

² World Bank Report, 1992

Summary

Consideration has been made of the major factors involved when developing skill formation policies in general, but with the particular requirements of Botswana in mind. Globalisation and its effects upon the role of the state have been examined, and what could be the most effective approach to skill formation discussed. Neither human capital theory nor social capital considerations alone are deemed to provide significant assistance in developing a skill formation policy. An alternative, holistic approach was therefore investigated.

A number of factors have been considered in this holistic approach which centres upon the dynamic nature of skill formation, and can therefore better cope with the current rapid pace of technological development, the demand of globalisation and the consequent needs for job updating and retraining. It contends that skill acquisition and utilisation are social acts that are dependent upon, not only technical knowledge, but also upon workplace relationships, which are embedded in an historic, social context. In a country such as Botswana, with a still strong, traditional culture and mores, relationships of trust and respect are not always straightforward, but should be considered under a holistic skill formation procedure as indicated in the systemic pressure points of Brown *et al* (2001: 242) who claim that countries respond to four systemic pressure points, 'the future of skill formation policies will be shaped by the way in which countries respond to a number of systemic pressure points ... These converge around issues of globalisation, skills upgrading, social exclusion and 'model' workers of the future'.

The objectives, methodology and other relevant details concerning the preparation for the empirical survey of Botswana's VET system and other relevant, related factors are analysed in subsequent chapters. They include: information from village focus groups and parents, school leavers and teachers, VET personnel and students, VET graduates and employers, and additional experts. The concepts and hypotheses outlined in the preceding chapters will be used in this analyses.

CHAPTER 6

Methodology

Introduction

At independence (1966), Botswana was one of the ten poorest countries in the world. The discovery of diamonds and the consequent, guaranteed, large, long-term, revenue was initially expected to provide many jobs and increased wealth for all. However, the increase in jobs in the mining industry itself was insufficient for this goal to be realised. By the early 1980s the government was already planning for the development and diversification of its embryonic industry in order to provide more jobs. By the mid 1990s policies, such as a free market economy which instigated a positive approach to globalisation and a high skills strategy towards industrial development, were adopted. High investment in vocational education and training (VET) was pursued. This was considered to be a crucial factor in attracting new industry, and thus ensuring job creation.

However, twenty years on, Botswana was still experiencing high unemployment especially in areas traditionally associated with VET, as indicated by the following figures taken from the Republic of Botswana Labour Statistics for 1999:

- 45.3% and 41.3% of the 15-19 and the 20-24 age groups respectively, were unemployed;
- there were 16.1%, 22.7% and 21.0% job vacancies reported among craftworkers, technicians and professionals' jobs respectively;
- the numbers of work permits issued for expatriates were: 2170 (7.9%), 1552 (4.6%) and 1683 (9.5%) as being employed craftworkers, technicians and professionals respectively.

In other words, there existed simultaneously a high number of job vacancies, and a high number of unemployed, but appropriately trained, personnel. This suggests serious failures in the skill formation policies, the VET system, and their advertising of job availability.

To meet the challenge of globalisation, the development of human capital (i.e. more employable skills) will be required. The conclusions and assumptions of human capital theory were found to be inadequate in explaining the development of western industrialisation.¹ Its precepts appear to be not easily acceptable in Tswana culture, where, for instance, respect is not an automatic consequence of wealth, the resolution of a problem

¹ Chapter 4: 79

demands consensus and age demands respect. However, the government policy is to accept globalisation as a means of driving its economic and industrial policies forward.

The growing problem of youth unemployment has led to strong criticism of the educational system in Botswana, resulting in complaints of irrelevant curricula producing unemployable citizens (Monkge, 2001). The literature review has suggested that the relationships between the skills provided by education and those that employers require are a complex and ever changing problem (Ashton and Green, 1996). Substantial, critical comments about VET were made to me by employers during my ten years of employment in the Botswana VET system. Discussions concerning the relationships between education and economic development have shown diverse views from various groups from curricula theorists to social critics. However, whatever their differences, they generally agree that attempts to integrate preparation for the labour market into the school curriculum have usually been ineffective.¹ This places a heavy responsibility on VET to fill that intermediate role. The focus of this chapter, is primarily concerned with the problems and successes which have arisen in the current (1999) Botswana VET policy and practices and the lessons which may be learned for the successful development of future policies.

Objectives

The employers' adverse comments concerning VET graduates and the consequent research questions were considered as a starting point for evaluating the relative importance of the various factors may influence the effective operation of Botswana's VET.² These include:

- (i) focus groups, to obtain an indication of the influence of traditional culture, attitudes and behaviour;
- (ii) self-completion questionnaires, a quick method of obtaining a large amount of reliable information, from school leavers, teachers and parents; VET leavers, lecturers/instructors; VET graduates and employers structured interviews for teachers; VET leavers and lecturers/instructors; VET graduates and employers;
- (iii) structured interviews, which allow for more depth in response and the raising of points not previously considered, for teachers, VET leavers, lecturers/instructors; VET graduates and employers;

¹ Statz *et al*, 1996; Lewis, 1997

² Chapter 1: 4 and 6

(iv) informal, open-ended interviews of additional experts.

To clarify which influences had an effect on the implementation of VET in Botswana a wide range of factors needed to be considered, details are shown in Figure 6.1:

Figure 6.1: Factors Relating to VET and Skills Creation

Areas of Interest	Instruments of Enquiry
<u>Village life:</u> Importance of traditional village culture; hierarchy, age and status; relationships and responsibilities within the family and community; attitudes to school, work and careers.	Focus group discussions.
<u>Schools:</u> The quality and standard of education (as a base for VET) i.e. English, Maths, Science and D&T; at the end of secondary education, factors which have lead to underachievement; the influence of teachers, parents, relatives and peer groups on choice of career; status of VET careers.	Self-completion questionnaires and structured interviews .
<u>VET Institutions:</u> (a) <u>VET Students</u> – expectations of the importance, content and status of their future career; satisfaction with their course, work experience and lecturers, relevance of the curriculum. Factors considered when taking up VET and factors leading to underachievement. (b) <u>VET Lecturers/ Instructors</u> – satisfaction with their students, and their standard of communication, relevance or deficiencies of the course. Own work experience and factors considered when taking up VET; job satisfaction and status.	Self-completion questionnaires and structured interviews.
<u>Employment:</u> (a) <u>VET Graduates</u> – satisfaction with VET, deficiencies in training; factors considered when taking up VET; time taken to obtain a job, time in job, job satisfaction; status and social relationship within workplace; cultural clashes; communication / numeracy problems, willingness to retrain, career prospects (b) <u>Employers</u> –management, organisation and relationships of the workplace; satisfaction with VET graduates; causes of training deficiencies, communications / numeracy problems, syllabus omissions, poor training, willingness to retrain; attitudes to work; cultural clashes.	Self-completion questionnaires and structured interviews.

The main objective of this empirical research was to investigate, in depth, the areas of interest shown in Figure 6.1. In order to investigate the overall picture of VET in Botswana, both qualitative and quantitative approaches were used, the results of which are itemised and discussed in Chapters Seven to Thirteen.

In carrying out its role, VET should consider both the needs of the employers and the abilities of the trainees which it receives from the schools. In addition, Botswana retains a strong traditional culture, especially in the rural villages, which could raise problems for the management and organisation of work in westernised workplaces.

Scope of Surveys

It soon became apparent that, because of the large number of factors affecting the efficiency of VET, each with its own degree of importance, compromise between the time spent on each factor would be required if realisable and useful surveys were to be completed. An outline of this is shown in Table 6.1, where the population and sample numbers of village focus groups, schools, VET institutions, employers, VET graduates utilised in the survey are detailed. It does not include the participants used for piloting or additional experts consulted.

Table 6.1: Categories to be Surveyed

Category	Total Number	Sample Number
1. Village Focus Groups		5
2. Schools		
(a) Community Junior Secondary Schools	210	30
(b) Senior Secondary Schools	32	6
3. VET Institutions		
(a) Brigades	32	16
(b) VTCs	7	7
(c) Technician Institutions	6	6
4. Employers		105
5. Additional Experts		140

Notes for Table 6.1:

1. Village Focus Groups: 5 of the more traditional villages were selected, all of which were accessible within a day from Gaborone.
2. Schools: the number of schools surveyed was determined by the need to ensure:
 - (i) that a sufficient number of responses to obtain statistically significant results was obtained;
 - (ii) all administrative districts of the country would be equally represented in order to avoid accusations of tribal bias;
 - (iii) differences between the performance of urban and rural schools and male and female respondents could be detected;
 - (iv) that parents opinions would also be considered.
3. VET Institutions:
 - (a) Brigades: as these are more varied in character, content and quality, a relatively large sample was required;
 - (b/c) VTCs and technician institutions: these are few in number and therefore all were used to obtain statistically significant results.
4. Companies: both large and small employers, all potential employers of VET graduates from across the whole spectrum of industry were selected using the Ministry of Commerce and Industry's randomly selected list of employers;
5. Additional Experts: these included highly placed government, parastatal officials and private enterprise employees.

The influence of traditional culture is a potentially important consideration, which is often ignored in such analyses of the effectiveness of VET in developing countries. In order to establish a current, first hand account of the nature and strength of this phenomenon and to gauge its influence on the perceptions of VET in other walks of life, the five-month empirical research fieldwork started in May 1999 with focus groups in five traditional villages, recognising that they alone would be unlikely to produce useful insights into the wider issues involving VET in Botswana. From my own experience on the Botswana National Commission on Education in 1992; at a *kgotla* meeting presided over by the tribal chief at a large village, the responses to the question: 'at what age should children start school?' (the starting age was then seven) were ten, eleven or even twelve years of age, since, it was argued that, by that age the male children would have learnt the basic skills of cattle ranching. Such is the importance of cattle that instruction in the art of ranching in their culture may equate to our concept of obtaining a diploma via VET.

In order to investigate the perceptions of VET in Botswana on a wider scale, the opinions of those who might be more directly concerned were sought. The method of investigation was a cross-sectional research design in which the data on the relevant variables was collected quantitatively, more or less simultaneously, using self-completion questionnaires and

structured interviews. This included final year secondary school pupils, some of whom might be considering entering a VET course, together with their teachers and parents; VET student leavers and their lecturers/instructors; those recent VET graduates who were already in employment, their employers; and additional experts, with wide ranging experience. Sequential administration of questionnaires and interviews was not possible where distances and geographical location were difficult, where participants from different sub-groups were targeted on the same visit. Also, the best use of the Setswana speaking research assistants sometimes involved a change in order of target groups.

There was substantial overlap in the information and opinions sought from the participants from schools, VET institutions and employed VET graduates, as might be expected, given the overall aim of the study. However, each group of respondents was expected to view VET from somewhat different perspectives, and the opportunity which was thus provided to compare these different viewpoints on the same questions, was deemed to be a strength of the design. Questionnaires and structured interviews were developed separately for those groups itemised in Figure 6.2. These, and the focus group discussion schedules, were initially compiled in the UK prior to piloting and modification in Botswana.

Figure 6.2: Categories Surveyed by Questionnaire and Interview

Target Group	Instrument of Enquiry	
	Self-Completion Questionnaire	Structured Interview
<u>Schools</u>		
Pupils	√	-
Teachers	√	√
Parents	√	-
<u>VET Institutions</u>		
Students	√	-
Lecturers/Instructors	√	√
<u>Employment</u>		
Recent VET Graduates	√	√
Employers	√	√

Other Sources: information used to complement the primary sources was drawn from:

- (a) village focus groups;
- (b) reports, documents and texts regarding the policies and purposes of VET and its function in industry and the economy;
- (c) interviews with additional experts with interests in VET and the calibre of its graduates.

Considerations of the Data Collection Methods Used

1. Focus Groups (Qualitative Method)

Using the traditional village focus group approach enables the villagers to express their way of life, how they have organised their lives, including their norms, sanctions, experiences and perceptions and concerns over VET. Patton (1990: 24) states that 'The task for a qualitative researcher is to provide a framework within which people can respond in a way that represents accurately and thoroughly their points of view about the world, or that part of the world about which they are talking'.

The focus group method is a form of group interview in which there are several participants (in addition to the moderator/facilitator) ... it contains elements of two methods: the group interview in which several people discuss a number of topics, and what has been called a focused interview, in which the interviewees are selected because they 'are known to have been involved in a particular situation' (Merton et al 1956:3) and are asked about that involvement (Bryman, 2001: 337).

If the focus group members are known to have had extensive experience in the area concerned, they can be 'interviewed' in a relatively unstructured way about that experience. The technique enables researchers to develop their understanding about *why* people feel the way they do. In the focus group situation, the moderator has to relinquish a certain amount of control to the participants, so that participants may question each others' reasons for holding certain views, and the issues that most concern them can rise to the surface more easily. Consequently, the researcher may end up with a more realistic account of what people think, and a better understanding of the process through which people, in conjunction with one another, construe the topics upon which the researcher is interested. It allows participants' perspectives may be revealed in ways that are different from those obtained from individual interviews (Bryman, 2001).

Limitations

In general, the researcher seeks an understanding of the behaviour, values and beliefs in terms of the context in which the research takes place. Their contextual approach, and their often prolonged involvement in the setting up, leads to a rich data base. In evaluating such qualitative data the strict application of the reliability, and often validity criteria, associated with quantitative research is inappropriate. Words do not obey the same rules as numbers and the words of qualitative research are often not amenable to the statistical procedures of quantitative research. 'Most qualitative researchers prefer seeing the subject of their research through the eyes of the people being studied' (Bryman, 2001: 276), implying that there is more than one way of seeing the same reality. Some writers, for instance Lincoln and Guba (1985) and Guba and Lincoln (1994), suggest that the alternative criteria of trustworthiness and authenticity should be used for assessing qualitative research instead of the quantitative research criteria of reliability and validity. The criteria should not presuppose that only one account of a social reality is feasible (Bryman, 2001). In my own experience, the social reality as viewed from the *kgotla* (the village meeting place) can be very different from that obtained from the capital city and the quantitative research criterion, that the research should be repeatable by other researchers, has its problems when applied to qualitative research.

The topics for discussion for a focus group may be introduced in a structured manner, but there is little control over who speaks first, in what order further points are raised in discussion or that the responses will be the same regardless of which researcher is involved:

- The participants of the original focus group are unlikely to all be available at the same time for a repeat performance.
- The course of the discussion is often reliant on the moderator's ingenuity, an alternative researcher could well guide the group in a different direction because of his/her different interests and personality.
- The researcher may have less control over the proceedings than he/she would have with individual interviews.
- Data may be difficult to analyse. Focus group recordings are particularly affected by unwanted, random noise on the tape recording, which can adversely affect transcription and would differ from the original session.

- Transcription is more time consuming than the equivalent recording of individual interviews because of the need to know who was saying what, which would surely change from that of the original session.
- There are possible problems with 'group effects': reticent speakers may not acquire their full quota of time (though not in a Botswana village, which is still an oral society), whereas those who like to hog the stage may get more (Bryman, 2001). These effects could also change from the original session.

Moderator Involvement

The degree of moderator involvement is closely connected to the degree of structure imposed by the moderator on the focus group. There is a need to limit the boundaries of discussion so as to ensure that some clear comparability exists between the focus group discussions. To this end, a discussion schedule was drawn up, which listed the general aims and specific objectives. The latter was expanded into more accessible discussion questions which served as an *aide-memoire*, and were only used when intervention became necessary, for instance to start off the discussion, or when the conversation was clearly going off track, or to break unproductive silences.¹ Because of the respect for age, most *kgotla* members were elderly, some very old. Most were very able orators, but a few tended to ramble on. Fortunately, the village chiefs were able to deal diplomatically with these when such a situation arose.

The Botswana Village Focus Groups²

Focus groups, each consisting of six to ten village elders, were organised in five of the more traditional villages which were within a day's journey from Gaborone. These were arranged through the Botswana Orientation Centre (BOC), which my wife and I had attended on arrival in Botswana. This organisation aims to promote the language and customs of the country, which tied in with the project's need to obtain first hand information on the traditional attitudes, customs and living memories, together with their current strengths and influences in the villages. Under this arrangement, BOC, also provided an interpreter/facilitator, a job that was shared between two members of their staff, Banki and Matts. In situations where the discussions were in Setswana, they each

¹ Holbrook and Jackson, 1996; Miller *et al*, 1998; Bryman 2001

² Appendix A10: Villages Visited for Survey

took turns in the role of moderator and interpreter, using the Focus Group Discussion Schedule and Discussion Points.¹ After receiving a full explanation of my requirements, their execution of that role was exemplary. All focus group discussions were tape recorded and later transcribed.

Focus Group Discussion Schedule: This is concerned with the social and cultural background of the village, family relationships and work, and considers specific aspects of village life.

- 1) Explain the hierarchy, status and obligations within the family and the community.
- 2) How do villagers help each other with their work?
What are the benefits, obligations and expectations with respect to such help?
- 3) Do different jobs each have a different status?
- 4) How does this work differ from paid work in industry or commerce (relationships and organisation)?
- 5) When a young person starts work, who makes the choice of career – the individual, the family or the school?
What factors do they consider – service to the community, interest or skill of the individual, or money?
- 6) Do schools help pupils in their preparation for work?
How effective are Brigades, Vocational Training Colleges and the University of Botswana in producing useful workers? Could they (the training institutes and industry) learn from the traditional values in the village?

The above discussion group schedule was broken down and expanded into more accessible discussion points, which were used as an *aide-memoire* for the focus group discussions in the villages.² They were also translated into Setswana for use with villagers who were unfamiliar with English.

¹ Appendix A11: Focus Group Discussion Points

² *ibid*

2. Self-Completion Questionnaires and Structured Interviews (Quantitative Method)

Many of the attributes, problems and limitations of both self-completion questionnaires and structured interviews are the same. The self-completion questionnaire was completed by the respondents and became one of my main instruments for gathering data. It has the advantage of being quick and cheap to administer and, unlike the case of structured interviews, has an absence of any interviewer effect, i.e. does not suffer from problems of each interviewer asking the same questions in different ways. The structured interview may be defined as: 'encounters between a researcher and a respondent in which the latter is asked a series of questions relevant to the subject of the research. The respondent's answers constitute the raw data analysed at a later point in time by the researcher' (Ackroyd and Hughes, 1983: 66).

Sampling

As with most other quantitative research where the results of a representative sample are to be applied to a whole population, the sample should ideally reflect the whole population accurately. Where possible, this sample is selected using a random selection method, so that each unit in the population has an equal, known chance of being selected and the full power of statistical inference can be used. However, this is not always the case:

Although the standard error of the mean should not be computed for a quota sample, it frequently is. As Moser and Kalton (1971) observe, some writers argue that the use of a non-random method of sampling should not act as a barrier to such computation because its significance as a source of error is small when compared to other errors that may arise in a survey (Bryman, 2001:101).

Bryman also claims that both random and quota samples can often result in biases. In either case every effort must be made to reduce bias and other errors. In May (1993), Bryman and Cramer summarised the following points that researchers should consider when deciding which method to use and how many persons to sample. These points are: the time and resources available – the larger the sample size, the more accurate the sample results will be; non-responses should not be considered when selecting the sample size and: 'social researchers, although aware of the advantages of random sampling, often do not use such techniques and resort to samples which are broadly representative' (Bryman and Cramer, 1990: 103-4).

The rural population of Botswana, which forms almost 50% of the total population, as well as many of the urban population, have had little exposure to, or understanding of, VET. Their traditional culture and agricultural economy would have had little need for it. A randomly selected sample based upon the whole population of Botswana would, therefore, not only be very time consuming, but also inappropriate, and would produce little further useful perceptive information or evaluation of VET. A purposive or quota sample was therefore used for the survey. This was targeted at those sections of the population which might be expected to have a greater interest in, or direct knowledge of, VET, its problems, its potential as a route to employment and the VET employment expectations. These included final year secondary school pupils, together with their parents and their teachers of English, Mathematics, Science, Design and Technology and Careers. Similarly, the survey also included final year VET students, their lecturers and instructors and finally, recent VET graduates and their employers. Self-completion questionnaires were used with each of the above categories. An additional sample of teachers, lecturers/instructors, VET graduates and their employers underwent structured interviews, where a self-completion questionnaire was provided for those who were not available for interview because of other duties.

Questionnaires were also handed out, one to each pupil, for completion by their parents. Where necessary these were written in Setswana or Ikalanga. The completed questionnaires were returned by the pupils to the school in sealed addressed envelopes, to be posted to, or collected by me at a later date. However, in schools such as Ghanzi Senior Secondary School, where most of the pupils were boarders, stamped addressed envelopes were provided for direct return to me.

There were further limitations which influenced the structure of the survey: in order to obviate the charge of tribal bias in the distribution of the interviewees, the community junior secondary schools chosen to be sampled were spread throughout the country, with three schools from each administrative district. This precaution was not possible for the senior secondary schools since most of them had large numbers of boarders. In addition, although the schools' staff members were fully cooperative it was not possible to randomise the selection of pupils from among the final year pupils without creating undue disruption of the teaching programme. The official policy was that the schools

should not stream their pupils. Therefore, as a compromise, and to limit disruption, a single class of final year pupils of average ability was always requested. The selection of schools was also chosen to reflect the almost equal proportions of urban and rural Botswana. The equal numbers of male and female pupils followed automatically from the co-educational system. No such gender equality occurred in any of the other groups investigated, for instance the brigades and VTCs, as they were predominately male orientated.

A similar purposive, or quota driven sampling approach used for schools was extended to cover the selection of final year students, their lecturers and instructors from the VET institutions. These institutions were chosen, where possible, on the basis of providing a countrywide selection.¹ Students were also selected to cover the range of courses on offer.²

With the help of the Central Statistics Office (CSO), a random sample of registered companies was obtained, in which companies were categorised according to the type of business or industry in which they were engaged using the Botswana Standard Industrial Classification.³ The CSO provided their phone numbers and addresses together with the number of employees. By analysing the type of business and ensuring that a cross section of industry was represented, 439 businesses, which might employ VET graduates, were selected and contacted. 49 of these companies agreed to my request to provide an employer or his/her representative to participate in structured interviews, 34 agreed. The remaining 390 were sent self-completion questionnaires, of which 71 responded.

Validity, Reliability and Replication

These are among the most important criteria for the evaluation of quantitative social research. *Measurement Validity* (also known as *construct* validity) refers to the issues of whether an indicator devised to measure a concept really does measure that concept. This in many ways the most important criteria of social research as it is concerned with the integrity of the conclusions. *Internal Validity*, relates mainly to the issue of causality. It is

¹ Appendix A6: Location of Brigades and VTCs

² Appendix A5: Brigades: Enrolment by Course, Sex and Year of Study

³ Appendix A12: Botswana Standard Industrial Classification

concerned with the question of whether the conclusion that a relationship or association exists between two variables is true and is not in fact influenced by some other variable. *External Validity* is concerned with the question of whether the results of a research project can be generalised to apply beyond the limits of that project. The methods of sampling chosen for this project could make some of its conclusions unsafe for generalising elsewhere. In addition, *Ecological Validity* questions whether the findings of social research that may be technically valid in one environment are also applicable to other peoples' everyday life, especially if they live in a very different culture. Many aspects of the research carried out for this thesis may not have had full applicability outside Sub-Saharan Africa because of the different nature of those country's cultures.

Reliability refers to the consistency of the measurement of a concept, and consists of:

- (i) *Stability*: the measurement should not vary with time. For this reason all measurements were made within a four month time span, to ensure that any variability with time was reduced to a minimum;
- (ii) *Internal reliability*: the dependent variable must indisputably depend upon the independent variable;
- (iii) *Inter-observer consistency*, where more than one observer is involved, as is the case when using the structured interview in this project, the measurement made by any one observer should be consistent with those made by others. 'Replication', the research project must be capable of replication by others (*ibid*). This was achieved in this survey by presenting the research assistants with guidance notes.¹

The purpose of much of this chapter is to enable the replication and hence the verification of this project and its findings.

Open and Closed Questions

Both these types of questions have their advantages and disadvantages. Open questions may be answered in any way the respondent wishes. With a closed question the respondents are asked questions and are presented with a set of fixed alternative answers

¹ Appendix A13: Guidance Notes for Interview Techniques

from which to select an appropriate answer. Open and closed questions are appropriate for both self-completion questionnaires and structured interviews.

(a) Open questions:

- Advantages: can be answered in the respondents own terms; answers may contain data which the researcher had not thought of, especially during interviews;
- Disadvantages: time consuming to administer; answers usually have to be enumerated and then 'coded' before processing if unpredicted variables have occurred in the responses; greater possibility of variables between interviewer and respondent also occur when structured interviews are used with open questions, due to the time required to write answers by the interviewers.

(b) Closed questions:

- Advantages: easier and quicker to complete and process; enhanced comparability between answers; reduced possibility of error in recording answers;
- Disadvantages: loss of spontaneity between researcher and respondent, when used in structured interviews; forced choice questions may be difficult to make a topic both exclusive and exhaustive (Bryman, 2001).

It should be noted that in schools English was the language used after Standard 5 in primary schools. The type of questioning could affect the responses of certain groups which experienced difficulties with the language, these included some employers and brigade students, and the pupils' parents, for whom questionnaires were available in both Setswana and Ikalanga.

Piloting

This is very important for both self-completion and structured interview questions in order to eliminate previously unseen errors before starting the full-scale survey. These were originally designed in the UK and piloted with a suitable sample of each population group concerned, in Botswana, before use in the field. Any problems, which were revealed by the respondents' answers, were then corrected prior to the full-scale survey.

Structured interviews were attempted with school pupils, but it became evident that the unfamiliar, one-to-one, adult to child situation was inhibiting their responses.¹

Coding

In order to enter the information, which had been collected from either self-completion questionnaire or structured interview questions, into the computer, each variable was first be given a different identification number. This number or 'Code' acts as a tag, which allows the information to be processed by the computer. It should be noted that open questions may allow several different, but 'correct' responses to the same question. Such answers were categorised and each category coded differently so that they could be analysed quantitatively. Care was taken to prevent potential errors due to variability in the rules for assigning answers to categories.²

The Structured Interview and Interview Techniques

The aim when administering structured interviews is to ensure that each respondent receives exactly the same approach with identical cues from the interviewers. Questions should be read out exactly as they are written and in the same order as they are printed on the schedule. This style of interview promotes the standardisation of both the asking of questions and the recording of answers.³ If properly executed, it will keep the error, and thus the adverse effect on the validity, to a minimum, especially if more than one interviewer is used. (This precaution was used in this study where two research assistants were used.) Interviews may be used to obtain many types of information: the respondent's own behaviour and that of others, their attitudes, norms, beliefs and values (Bryman, 2001).

Evaluation of Self-Completion Questionnaires and Structured Interviews

Self-completion questionnaires have the advantages over structured interviews in terms of the absence of interviewer effects, and the cost and time required. However, they do not permit probing or prompting and consequently deny the opportunity for the clarification of misunderstood questions or further exploration if a respondent has

¹ May, 1993; Bryman, 2001

² *ibid*

³ Appendix A13: Guidance Notes for Interview Techniques

additional, appropriate information. Unsupervised self-completion questions result in a much lower response rate, especially if delivered by mail. In this project, this could affect the returns for teachers, parents and employers. Each questionnaire for these categories was accompanied by an explanation of my status, the research permit number and an assurance of confidentiality. However, the questionnaires for both school pupils and VET students were completed under classroom supervision, which should provide an almost 100% response rate.

Deficiencies and Inconsistencies in Responses

In spite of precautions taken, deficiencies, inconsistencies and unfulfilled promises of further factual information occurred. A few respondents deliberately did not answer parts of the self-completion questionnaires, despite assurances of confidentiality. Some, particularly teachers, claimed it was inappropriate or was not applicable to them. Others gave information which was inaccurate, with the promise that the correct data would be forwarded later, for instance, the numbers of VET graduates employed by a large company. These, together with other inconsistencies resulted in low responses to a few questions, especially from the adult respondents, other than the children's parents. Further statistical analyses of such discrepancies in the raw data were to be taken into account in order to protect validity.

Research Assistants¹

Research assistants were necessary for the Setswana element of the project as they were able to conduct interviews and translate the questionnaire responses when Setswana was the only appropriate language. Closed questions were often used for preference, partly in order to reduce the possibility of error, to make the process simpler and quicker and to ensure consistency between the two research assistants who helped with the administration of the survey. The two research assistants were employed on the recommendation of the Chief Administration Officer of the Faculty of Engineering and Technology in the University of Botswana. They were both officers of the Botswana Defence Force on secondment for the B.Eng. degree programme in Mechanical Engineering. As such, they had a background of responsibility and authority as well as

¹ Appendix A14: Research Assistants' Job Description

their inherent common sense, initiative and intelligence. They also had their own transport, an essential factor in a country with huge distances between areas of population and a limited public transport infrastructure. One research assistant was based in Gaborone (the capital) and the other at Selebi Phikwe, where he was able to cover the second most populated area around Francistown. They accompanied me to witness the administration of a questionnaire and scheduled interview, and were both issued with written instructions of their duties, which were fully discussed with them before the commencement of their tasks¹.

In addition to the above research assistants, my wife, who has acted as personal secretary to me throughout my studies, her presence invaluable when visiting schools. She has a B.Ed. (Special Needs) from the University of Wales, has worked in UK and Botswana schools at all levels, from pre-school to 'O' level and has been involved with secondary school teacher training, both initial and in-service. Her experience in the schools of Botswana, particularly her knowledge of their organisation and protocol, helped smooth the path for the investigations. She had previously been involved in the education element of several of the Design and Technology teachers interviewed and felt that their positive input was authentic and helpful.

3. Design of the Questionnaires and Interview Schedules

According to May (1999: 75) 'Basically the questionnaire is an instrument for measuring the ideas which go into its design', May also considers the views of Hoinville and Jowell (1987: 27) that:

A good questionnaire has to be designed specifically to suit the study's aims and the nature of its respondents. It needs to ... be clear, unambiguous and uniformly workable. Its design must minimize potential errors, from respondents, interviewers and coders. And, since peoples' participation in surveys is voluntary, a questionnaire has to help in engaging their interest, encouraging their cooperation and eliciting answers as close as possible to the truth.

In the design of the self-completion questionnaires and the structured interview schedules, the above strictures were supplemented by my own experience of the operation and purpose of the VET institutes in Botswana and my knowledge of their staff. After the necessary reading around the topics, the aims of the project, the scope of

¹ Appendix A13: Guidance Notes for Interview Techniques

the surveys¹ and the areas of interest had been established, the initial questionnaires and interview schedules were completed. These were subjected to review and comment by interested parties and were used in pilot surveys in Botswana, prior to the development of their final form.

Different questionnaires were produced for each group of respondents, although the general format remained the same. Each self-completion questionnaire and structured interview schedule started with factual or demographic questions, for instance age, gender, home base and, where appropriate, training and qualification. The next section dealt with factors which had led the respondent to their choice of career and, where appropriate, the quality and suitability of the education and VET as a preparation for that career. This was followed, where appropriate, with opinions on the requirements and organisation of the workplace, factors of status, culture and their place in training and preparation for employment. Most questions were 'closed', but where relevant, opportunity was provided for comment. Similar procedures and considerations were followed in the design of the structured interviews.

Development of Self-Completion Questionnaires and Structured Interview Schedules

Schools²

Inevitably school, parent, teacher and culture influence a child's choice of career. This blend of influences, together with the school's academic input, upon which VET depends, are itemised in Figure 6.3. These factors were incorporated in the design of questionnaires, to elicit opinions of final year, secondary school pupils, their parents and teachers on VET and, in addition, the necessary preparation required of the school towards a career as a qualified craftworker or technician.³ These questionnaires (and structured interview schedules for the teachers only), were developed by refining, detailing and expanding the items in Figure 6.3. Parent's

¹ Table 6.1: Categories to be Surveyed: 124

² Appendix A15: Schools to be Surveyed

Appendix A16: Ministry of Education: Letter of Introduction: Secondary Schools

³ Appendix A17: Schools: Self-Completion Questionnaires: School Leavers

A18: Schools: Self-Completion Questionnaires: School Teachers

A19: Schools: Structured Interview Schedule: School Teachers

questionnaires were also provided in Setswana and, where appropriate, in Ikalanga (only 2 of the latter were used).¹

Figure 6.3: Schools: Factors Used in the Design of Self-Completion Questionnaires and Structured Interview Schedules

Categories	Examples
Personal background Details	Age, home village or town, gender, family, parent's jobs and status, cultural factors
School	Community Junior Secondary or Senior Secondary. Curriculum, attitude/ understanding of VET by teachers
Influences on choice of job	Ambition, ability and interest, family, teachers, cultural factors
Quality of education received	Relevance of curriculum, competency in English (the language of instruction, essential for most trained craftsman and technician jobs), competency in Maths. The quality of teachers.

VET Institutions (Brigades, VTCs and Technician Institutions)²

It was anticipated that the students, lecturers and instructors of the VET institutions would provide better informed and more focused responses, than their school counterparts, on the preparation for their chosen careers. The students were selected from a range of disciplines in their final year of training and were older and more mature than the school children. Their parents were therefore not included in the survey. It should be noted that that a Junior Secondary School Certificate was the minimum required for craft courses and only post 'O' level students were accepted on technician courses.

¹ Appendix A20: Schools: Self-Completion Questionnaire: Parents (English)
A21: Schools: Self-Completion Questionnaire: Parents (Setswana)

² Appendix A22: Ministry of Education: Letter of Introduction: Brigades
Appendix A23: Ministry of Education: Letter of Introduction: Technicians
Appendix A24: VET Institutes to be Surveyed

Figure 6.4: VET Institutions: Factors Used in the Design of Self-Completion Questionnaires and Structured Interview Schedules

Categories	Examples
Personal background details	Age, gender, home village or town, family size, parent's jobs, cultural factors
Type of VET institution	Brigades, Vocational Training Colleges (VTCs), Polytechnic (now University of Botswana), Others. Student satisfaction with course.
Influences on the choice of VET	Ambition, interests, ability, family, school, availability of jobs, cultural factors, potential job satisfaction, competency in English and Maths, career status and pay prospects
Quality of VET received	Relevance of curriculum, quality of VET staff and their industrial experience

The situation here is similar to that of schools. The goals of students, lecturers and instructors are virtually the same, although viewed from differing perspectives. Factors identified in Figure 6.4, are used as the basic core material for the students' self-completion questionnaires and for the lecturers' and instructors' self-completion questionnaires and structured interview schedules.¹

Recent VET Graduates and Employers

Self-completion questionnaires and structured interview schedules provided an opportunity for the VET graduates and the employers to express their evaluation of VET. A recent VET graduate was defined as an employee who had graduated from VET, or had obtained his/her first VET orientated job, within the previous five years. Examples of both questionnaires and structured interviews are shown in the Appendix.²

¹ Appendix A25: VET Institutes: Self-Completion Questionnaire: VET Leavers
A26: VET Institutes: Structured Interview Schedule: VET Leavers
A27: VET Institutes: Self-Completion Questionnaires: Lecturers/Instructors
A28: VET Institutes: Structured Interview Schedules: Lecturers/Instructors

² Appendix A29: Recent VET Graduates: Self-Completion Questionnaire
A30: Recent VET Graduates: Structured Interview Schedule

Figure 6.5: Recent VET Graduates: Factors Used in the Design of Self-Completion Questionnaires and Structured Interview Schedules

Categories	Examples
Personal and company details	Age, gender, home village or town, family size, job title; Company's main activity and size; VET graduate's job
Type of VET institution	Brigade, VTC, Polytechnic (now part of the University of Botswana), other technician and craftsman institutions
Influences on the choice of VET	Ambition, attitude, interest, family, school. Peer group, cultural factors, availability of jobs, career, status and pay prospects
Quality of education and VET received	Subject/trade, type of graduate – craft or technician, relevance, quality of VET staff and industrial placement, benefits and deficiencies
Workplace	Usefulness of VET to job, organisational structure, interest, relationships, status, cultural factors, job satisfaction

Employers were approached in order to obtain their opinions on the performance of recent VET graduates during the first few years after their training. Again, these main factors were developed further, as shown in Figure 6.6, prior to the compiling the actual questionnaires and structured interviews, which are shown in Appendix 2.¹

¹ Appendix A31: Employers: Self-Completion Questionnaire
A32: Employers: Structured Interview Schedule

Figure 6.6: Employers: Factors Used in the Design of Self-Completion Questionnaires and Structured Interview Schedules

Categories	Examples
Personal and company background	Age, job title, nationality, qualifications and experience, company's main activity, size
Opinions of VET and its importance to the company	Satisfaction or dissatisfaction with graduate's performance. Reasons for this e.g. VET, school, lack of interest, relevance to job
Status of career and prospects for VET graduate	Type of VET qualification of graduate – craft or technician, promotion prospects
Workplace factors	Organisational structure, relationships, cultural factors, status

Implementation of the 1999 Survey (24.4.99 to 20.5.99)

Focus Groups¹

The meetings with the five focus groups took place in 1999, between June 22nd and 30th. During each visit, I was accompanied by a Botswana Orientation Centre (BOC) member of staff, who acted as a guide and interpreter and ensured that the correct protocol was observed. Notes were taken during each of the focus group meetings and all meetings were taped. BOC staff also prepared a short summary of the proceedings of the four meetings which were held in Setswana.²

Schools³

Letters of introduction were sent from the Ministry of Education to the Heads of all Secondary Schools (and Principals of Vocational Training Centres and Brigade Coordinators) explaining the aims of the study and requesting their full co-operation.⁴

¹ Appendix A10: Villages Visited for Survey

² Appendix A33: Botswana Orientation Centre Report

³ Appendix A16: Schools Surveyed

⁴ Appendix A15: Ministry of Education: Letter of Introduction (a) Secondary Schools

The information regarding the purposes of the survey and assurances of confidentiality was given to the group or individual concerned before they were asked to complete either the self-completion questionnaire or the structures interview. This procedure usually served to address any relevant questions or uncertainties and acted as an 'ice-breaker'. Additional information, and assurances of confidentiality, were entered onto the self-completion questionnaire forms for Secondary School Teachers, Parents, and for the interview schedule for Secondary School Teachers were emphasised verbally.

The community junior secondary and senior secondary school samples were surveyed first because of their large numbers, geographical spread, the time required, the period of time when the schools were open and the research assistants were available. This survey commenced towards the end of May.

Brigades and Vocational Training Centres (VTCs)¹

These institutions were surveyed between the middle of June until the end of August. They use the same calendar as the schools. Operating the surveys in schools, Brigades and VTCs concurrently avoided duplication of itineraries, thus saving time. All seven VTCs, plus Brigades from each district were included.² These operations were made easier by the transfer of our base to Gaborone as from June 4th. It should be noted that the VTC at Orapa diamond mine belongs to Debswana, but is approved by the Ministry of Education.³

Brigades provide 2 and 3 year courses of full-time training with production, which lead to Trade Test C. and (in some) the more advanced Trade Test B.

VTCs have hostel accommodation and provide two main programmes:

- (i) 4-year apprenticeship courses, each year of which consists of 3-months full-time study in college plus 9-months practical training in industry, leading to the National Craft Certificate (NCC).
- (ii) 2-year full-time college based courses, which lead to Trade Test B.

¹ Appendix A22: Ministry of Education: Letter of Introduction: Brigades

Appendix A23: Ministry of Education: Letter of Introduction: Vocational Training Colleges

Appendix A24: VET Institutes Surveyed

² Appendix A6: Location of Brigades and VTCs

³ Appendix A2: Map of Botswana

As with schools, final year students in both brigades and VTCs were targeted. Self-completion questionnaires or structured interview schedules were administered to both students and their lecturers/instructors (confidentiality of data was assured). Questionnaires were not given to the students' parents, although information about their parent's employment was included in the students' questionnaires.

Technicians

Technician programmes are mostly of two years duration, although a few last for only one year. The entry requirements are usually good 'O' levels or better. The calendar for some technician training institutions was different from that of schools, VTCs and Brigades. Following the long vacation the university started back at the end of August and were not ready for survey until the beginning of September. Self-completion questionnaires were administered to final year students and the lecturers/instructors received either self-completion questionnaires or structured interviews.¹

The following institutes were covered:

- Botswana Institute of Administration and Commerce (BIAC)
- Roads Training College (RTC)
- Botswana Agricultural College (BAC)
- University of Botswana (UB), Faculty of Engineering and Technology (FET) – a parastatal
- Damelin College – a private college
- Botswana Telecommunications Training School – a parastatal which is also the City and Guilds examination centre for Botswana.

Tourism was seen as a very important money earner and employer of the future and several initiatives were underway to provide training in this area. A two-year programme for safari guides and similar personnel had just replaced the previous six-month programme (August 1999) at the Institute of Wildlife. A hotel and catering management programme was started

¹ Appendix A25: VET Institutes: Self-Completion Questionnaire: VET Leavers: 369
A26: VET Institutes: Structured Interview Schedule: VET Leavers: 372
A27: VET Institutes: Self-Completion Questionnaires: Lecturers/Instructors: 374
A28: VET Institutes: Structured Interview Schedule: Lecturers/Instructors: 378

at Damelin in September 1999. A consultancy, sponsored by the European Union for the Department of Tourism in the Ministry of Commerce and Industry and the Hotel and Tourism Association of Botswana (HATAB) had recently been completed and the lower level training elements were already in operation. Important as these initiatives were, there had not yet been sufficient time to evaluate their effectiveness, therefore, no further effort was made to survey this field.

Recent VET Graduates and Employers

Great difficulties were encountered in obtaining an up-to-date, unbiased sample of employers. The type and spread of the companies surveyed is indicated in Table 6.2, and was obtained by omitting those, such as bottle stores and retailers employing 5 persons or less, which were most unlikely to employ trained personnel. By August 10th, due to time constraints, 323 of these, mostly those outside Gaborone and Selebi Phikwe were mailed questionnaires (their response was poor). The remaining 67 were approached to be interviewed, most of these agreed, although some insisted on using questionnaires rather than undertaking an interview. However, there were only 71 responses to the questionnaires and 34 interviews actually completed, making a total of 105 employers willing to offer their time and views for the survey.

Notes for Table 6.2 (overleaf):

1. Major employers (e.g. Government Ministries) were often divided into several departments, each of which was semi-autonomous and was able to respond to its own questionnaires or interview schedules. Thus, several questionnaires/interviews with employers, supervisors and with VET graduates could be obtained from one location.
2. Some of the employers approached did not have any VET graduates and therefore took no further part.
3. Many other employers did not respond.
4. A few of the employers targeted were unwilling, or unable, to make time available.

Table 6.2: Numbers of Employers Targeted from the Central Statistics Office Random Sample of March 1999

ISIC Nos.	Group Name	Size: No. of Employees	Questionnaires		Interviews	
			Sent	Responses	Tried	Achieved
0110 to 0200	(A) Agriculture	>30	18	3	0	0
1010 to 1426	(C) Mining and Quarrying	>30	8	8	2	0
1510 to 3690	(D) Manufacturing	>30	103	9	11	1
4010 to 4100	(E) Electricity, Gas, Water Supply	>30	1	0	3	3
4510 to 4550	(F) Construction	>30	75	8	11	3
5010 to 5510	(G) Wholesale/Retail Trade (Autos) + Repair of household goods	>5	112	14	1	1
5510 to 5522	(H) Hotels & Restaurants Others	>5	5	4	0	0
6010 to 6200	(I) Transport and Communications	>30	6	1	2	2
6304 to 6420	(I) Safaris and Travel Agents	>30	9	4	0	0
7200 to 7300	(J) Computing, Consultancies Advert & Printing	>5	6	1	2	1
7540 to 8010	(K) Central & Local Government	>30	34	10	23	18
8022 to 8030	(M) Brigades (as VET graduate employers)	>30	13	9	11	5
	Totals		390	71	66	34

At the beginning of August, when the research assistants were set to interview the remaining smaller businesses (because of their facility in Setswana), my wife and I continued the survey of the few remaining VTCs and Brigades. The research assistants were due to return to college towards the end of August. It was at this point (August 18th), on a remote road after dark, that we had a collision with a donkey. We were very fortunate to escape unhurt,

although the car was quite badly damaged – the donkey did not survive. Fortunately, when our car was off the road, we were able to obtain the use of another (older) vehicle, however, our plans had to be modified accordingly. The remaining list of employers was again reviewed and another batch of questionnaires mailed to the smaller companies for completion and return. Care was taken to retain representatives of each industrial sector among those remaining for interview. We also postponed our date of return to the UK for three weeks, which was still just within the limits set by the Botswana Immigration Office, which allowed time for the survey of technician institutions to be completed.

Additional Experts

The main purpose of these contacts was to collect information, expert opinion and alternative view points on VET and VET related topics from various experts who, by the virtue of their work and experience, had potentially relevant information were interviewed. They were generally either known to me from my previous ten year period of employment in Botswana, or had been recommended to me by other personnel met during the survey and its preparation.

The ‘experts’ included government officers from the Ministries of Education, Labour and Home Affairs, Commerce and Industry, Finance and Development Planning, Works, Transport and Communication, Mineral Resources and Water Affairs together with the parastatals of Water Utilities, Botswana Technology Centre, Botswana Productivity Centre, Botswana Power Corporation, Botswana Telecommunications Corporation and the University of Botswana and, in addition, local government officers, consultants and managers of private companies. A list of contacts is included in the Appendix 2.¹

Interviews were generally conducted on an informal conversational basis, with a minimum of structure. Kvale (1996: 11) claimed that: ‘there is a move away from obtaining knowledge primarily through external observation and manipulation of human subjects towards an understanding by means of conversation’. In each case, a brief list of critical points to act as an *aide-memoir* was prepared and brief notes made during the interview were written up immediately afterwards.

¹ Appendix A34: Additional Experts: List of Contacts: 401

Analyses

The Statistics Package for Social Sciences (SPSS) was the tool used for analysing the data collected during the survey. Numerical representation was confined to simple counts and percentages and was considered to be adequate for this research. This data was used to analyse and explain the concepts discussed in later chapters pertaining to a more holistic approach (as opposed to human capital theory) such as the four pressure point approach of Brown *et al* (2001): ‘the impact of globalisation’, ‘upgrading the skills of the workforce’, ‘opportunity and social inclusion’ and ‘the changing model of the worker-citizen’.¹

Summary

The problems of VET revealed themselves most clearly in the high level of youth unemployment, which occurred in conjunction with the number of work permits issued to expatriates for the jobs of craftworker and technician, and a relatively high number of job vacancies in this field.

In order to obtain an understanding of the performance of the VET institutions, it was considered necessary to obtain data from several sources. These included the influences of the village elders, the parents and the schools, as well as a measure of the student output in terms of the VET graduates performance, the effectiveness of the training, their expectations and those of their employers.

Some very important information was obtained through village focus groups, but the remainder was obtained mainly through the use of self-completion questionnaires and structured interviews devised for schools (parents, school leavers and teachers), VET institutes (VET leavers, lecturers/instructors), recent VET graduates and employers. Additional experts, including key personnel, were also consulted on their expectations of, and contributions to, VET. These methods of collecting evidence, their design, limitations and implementation are described in this chapter.

The results and the analyses of the study are presented in the following chapters, starting in Chapter 7 with the cultural background of the traditional village and its significance in the

¹ Brown *et al*, 2001

lives of the villagers, the children, the reactions of the parents to the effects of school on their traditional customs and their influence on their child's future employment.

CHAPTER 7

Community and Family

Introduction

Botswana claims to be moving from being an isolated agricultural economy towards becoming a more significant player in the regional, and even global, economies. These aspirations have been made possible by the revenue derived from the production and sale of diamonds. However, successive governments have sought to reduce its dependence upon diamonds and to provide employment by diversifying and enlarging its limited industrial and commercial base. To this end, a great deal of investment has been placed into establishing a countrywide education system, a vocational education and training (VET) system and into subsidies for new industries, in order to fulfil its skill formation and industrial development strategies.¹ The supply side of skill formation is based largely on human capital theory assumptions, the understanding and relevance of which, in village life, may be questionable. Unfortunately for the villagers, especially the older generation, and for many of the first generation urban dwellers, industrial work could mean a massive change from their traditional way of life which could, in turn, affect the ease with which such diversification and enlargement of the industrial and commercial base can be made in the country as a whole. For such reasons, the effects of nascent industrialisation and urban employment on traditional family life and customs have been central to this investigation.

In the community and family there are two major influences which could affect the attitude of school pupils towards the type of employment which require a preparation through VET. These are:

- (i) the overall expectations of traditional culture, which is especially strong in the villages;
- (ii) the attitudes of parents towards school and of children attending secondary school.

In order to examine these influences in more detail, focus groups, consisting of village elders, were organised to discuss the contributing factors, such as the role of education, employment and the government's national skills formation policies in the face of the traditional way of life.² It was anticipated that the focus group discussions would identify the relevant cultural factors from which the attitudes of the village elders towards the government strategies

¹ Republic of Botswana (1997) National Development Plan 8

² Republic of Botswana (1998) Industrial Policy for Botswana

would be expressed. At the same time, the attitudes of the parents of the school children towards similar issues were investigated by the use of self-completion questionnaires.¹ It was hoped to identify changes in attitude between the elders and the parents towards the children's education, preparation for employment and attitude towards VET. As this background will allow better understanding of the results and analyses presented in future chapters.

Parents of school leavers were canvassed in order to determine their attitudes towards the education, training and job aspirations for their children and to establish whether there was any significant difference between the opinions of urban and rural parents. Teachers had indicated that a low response should be expected, in fact 462 of the parents representing 963 children replied, i.e. almost 50%. As Botswana has an illiteracy rate of 31.1%, this may be regarded as almost beyond expectation.² Responses were received in almost equal measure from both urban and rural parents.

Issues arising from the focus group's discussion points will first be considered.³ This will be followed by the parents' contribution, which will be devoted to their concern for their children's education and careers. Comparisons with the views expressed in the focus group discussions will be made where appropriate. The importance of these two groups, the village elders and the children's parents, lies in the power which they have to influence a child's career choice, and hence, the longer term success of the government's skills strategies. They also provide the cultural background against which Botswana's substantial achievements should be evaluated.

Focus Groups

Implementation

Focus groups were set up in each of five traditional villages. These were organised by the Botswana Orientation Centre (BOC), an organisation which had been established in order to provide language and orientation programmes for foreign groups, such as US Peace Corps, on their arrival in Botswana. Part of most of their courses usually involved

¹ Appendix A20: Schools: Self-Completion Questionnaire: Parents (English)
A21: Schools: Self-Completion Questionnaire: Parents (Setswana)

² Republic of Botswana (1997) National Development Plan 8

³ Appendix A10: Villages Visited for Survey

spending a period actually living in one of the traditional villages. The establishment of the necessary contacts to enable such visits to be successful meant that the BOC was well placed to organise the requirements for this survey. Such a survey would not have been permitted in any village without permission from the village chief, by using the good offices of BOC, however, their cooperation was assured.

The meetings were held in the village *kgotla* (meeting place). Traditionally these were held in the open air under the shade of a suitably formed tree, with only a small shaded area for the chief and the village elders, to deal with day-to-day matters. More recently it has become the norm to include one or two women elders. For the survey, only two of the meetings were held in the open air. The first meeting was held at Manyana, a village where David Livingstone used to preach once a month and where the large tree under which he preached still remains. The village is also notable for a large number of Bushman rock paintings of animals, such as giraffe, elephant and eland. When the BOC representative and I arrived, the Chief and his elders were giving their verdict in a dispute involving the use of water for the cattle. After the formal, traditional greetings we were invited to join the group, where we were introduced to the elders by the Chief, who continued to attend in both a participatory and supervisory capacity. The role of the BOC representative was that of interpreter/facilitator. This was the procedure in every village that we visited where the focus groups were comprised of between six to ten participants.

The aim of each exercise was to gauge the attitudes and feelings of the villagers on topics such as status, age and cattle; school/education, vocational training and the government strategies on skills creation; traditional working practices and general concern of how today's western working practices might impact on traditional customs and culture.¹ Information was largely derived from the taped comments made by elders during focus group proceedings, and is reported extensively, often verbatim, in the rest of the chapter.

Social and Cultural Background

Status

In Tswana culture, status carries with it respect and is intrinsically dependent upon age and cattle ownership. However, the Chief has the highest status in the village because he

¹ Appendix A11: Focus Group Discussion Points

comes from the 'royal' family.¹ Age is associated with wisdom but, on the other hand, it was said in a focus group that, 'if you don't look your age people will not give you respect for age' and, 'you must carry yourself in a manner that will earn respect'. Respect is very important in Tswana society, as one villager put it, 'if anybody who, whatever else they may have, has no respect for other people, they will get no respect for themselves'.

Similarly, the ownership of cattle still gives a man higher status within the village however, this depends upon the purpose of owning cattle and is not dependent upon earnings from any other job, 'largesse (i.e. cattle) must be given with respect by the donor if the donor is to be given respect by the villagers'. 'The purpose of owning cattle was for the purpose of assisting those near you ... that is why, in Setswana, we don't talk of my cattle. The 'my' becomes like communal ownership because they belong to all of us who are using them'. This concept becomes clearer from the following quotation:

I could be asked to look after some cows for a friend or relative. As a reward or thanks for herding the cows, if one of the cows has a calf or calves, the calves are branded or marked as mine. I use the cows while I am caring for them as if they were mine. Their milk is drunk by the children of my yard (family) and they are used to plough my fields, and not the owner's fields (Focus Group Participant).

Yet another participant stated that, 'Cattle are often viewed as being better than money. They can be used to assist in many other ways, they are readily available for weddings and funerals'. It can be seen how this approach to life can build up a strong social network, but should also be viewed as being part of the survival strategy of a people living in a harsh and unpredictable environment. It can create social capital, which can be used, for instance, in lieu of pension, but does not create human capital. Although there are now other ways of earning a living, they do not add to the prestige derived from owning cattle. However, modern industry generally favours the younger, well-educated members of the population, who may therefore possess useful human capital. According to the Training Manager of a large parastatal, 'Respect for elders is not part of modern industry', a view that is shared by many other managers.

¹ Appendix A35: Focus Groups: Botswana Orientation Centre Report

Family

When the discussions turned to family hierarchy, especially the place of the first-born male, it was stated that, within many families, 'the first-born is still regarded as the 'King' and he is given privileges and responsibilities'. The first-born had special recognition because, 'in the absence of parents, the father in particular, the first-born male takes over ... they still have the responsibilities but not so many privileges as they used to'. Within the family, 'after the first born male, the other brothers and then sisters have the status (and the respect that goes with it) more or less in keeping with the order in which they were born'. 'This same order is then used in a general way to establish their status within the village'. However one elder stated, 'the first-born is not able to make the choice of career for his juniors if his parents have died, as he will often have foregone his own education in order to cope with his family responsibilities and therefore will not have sufficient knowledge to make such a decision'.

Education, Training and Employment

Schools and Education

In each focus group there was a strong negative attitude towards the schools, for what the children were taught in school, and what the elders believed they should have been taught, but was omitted. The view that the school was isolated from the villagers and was inaccessible to them came across ever more strongly. They also resented the fact that whilst the children were in school they were not available (as they used to be) to undertake household chores, or to be taught the customs and culture of their parents. Such opinions indicate a clash between the opportunity to obtain human capital skills via the education system, and village human capital skills, such as cattle ranching, from their parents. Failure to obtain either represents a loss of opportunity and identity and, later, potential social exclusion.

In line with the accusation that the schools were isolated from the village, it was claimed that:

there are difficulties in getting involved with anything at all in the school, or saying OK let us work together with the teachers to talk about changes. But the school puts itself first and puts parents against teachers, so that they (the parents) have no control over the materials or the children. This is why it is very sad.

In response, another villager stated that ‘we are not blaming anything on to the teachers. The teachers are told what to do’.

With regard to the curriculum, comments included, ‘although our children are taught carving (woodwork) and handwork in school, there is no possibility for them to do such work in the village’. Others claimed that ‘school curricula should be more useful and should include more useful technical and commercial activities’ and, in the long run, ‘education must make young people appreciate themselves and their country more, then the technical skills will fall into place’. It was suggested by a Director of Botswana Technology Centre that relevant Design and Technology projects, developed in cooperation with villagers, could be beneficial to the villagers, the teachers and the pupils over a wide range of issues. Here there was recognition of the school’s potential in providing a path towards gaining human capital skills which was being wasted.

The views on English as the medium for instruction were mixed. It was pointed out that ‘the teacher was trying to speak English at the school but they know that they, the children, speak Setswana at home’. This brought the response that:

its not that we are not teaching our kids our culture, we are, but we are still looking at the fact that maybe, if I want my kid to be a doctor, obviously there are more books that are not in Setswana needed to teach my kid to be a doctor of medicine. You see, books are in English. The machines are everywhere and the instructions are in English. There are no machines that have instructions in Setswana.

This was one of the few responses that acknowledged the role of English in the preparation of children by the schools for human capital based careers.

Concerns about the absence of children because they were in school, were not only because they were unavailable to help with the household chores, as the following quotation illustrates:

today it gives you cause to weep if you see a small boy standing next to his father at the cattle post. As the saying goes the feet of the vulture are its wings (meaning; when one gets old your speed comes from your children because you can send them at times when you would be too slow). At my age I cannot run after a cow but I can tell my son to herd them when they scatter. But now, our children are all at school and our culture and traditions have ended.

A further quotation which follows from the different way of organising work under the traditional way of life was given as follows, ‘today children finish school too early ...

Their attitude is that I will work for so many hours and then it is time to play. After school it is time to play'. Schools were further accused of encouraging bad manners among the children:

in the past, a child being naughty could be chastised by anyone. Teachers are too scared to chastise children today because we might get angry with them. This means that our children are not learning in school and are ill-mannered because teachers are scared of us parents, and parents are scared of teachers.

The negative attitude, which has developed towards the school system was further directed against the Ministry of Education in some instances. In a comment on the choice of career it was stated:

I feel that the teachers are the ones to choose (the pupils' career), in conjunction with the parents and the government. They look at how well the student has done in his exams and decide which school he will go to for further education. The parents have no choice. They just hear that their child has gone to university.

Thus indicating little, or unsatisfactory, communication between school and home.

The following quotation illustrates the mutual lack of understanding by many of the villagers of the government policies and the government's lack of understanding of the villagers concerns: 'the government theories are being sold by educated people to exclude the concerns, the wishes and aspirations of ordinary people. To have their support (the ordinary people) is to involve them in the making of the curriculum, a thing that is never done'. Another said, 'maybe we are not outspoken enough to say this is our culture and you must stick to it rather than reducing it and trying to cope with western culture, which does not in any way help us'. The concern that a division could arise between the old and the young was expressed by comments such as, 'what about the kids' education which is going to create a gap where we have the old people who are illiterate? Adult education should be strengthened by the government of the day'. There were however counter arguments and wishes which did not lay down prescriptive methods, showed a good understanding of government's problems and are best expressed by the following quotation, 'maybe we are talking about something that we can harness for Botswana, since Botswana will only remain to be Botswana if we want to produce people here who will be able to work here'.

Vocational Education and Training (VET) and Employment

Scarcely a good word was said about VET. The main targets were the Vocational Training Centres (VTCs). It was almost universally believed that 'the poor quality of the VTCs and their graduates was due to the poor quality of their lecturers'. This belief was supported by the view that, 'the lecturers lack practical experience and therefore teach from books'. Several further claims were made that, 'the VTCs were largely a waste of time because the lecturers were poor'. In one village, the chief's daughter, it was claimed, wasted several years of her life at a VTC. 'The VTC graduates have no pride in their work', was a further claim, which had several supporters. A possible reason for these strong and numerous criticisms of the VTCs may have been that 'the current vocational curricula are not appropriate and that their authors should look at the appropriateness of the content'. This was supported indirectly by the comment, 'some graduates automatically come home as soon as they have finished their course ... and are unable to start their own business or find work in the village'. This situation represents the classic, but far from unique, case of poorly advised youngster taking VET courses inappropriate for their needs. The point being that only a few of the courses at the VTC are meant to be suitable for jobs in small villages since they (the villages) would not be able to produce enough custom to support such enterprise. The irrelevance of the products of the VTCs, and indeed the irrelevance of VTC graduates to village life, was understandable, but the general criticisms of VTC graduates for work elsewhere demand answering and rectifying, as they have produced such a negative attitude towards the VTCs. (It should be noted that the VTCs have now been renamed as Technical Colleges).

These comments on the dual-system in Botswana are in sharp contrast with those of others on the dual-system as it is organised in Germany itself:

There are three further advantages of the dual-system occupational labour market which relate to the willingness of the labour force to embrace innovation. As was stressed in our interviews, it socialized young workers into appropriate habits of work giving them a sense of direction and identity. It also provides a sense of pride and commitment in doing a good job (Fevre, Rees and Gorrard 1999), which is essential if the economy is to trade on quality rather than price. Finally, it provides a young worker with a sense of confidence. (Lauder, in Brown et al, 2001: 171).

Evans and Heinz (1994) were impressed by the sense of purpose and confidence that was experienced by German youths when working for apprenticeship certification. They considered that such positive responses would not be likely to result from the approaches

to training used in the United States or Great Britain. In their study of training and labour markets in South Wales, Fevre, Rees and Gorard (1999) showed that a culture had developed over time that was highly sceptical of anything but on-the-job training and that their orientation was largely instrumental in contrast to the German intrinsic concern with the quality of their work. Lauder professes that the inflexibility that was originally associated with the dual-system is no longer valid, and it is considered to be an effective platform for a career that it builds for the worker citizen. Such diverse opinions on the dual-system demand investigation, with particular reference to its Botswana interpretation and application.

It was felt by several members of the focus groups that 'start-up grants should be available from the government for setting up small businesses'. The existing Financial Assistance Package (FAP) grants were thought to be too complex and inappropriate for the villages. The problem of start-up finance was discussed further and the relative success of the Indian population in this regard was cited. One of the chiefs said:

You know if you go to India you soon realise that at the corner of every street there is a market stall of some type. You will see a development bank wherever you go there, whereas here you will go to only one development bank and you have no competition ... so that, when they are very young they have learnt how to use it, and when they come here (from India) it is an easy route for them.

It was believed that 'There is a strong awareness (amongst some of the villagers) that technical expertise from the VTCs, even if it is good, is not enough'. A job, or finance to create work, was also essential.

Many of the views held by most of the focus group participants, who were mainly elders, advocated the importance of traditional and cultural values and activities, and were extremely critical of some of the measures undertaken by the government to enhance the opportunities for education and employment of the young people of the villages. Next, the views of parents were considered, most of whom either lived in, or originated from, the village and were younger than the focus group participants and had grown up with the traditional village customs.

Parents

Parents have a special relationship with their children and have a great influence over them. They also represent the views of the generation between the focus group elders and the children. Many of them would have had little or no secondary education. Many would have

experienced the hardships of rural life and migration to the towns or larger villages in search of work. In view of this relationship with their children, and their own position in society, their opinions are considered in conjunction with those of the focus groups.

Social Customs and Attitudes to Education

The comments recorded earlier in this chapter often indicate that life in a traditional village provided both support and responsibilities on a different scale to that experienced in the west. An example of this concerns the survival of large families. The data in Table 7.1 shows that 45% of families, which responded to the self-completion questionnaires, had five or more children. The 50% of the parents who did not respond probably included the less literate and it was highly likely that many of them would also have five or more children.

Table 7.1: Parents: Number of Children

No. of children	Frequency	Valid %
0	5	1.2
1	23	5.4
2	59	13.8
3	74	17.3
4	72	16.8
5	61	14.3
6	51	11.9
7	34	7.9
8	28	6.5
9+	21	3.9
Total	428	100

For such families to survive the sometimes severe conditions of the Kalahari Desert help would usually be provided, in the traditional African custom, by members of the extended family. 'Repayment' could, in some instances amount to the equivalent of the full-time occupation of one man. It can also require a family member to remain in the village for several years and to forgo the opportunity of training for skilled employment in order to fulfil such obligations. In the event of both parents dying (a not uncommon event given the high prevalence of HIV/AIDS in the country) the eldest son was expected

to take over the running of the family and give up any thought of his own education. Several of the students studying at the Polytechnic, from certificate to degree level, left to fulfil these obligations. The villagers do not always like such practices, but they believed that they could carry them through hard times.

These examples indicate that, the long history of survival through mutual assistance had resulted in the acceptance of a much greater sacrifice of an individual's self-realisation than would be tolerated in the current individualistic societies of the west. Such norms make western style concepts, such as human capital theory, difficult to accept. These considerations make the opinions and attitudes of the parents especially interesting, by far the majority of whom are either traditional villagers or first generation urban dwellers. Would they still retain the same values and attitudes as expressed in the focus group discussions, or, would they approach their responsibilities in the spirit of helping their children to make their way in a world of the skilled workforce based on a human capital theory driven industrial economy?

The Purpose of School: Parents' Opinions

Parents play a very important role in bringing up their children, particularly in their choice of career. Results of the initial empirical investigations into that role are shown in Table 7.2. When asked to choose between the promotion of tradition, culture and customs or the preparation of children for work, over three quarters of the parents chose the latter. The information in Table 7.2 illustrates that the strength of support for this opinion was slightly stronger in urban areas than rural areas. This may indicate the start of an erosion from the automatic acceptance of traditional values.

Table 7.2: Parents: Purpose of School

	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
To promote tradition , culture and customs	39	16.6	29	13.6	68	15.1
Prepare for work	183	77.9	161	75.2	345	76.7
Both	13	5.5	24	10.9	37	8.2
Total	235	100	214	100	450	100

It should be noted that schooling is not compulsory in Botswana and that approximately 15% of the school age population did not attend school (Kann and Taylor, 1986). This proportion has probably decreased since then, but some of these children, particularly in remote areas, do not even start school, others drop out. In such families, parents will not have contributed to this survey even though concern may have been felt for their own children's future.

Parent's Own Jobs

It was decided to obtain a breakdown of the parent's own jobs, in order to compare those of urban parents with those of rural parents. However, many of these parents may have had to choose their jobs and careers under harsh conditions, for instance, during a period of drought when the government self-help drought relief programme has been instigated. If the drought is really severe (four years or more) all building work is halted because of the need to prioritise the use of water for basic survival. These circumstances may well have coloured the parents' influence and advice to their children even though, in recent years, with the improvement in education, transport, communication and the development of technological applications, both the urban and rural way of life has been changing rapidly. In addition, many of the parents themselves may not have received more than primary education, since many of the secondary schools were built much later than the primary schools.

The definitions of the various categories of occupations used for the questionnaires and the structured interviews are those in everyday use, and may not correspond exactly to those used by the Botswana Standard Occupational Coding Scheme.¹ Occupations identified in Table 7.3 that require some form of VET (i.e. White Collar, Craft/Technician and Teacher) accounted for 33.8% of the urban parents' jobs and for 30.0% of the rural parents' jobs in 1999. The more recent Botswana Labour Statistics for 2001 present a similar proportion of just over one third of all jobs in Botswana requiring VET.²

A comparison of the numbers of urban and rural parents in each type of employment can be seen in Table 7.3. None of the top four of the urban jobs were the same as the top four

¹ Appendix A34: Botswana Standard Occupational Coding Scheme

² Republic of Botswana (2003) Labour Statistics 2001

of the rural parents' jobs, where the second highest 'occupation' was unemployed. Such differences reflected the availability of jobs in certain occupations in both town and country: white collar, blue collar and craft/technicians in urban areas farmers and teachers in rural areas.

Table 7.3: Parents: Ranked Own Jobs, Urban/Rural

Urban			Rural		
	Frequency	Valid %		Frequency	Valid %
1. Blue Collar	31	18.3	1. Farmer	25	16.1
2. White Collar	28	16.6	2. Unemployed	23	14.8
3. Self-Employed	22	13.0	3. Teacher	22	14.2
4. Craft/Technician	15	8.9	4. Housewife	19	12.3
Service	15	8.9	5. White Collar	18	11.6
6. Farmer	10	5.9	6. Blue Collar	16	10.3
7. Teacher	8	4.7	7. Service	13	8.4
8. Housewife	9	5.3	8. Craft/Technician	8	5.2
9. Other	31	18.3	Self-Employed	8	5.2
			10. Other	3	1.9
Total	169	100		155	100

In order to determine whether the parent's reasons for choosing their own job might influence their aspirations for their child's job, the reasons given by urban and rural parents respectively were compared. Parents' responses for choosing their own jobs in the rural areas, as compared with those in urban areas are shown in Table 7.4. The influence of the often harsh climatic conditions and poverty on job opportunities is particularly evident among rural dwellers responses. This is reflected in their less idealistic and more pragmatic reasons for taking a job, such as, 'no alternative', 'to feed the family' and 'no education', and yet 'to serve the community' still emerged as overall reason number three. When comparison is made between urban and rural respondents, it may be seen that 'to feed the family' is in first place for rural parents and fifth for urban parents, whereas 'profitable' is in fourth place for urban parents and sixth place for rural

parents. As may have been expected, the rural parents tend to be poorer with more basic needs.¹

A very low proportion of either category gave 'profitable' as the reason for choosing their job. Human capital theory argues that the desire for increased income is the main driving force which can be harnessed to drive skills development. When considering the previous evidence, it appears that this theory may be inappropriate for Botswana, since they are more concerned with supporting their families and the community than personal gain.

Table 7.4: Parents: Reasons for Choosing Own Job, Urban/Rural

Urban			Rural		
	Frequency	Valid %		Frequency	Valid %
1. Interest or challenge	36	22.5	1. To feed family	26	21.3
2. To serve community	28	20.0	2. No alternative	17	13.9
3. No alternative	32	17.5	3. Interest or challenge	16	13.1
4. Profitable	10	6.3	4. To serve community	11	9.0
5. To feed family	9	5.6	5. No education	9	7.3
No education	9	5.6	6. Profitable	8	6.5
7. Other (small % each)*	36	22.5	7. Other (small % each)	35	28.7
Total	160	100		122	100

* Other included: not wanting to be unemployed, to be my own boss, for self esteem and (one only) "to use the knowledge given to me by my ancestors" (spiritual healer).

These suggest a different availability of jobs and approach to job hunting between the two areas, which could lead to a substantial difference in the reason for choosing jobs. This may be more easily recognised if the reasons for choosing the jobs are divided into two categories: those which have been 'forced' onto parents by circumstances, for instance: no alternative, to feed the family and no education, which have been categorised as adverse experiences, and those from a much more positive experience, such as: interest or challenge, to serve community and profitable. These differences shown in Table 7.4 are used in the Table 7.5 to show that 48.8% of urban but only 28.6% of rural parents chose their own job for 'positive' reasons, whereas 42.5% of rural and 28.7% of urban parents chose their own jobs for adverse reasons.

¹ Republic of Botswana (1998) 1995/96 Labour Force Survey

Table 7.5: Parents: Reasons for Choosing Own Job v Type of Experience

Adverse Experience			Positive Experience		
	Urban	Rural		Urban	Rural
1. Feed family	5.6	21.3	1. Interest/challenge	22.5	13.1
2. No alternative	17.5	13.9	2. Serve community	20.0	9.0
3. No education	5.6	7.3	3 Profitable	6.3	6.5
Total	28.7	42.5		48.8	28.6

These different experiences reflect the harsher conditions which generally prevail in the rural areas, which may well result in different parental job aspirations for the urban and rural children.

Job Aspirations for their Children

Another question was set in order to find out if the parents had sufficient background experience and knowledge to evaluate a wide range of jobs to make a suitable recommendation for their children. Each parent was asked to rank the list of ten assorted jobs shown in Figure 7.1 in order of prestige. This format was used in several other chapters.

Figure 7.1: Parents: Jobs Listed for Ranking in Order of Prestige

Job	Categories Represented
Airline Pilot	Engineering/Modern
Bus Driver	Travel/Transport
Carpenter	Craft/Traditional
Computer Operator	Technology/Modern
Electronics Technician	Technician/Modern
Farmer	Traditional
Land Surveyor	Technician
Nurse	Medical/Care
Police Officer	Law Enforcement
Teacher	Professional

The overall prestige of these jobs was established by using the Friedman Test, which is a 'test for ordinal data and is a nonparametric list for a one-factor, within subjects, experiments ...' (SPSS for Windows Made Simple: 230), such as determining the overall

ranking of ten jobs in order of prestige. These numerical results were sorted into a more easily understood rank order shown in Table 7.6.¹ They were of particular interest, especially in the rural setting, as an indication of the parents' knowledge and understanding of the wider range of jobs (in addition to farming) for example electronics technician and computer operator. All jobs, except that of the airline pilot, have a large enough capacity to offer the possibility of a job for children in Botswana. There was a remarkable unanimity between urban and rural opinions, with identical results for both the top and bottom three rankings respectively. Most of the jobs, particularly those of the nurse and the teacher, could be interpreted as essentially 'service to the community'. Parents did not include the airline pilot, which is considered to be prestigious by many, in their top three, in fact rural parents ranked it down at number seven. The general impression given by the parents, is that of a pragmatic and realistic evaluation.

Table 7.6: Parents: Ranked Most Prestigious Jobs, Urban/Rural

	Urban	Rural	All
1	Nurse	Nurse	Nurse
2	Teacher	Teacher	Teacher
3	Electronics technician	Electronics technician	Electronics technician
4	Airline pilot	Computer operator	Computer operator
5	Computer operator	Police officer	Police officer
6	Police officer	Land surveyor	Airline pilot
7	Land surveyor	Airline pilot	Land surveyor
8	Farmer	Farmer	Farmer
9	Carpenter	Carpenter	Carpenter
10	Bus driver	Bus driver	Bus driver

A comparison of the parents' job aspirations for their children and the actual jobs of the parents, in order to determine the soundness of their selections and the similarities and differences, are shown in Table 7.7. When analysing these results, certain caveats should be noted, that only about half of the parents completed and returned their questionnaires. It was not possible to check whether the parents had collaborated with their offspring in the making responses to the questions, it had been suggested by the researchers that, where there was a language or literacy problem, pupils could assist their parents, but not

¹ Appendix A36: Parents: Job Prestige, Urban/Rural (Friedman Test)

choose the answers for them (National Development Plan 8 showed that 31.1% of the population was illiterate¹). For this table the categories of ‘unemployed’ (7.2%) and ‘housewife’ (8.6%) were omitted from the list of parent’s own jobs and included under ‘others’ in order to focus on available, paid employment.

The most notable feature of Table 7.7 is the lack of commonality between the contents of the parents’ own job column and job aspirations for their children. It is difficult to dismiss the possibility that the wishes of the children did not influence many parents when answering this question. The tables generally appear to reflect the parents’ considerations of the responsibilities of life, for instance teacher’s jobs have great popularity because they are considered to be prestigious and secure. As in the 1999 Education Statistics, there were still substantial numbers of unqualified teachers, particularly in rural areas, 1,166 (6.9%) untrained primary and 1,515 (16.5%) untrained secondary school teachers, so the certainty of employment for qualified teachers was good.²

Table 7.7: Parents: Ranked Job Aspirations of Parents for their Child v Parents’ Own Jobs

Parents’ Job Aspirations for Child		Parents’ Own Jobs	
Rank Order	Valid %	Rank Order	Valid %
1. Teacher	23.8	1. Blue Collar	14.5
2. Nurse	15.0	2. White Collar	14.2
3. Craft/Technician	13.1	3. Farmer	10.8
4. Doctor	12.1	4. Teacher	9.3
5. Scientist/Engineer	10.9	Self-employed	9.3
6. White Collar	7.4	6. Service	8.6
7. Others	17.7	7. Craft/Technician	7.2
		8. Others	26.1
Total	100		100

The six most popular job aspirations of parents for their children required at least two or three years further education and training after leaving school and all required certain basic pre-entry qualifications. Yet, it has been recorded that, in the opinion of many of

¹ Republic of Botswana (1997) National Development Plan 8

² Republic of Botswana (2001) Education Statistics 1999

the elders who formed the traditional village focus groups, the school curriculum was regarded as, at best, irrelevant and the quality of the brigades and vocational training colleges even worse. However, if parents from rural as well as urban backgrounds are considering the options requiring training for their children, then traditional attitudes to education and training may be changing in the younger generation.

In order to understand how the parents may have evaluated the jobs when making their choice of job for their child, they were asked to rank a list of factors which should be considered when choosing a job for a child. Would these judgements be biased towards traditional values of, for instance, service to the community or towards more western values of earning lots of money? The results are presented in Table 7.8.

Table 7.8: Parents: Ranked Criteria for Choosing Child's Job

Rank Order	Frequency	Valid %
1. Ability and interest of the child	234	53.7
2. Service to community	90	21.0
3. Earning power of job	62	14.2
4. Reliability of job	50	11.5
Total	436	100

This clearly confirms that by far the most important criteria in the parent's eyes was 'ability and interests of the child' with 53.7%. 'Service to the community' came second with 21.6%, but 'earning power of job' was considered to warrant only 14.2%, again emphasising the apparent lack of the importance of monetary reward to a high proportion of the Batswana, despite the reliance on human capital theory of the Botswana Government. 'Reliability of the job' with 11.5%, was considered to be the least important of the criteria listed.

These criteria contrast with the parent's own reasons for choosing a job, when only 22.5% of urban and 13.1% of rural parents were able to afford the luxury of considering 'interest or challenge' as a reason, but 'to feed family' and 'no alternative' were much more prevalent.¹ Interestingly, 'service to the community' received 20.0% of urban and

¹ Table 7.4: Parents: Reasons for Choosing Own Jobs, Urban/Rural: 164

9.0% of rural parent's reasons for choosing their own jobs, which is indicative of the traditional approach to life, although 'to feed the family' was the priority in the rural community. Inevitably, the choice of criteria for the children appeared to have been influenced by the massive expansion in education and the improved, but still limited, job opportunities now available.

The significance of the choice of the majority of parents in making 'the ability and interest of the child' the most important criterion when choosing a child's job or career should not be underestimated, especially in a rural environment. In such cases, pursuing that choice would probably mean leaving the village for the town. It also shows the parents' awareness of the much wider range of jobs and further training potentially available for their children as compared with the situation when they (the parents) had left school.

Because of the parents' choice of 'the ability and interest of the child' as the most important criterion for choosing a child's job, and its likely importance as a catalyst for rural migration, a more detailed breakdown was made in order to identify any significant difference between the responses of the three categories of parents respectively:

Community Junior Secondary School (CJSS) leavers' parents who answered in English;
Community Junior Secondary School leavers' parents who answered in Setswana and
Senior Secondary School (SSS) leavers' parents who also answered in English.

In each category the order in which parents had ranked 'the ability and interest of the child' on a scale of 1 to 4, where 1 was of maximum importance, was of particular interest, as variations became evident during the compilation of results, as shown in Table 7.9.

Whilst not unexpectedly, the evidence, provided in Table 7.9, showed the criterion to be the first choice of each category of parent by a large margin. However, it should be noted that the lowest percentage, 48.8%, for the criteria of first choice, was given by the CJSS (Setswana) parents, as compared with 57.9% for the CJSS (English) parents and 63.1% for the SSS. It was also noted that the vote was reversed for the lowest ranking, fourth place, the CJSS (Setswana) parents who 14.4% for 'the ability and interest of the child' criterion, whereas the CJSS (English) parents gave 6.7%. These differences prompted the

question of whether the CJSS (Setswana) parents represented the more traditional views of rural Botswana. On investigation, it was revealed that 115 of the 145 total of parents (or 79%) were associated with rural schools. If, as suspected, these opinions are also held by many of the less literate parents who failed to return their questionnaires (and the parents of school drop-outs and children who have never attended school¹), then concern for ‘the ability and interest of the child’ may not be considered important by many, revealing an attitude which may underpin the unemployment and social exclusion experienced by many pupils in later life. These results indicated that the CJSS (Setswana) parents gave more importance to earnings, reliability and service to the community than the others, whereas the SSS parents (the more academic group) considered the ‘ability and interest of the child’ to be the most important factor.²

Table 7.9: Parents: Job Choice Criteria for Child – ‘the ability and interests of the child’

	CJSS (English)		CJSS (Setswana)		SSS		All	
Rank	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
1	103	57.9	78	48.8	53	63.1	234	56.0
2	36	20.2	32	20.0	16	19.0	84	20.1
3	25	14.0	25	15.6	11	13.1	61	14.6
4	12	6.7	23	14.4	4	4.8	39	9.3
Total	176	100	158	100	84	100	418	100

Other examples of criteria were available and although several parents had alternative suggestions, including: help family, help each other, importance to the nation, earn one’s living, self-reliance, further training and job satisfaction, there was no significant support for any one of them.

Other Influences on the Choice of Child’s Job

If students are to avoid wasting their time and the country wasting its financial input, informed decisions about prospective careers which require VET are necessary, based on full and relevant information. The parents were therefore asked for information about their sources of advice and their knowledge of the typical work and characteristics of

¹ Kann, Mapolelo and Nleya, 1989

² Appendix A37(a) Parents: Ranked Job Choice Criteria for Child – ‘earning power of the job’
 (b) Parents: Ranked Job Choice Criteria for Child – ‘reliability of the job’
 (c) Parents: Ranked Job Choice Criteria for Child – ‘service to community’

craftworkers and technicians in industry, service industries or commerce. Evidence shows that teachers provided most advice on careers and jobs, comprising 57.3% in urban areas and 49.8% in rural areas.¹ This finding was somewhat unexpected since there is a much greater range of jobs (which urban parents would know about) in the urban rather than in the rural setting, it should be borne in mind, the urban population consists overwhelmingly of first generation residents. Overall, parents received approximately 24% of their advice from relatives. In view of the important role played by the parents' job advice to their children, and the route from rural to urban living that it encourages, the important part played by the teachers should be noted.

In order to determine the parents' understanding of the requirements for specific careers, they were asked to suggest the characteristics of children who make suitable candidates for VET as a craftsperson, only 13.9% of urban parents and 11.9% of rural parents were able to suggest the suitable qualities of: interest, manual dexterity and a good command of basic Maths, English and relevant Science.² The characteristics required for training as a technician, include: ability and interest in Design and Technology, Maths, English and Science at Cambridge GCSE level. The answers given by the parents for technicians came closer to those required, with correct answers for 37.8% of the urban parents and 37.9% for those from rural parents.³ The parents' knowledge of where VET students should study was also weak, with only about half of them, both urban and rural, knowing the correct responses for both craftsmen and technicians.⁴ Their knowledge of which VET institute catered for craft and which for technician students was poorer than expected, with an approximate 60% correct response rate. Knowledge of examples of work done by craftworkers and technicians was also weak.⁵

Overall Concerns

A further concern, which lies relatively unexpressed behind the ambitions of governments such as Botswana's, is what will be the eventual impact of the changes from the traditional mores of its peoples to those of a modern, commercial and industrial way of life. It is not

¹ Appendix A38: Parents: Who provides job advice? Urban/Rural

² Appendix A39: Parents: Type of Child Suitable for Craftworker, Urban/Rural

³ Appendix A40: Parents: Type of Child Suitable for Technician, Urban/Rural

⁴ Appendix A41: Parents: Knowledge of VET Training Institutes

⁵ Appendix A42: Examples of Craft and Technician Work, U/R

simply a matter of money. This issue was not intended to be raised at any of the focus group meetings, however, it was well expressed by one of the village chiefs, as follows:

Let me first say that the idea of globalisation has to be viewed as seen from those countries who are very strong, they will have well defined values that they cherish so much that they become part of their development programmes (for other countries). When they are developed is when they will be able to be part of that which we want to be. But, there is no sense of identity. Well now, if you destroy that, if you take away that identity from a person, who comes from an underdeveloped country, that's what is most problematic.

It is fortunate that there are Batswana who are aware of this potential problem, as it could be disruptive and would need to be resolved by the Batswana with tact and patience. Any effective intervention would be likely to require a training programme based upon further investigation, and delivered on a countrywide basis to young people at the start of their working life in commerce or industry by those concerned with careers advice.

Summary

The information presented in this chapter has relied upon the goodwill and cooperation of the focus groups members and a 50% return for the quantitative data on the self-completion questionnaires from the parents. These two sources of information often complemented each other. The effects of the governments' skill-based industrial policies depend upon a positive response from the general population, which has a traditional, agricultural background. This culture has been nurtured by the villagers and their elders as a survival response to the harsh climatic and other conditions over the centuries, which have resulted in close-knit communities, with strong networks giving support and developing their own norms of behaviour. Modern, westernised industries, on the other hand, run on a more competitive basis. Traditionally, one of the major factors which determine ones position in the village hierarchy is the number of cattle owned. Another is age. Without them other attributes count for little. For instance, the eldest son must look after the family upon the death of his parents, even if he has to leave school and forgo his education.

The older villagers resented the way in which the school hours take children away from home and prevent them from completing the household chores previously expected of them. Traditionally, boys were sent to the cattle posts to help with the cattle and hence to learn about cattle ranching: the real education according to these villagers. However, they mostly send their children to school, which is the first step to accepting its usefulness.

The village elders were particularly scathing in their criticism of VET, in particular: ‘the poor quality of the lecturers’; the: ‘irrelevance of the curricula’ and: ‘the lack of pride in the graduates’ work’, followed by: ‘poor job opportunities’. However, it should be noted that the focus groups consisted of mainly elderly members, who represented the traditional way of life in the village.

The parents of the school children generally believe that the main purpose of school is to prepare the children for the world of work. However, the parent’s own jobs, particularly in the rural areas, were very revealing. Here their occupations included: unemployment, 14.8% and housewife, 12.3%. Other indicators of the relative poverty of the countryside came from the reasons given for choosing their own jobs, for instance ‘to feed the family’, 21.3%; ‘no alternative’, 13.9% and ‘no education’, 7.3%. It should be noted that the extended families would, in recurrent times of crisis, provide support as a matter of course.

In the parents’ top job aspirations for their children the most notable feature, when compared with the jobs of the parents themselves, was the replacement of farmers, blue collar workers and self-employed by nurse, doctor and scientist/engineers. The other comment concerning the job aspirations for their children was that the current curricula of the schools, which were dismissed by many as irrelevant, may be considered more relevant for the children’s particular job aspirations.

When asked to identify the most important criteria used in choosing the child’s job, by far the most popular criterion was ‘the ability and interest of the child’, with ‘service to the community’ second, ‘the earning power of the job’ third and ‘the reliability of the job’ fourth. The Setswana preferred parents appeared to have a greater tendency to support traditional leaning views where, for example, respect for the ‘ability and interest of the child’ was not necessarily considered to be important. Traditional Tswana discipline of the child was very strict and could be administered by any adult in the village.¹ Children were brought up to accept the rulings of adults and never to question their words or actions, this left little room for the expression of ability and interest. Parental knowledge and understanding of VET and its requirements, including the characteristics of the work of craftworkers and technicians, were relatively poor. This may have reflected the very low esteem in which VET

¹ Village focus group quotation

and its trainees were held in the focus group meetings. Whatever criticisms the village elders made of the VET system, the parents, not the elders, have to make decisions about organising their child's career so that they can earn a living.

Botswana's industrialisation and skill formation policies are based on human capital theory concepts, which tend to assume that the desire for increased income is the main driving force which can be harnessed to drive skills development. The function of English in encouraging skill formation and its application was raised in the focus group discussions. The problems incurred in applying such an individualistic, westernised concept to a traditionally, mutually supporting African society seemed to arise implicitly in the apparent lack of the importance of the earning power of a job, revealed in the parents' criteria for choosing a child's job being a prime example.

The traditional village focus groups helped me to understand their opinions and the values of the villagers, especially with respect to changes which now impinge on their lives. A knowledge and understanding of their reactions, and those of the parents, to such changes was necessary in order to comment upon the likelihood of the eventual success of the government's industrial and skills formation policies. In contrast, the differences between the parents' points of view it was noticeable, for example, that when the parent's own jobs were compared with the jobs that they wanted for their children there were major differences. All six of the most popular jobs for their children required two, three or more years of education or training after leaving school, whereas only three of the parents own jobs were in the same category, revealing a knowledge that further study was necessary and the willingness for their children to undertake that study and an acceptance that the secondary schools were a means of reaching their goals. This represented a big change from the opinions of most of the focus group members. Again, the most important criteria in choosing a child's job was the selection of the child's 'interest and ability', as rather than the more traditional values of 'service to the community', also indicated a change in attitude. Such changes are positive and important, as they show that changes are possible.

In the following chapter the issues, which concern the attitudes and expectations of school leavers with respect to the future of the government's policies on skills development will be investigated. These concerns will include the pupils' expectations of school, their job

aspirations, the differences between urban and rural and male and female expectations, how these compare with their parents' jobs and, more specifically, their knowledge and interest in VET and the type of work that requires such training.

CHAPTER 8

School Leavers

Introduction

Schools impart many 'skills' to their pupils which are for use throughout their lives. Several of these may fall under the general heading (agreed by the Botswana 1993 National Commission on Education) as 'preparation for the world of work'. This includes many basic social, technical and intellectual skills, introduced at an age when pupils can most easily absorb them. This store of useful skills can then be further accessed later, when required for the purpose of training or upgrading and of acceptance in the workplace. The purpose of this part of the survey was to determine whether schools had adequately prepared the school leavers for entry into the world of work, but specifically for entry onto VET courses for training craftworkers and technicians and for their later upgrading if required, which is particularly necessary with the rapid advances in technology within the global economy.

Self-completion questionnaires were used with a population of school pupils who were in the final year of secondary school.¹ At each of the two school leaving ages (minimum of seventeen for Community Junior Secondary Schools [CJSS] and nineteen for Senior Secondary Schools [SSS]), pupils had to consider what they wished to do in the next stage of their lives. The presentation of these results has been divided into three sections. These, with their descriptions, give a useful and more detailed insight into the objectives and approach adopted in this chapter of the survey.

1. The general background and concerns of school leavers including their expectations of school, their wishes for further education and training, and reasons for wanting a job.
2. Their job aspirations, considering their perceptions of jobs and which jobs are important.
3. Factors influencing the choice of a VET course and career, including the jobs of their parents and relatives, the influence of parents, teachers and other advisers, who decides (parents or pupils); knowledge of VET courses, their requirements, what they entail and the jobs to which they may lead.

These factors were included in the self-completion questionnaires which were administered to classes of final year pupils, selected by the headteacher at each school, after explanation and instruction by myself or my assistants.

¹ Appendix A17: Schools: Self-Completion Questionnaire

1. General Background and Concerns of School Leavers

The survey population consisted of almost equal numbers of male and female pupils, together with an almost equal representation of urban and rural pupils.¹ This should allow any relevant differences between those brought up in the traditional rural environment and those from the urban environment to be properly identified. In order to preclude accusations of tribal bias, CJSS pupils from three schools from each of the ten administrative districts were used.² SSS pupils were similarly selected to represent their overall distribution throughout the country.

At the time of the data collection, the school system in Botswana was undergoing radical changes as a result of the recommendations from the 1993 National Commission on Education. Previously, there had been nine years basic education, starting at the minimum age of seven: seven years in the primary school and two in the CJSS, followed by selection for three years in the SSS. This was in the process of changing to ten years of basic education starting at six years of age, with seven years in the primary school, three years in the CJSS and two years in the SSS. Selection for progression from the CJSS to the SSS was based on performance in the Junior Certificate, and Cambridge Overseas School Certificate (COSC), at GCSE level. This was administered at the end of the SSS. Generally, the minimum ages when the examinations were taken were seventeen and nineteen years respectively. However, in order to allow for the sparse spread of population, the consequent vast distances between some schools in rural areas, the difficulties for children to get to school and the cultural importance of cattle ranching in which young boys are often expected to be proficient before starting a formal education, school attendance was not compulsory.³ In certain circumstances it was flexible and pupils were even allowed to *start* school in their late teens.

In the belief that the school education should provide a sound basis suitable for taking up a VET course, the school leavers were asked to choose the most important outcome that they thought they could gain from school, 51.1% chose 'preparation for work',⁴ (CJSS

¹ Appendix A43: School Leavers: Male/Female v Urban/Rural

² Appendix A44: School Leavers: Gender v District

³ Kann, Mapolelo and Nleya, 1989

⁴ Appendix A45(a): School Leavers: What is the most important thing that you should gain from school?

All

and SSS separately, the choice was 47% and 65.0% respectively).¹ Possibly the SSS pupils, who were more mature than the CJSS pupils, felt the need to get a job more urgently than those of the CJSS where, at that time, approximately a third would qualify for promotion to the SSS. The second most important gain from school was considered to be a 'knowledge of Botswana, its cultures and traditions', with a much lower figure of 27.1%.²

When the school leavers were then asked why they wanted a job their answers, shown in Table 8.1, were indicative of the importance of traditional culture over western materialism, and undermines the human capital theory claim that the desire for higher income is the driving force behind investment in training and education leading to a better job.

Table 8.1: School Leavers: Ranked Reasons for Wanting Job

Reasons	Frequency	Valid %
To serve the family and community	602	67.8
To use a great interest or vocation	182	20.5
To never be unemployed	64	7.2
To earn a lot of money	40	4.5
Total	888	100

The most popular choice of reasons for wanting a job was 'to serve the family and community', with 67.8%. When analysed on a gender basis, 73.9% of the boys chose this answer and 61.6% of the girls.³ Overall, 20.5% chose the next most popular reason: 'to use a great interest or vocation' and only 4.5% wanted 'to earn a lot of money'. This emphasis on service to the family and the community is greater than would be expected from focus group comments, where an apparent lack of commitment by the pupils to the family and the community on a day-to-day basis was said to be predominant, and probably reflects the mutual difference in expectation between generations found in many cultures.

¹ Appendix A45(b): School Leavers: What is the most important thing that you should gain from school?
CJSS/SSS

² Appendix A45(a): School Leavers: What is the most important thing that you should learn from school?
All

³ Appendix A46: School Leavers: Reasons for Wanting Job v Gender

However, when asked if they wanted further education and training (FET), the response was an almost unanimous 'yes'. A closer analysis of their aspirations revealed that just over 50% of the school leavers wanted to continue their education and training at the University of Botswana (UB) or at a Teacher Training College (TTC), whilst 12.3% wished to train as craftworkers and that a further 8.4% wished to train as technicians.¹ Two factors may have influenced these results. Firstly, there were approximately four times more craft related jobs in Botswana than technicians jobs.² Secondly, in order to obtain a place on almost all technician courses an appropriate level of Cambridge Overseas School Certificate (COSC) was required. This examination would not be taken by the CJSS leavers, only by the SSS pupils just before they left school, two years later than the CJSS pupils. Consequently, ex CJSS pupils are normally ineligible for entry onto technician courses and so the proportion wanting to take up craft courses is higher for CJSS school leavers, whereas more of the SSS leavers favour technician courses.³

In Table 8.2, the numbers of Male/Female and Urban/Rural choosing craft or technician courses are aggregated separately from the total number of aspirants for comparison and comment.

Table 8.2: School Leavers: VET Aspirants, Gender - Urban/Rural

	Male (Total 290)		Female (Total 289)		Urban (Total 300)		Rural (Total 279)	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Craft	42	14.5	29	10.0	28	9.3	43	15.4
Technic.	17	5.7	32	11.7	21	7.0	28	10.0

It may be seen that the proportion of aspirants wishing to take craft courses was almost three times that for those wishing to take technician courses. However, it also showed that the proportion of girls opting for technician courses is twice as many as for that of boys. In general, both male and female pupils and urban and rural pupils can equally well be trained in the skills required for craft/technician jobs, if that is their vocation. Substantial inequalities in either of the above pairs of potential students in the take up of

¹ Appendix: A47(a): School Leavers: Type of FET Wanted

² Republic of Botswana (2001) Labour Statistics 1999

³ Appendix: A47(b): School Leavers: Type of FET Wanted, CJSS-Urban/Rural; SSS-Urban/Rural

such training could represent the denial of opportunity to some individuals, and the neglect of a potential source of skilled labour for the country.

2. Job Aspirations

To determine the pupil's ability to express their perceptions and evaluation of a range of jobs of varying requirements and qualities, some of which may have been outside their direct interest or experience, they were asked to place ten jobs in rank order of prestige¹. The Friedman Test was used to average out the overall rank order. Two criteria were then applied to these results, shown in Table 8.3, where the ranking which each occupation received on the scale of prestige, and the differences in prestige levels awarded for the same occupations between urban and rural evaluations.

Table 8.3: School Leavers: Ranked Most Prestigious Jobs, Urban/Rural

	All	Urban	Rural
1	Airline pilot	Airline pilot	Airline pilot
2	Computer operator	Electronics technician	Computer operator
3	Electronics technician	Computer operator	Nurse
4	Nurse	Nurse	Teacher
5	Teacher	Teacher	Electronics technician
6	Police officer	Police officer	Police officer
7	Land surveyor	Land surveyor	Land surveyor
8	Carpenter	Farmer	Carpenter
9	Farmer	Carpenter	Farmer
10	Bus driver	Bus driver	Bus driver

The airline pilots' job was considered to be easily the most prestigious, and probably owed some of its popularity to an element of fantasy, which was engendered in the minds of school leavers. Realistically, there are very few airline pilots' jobs in Botswana. The second highest overall was the computer operators' job, and reflected the fact that Botswana had invested heavily in computers for its schools and there were quite a number of jobs requiring computer literacy in banks, offices, commerce and industry. Jobs which might appear to require little or no training, for instance farmers and bus drivers, were placed at the bottom of the list in order of prestige. The ranking of the

¹ Chapter 7: Figure 7.1: Parents: Jobs Listed for Ranking in Order of Prestige: 165

carpenter (eighth overall) probably illustrates the lack of understanding and appreciation of the skill and training required for competent craftworkers. Overall the technician jobs, represented by the electronic technician and land surveyor, were ranked as third and seventh, respectively and include the mid-table jobs of nurse, teacher, and police officer. All of these, together with those at the top of the table require training, provide good job security and the opportunity to pursue a satisfying career.

The job showing the greatest difference in prestige between urban and rural school leavers was the electronic technician. Its prestigious rating was much higher among townspeople, possibly because the towns provide the majority of its work, and the fact that many rural houses do not have electricity. Farmers, on the other hand, received almost identical, but poor, support from both urban and rural populations. This probably reflects the strong link which many town people maintain with their home villages and the consequent, first hand, realistic understanding of the farmers' harsh way of life. Bus drivers, necessary to many citizens, were not considered to have prestigious jobs. In general, these results showed an adequate ability to distinguish between the prestige of jobs, with similarities and differences between both urban and rural pupils' perceptions.

In order to obtain even greater insight into the pupils' perception of the importance to the country of certain jobs, a further question requested the pupils to give their choice of the three most important jobs for Botswana, resulting in quite large differences.¹ Whilst the teachers obtained the highest ranking in all categories, their rating varied from 41.2% for girls to 31.1% for boys. This is possibly reflected in the difficulty which is experienced in obtaining a reasonable balance between male and female teachers in both primary and secondary schools, and indicated the beginnings of a male/female bias. It should be noted that both the pupils' estimation of the three most important jobs for the country and their own job aspirations predominantly may have reflected their desire 'to serve their families and the community', as illustrated in Table 8.1.

The school leavers' job aspirations were then requested. In the list of jobs in Table 8.4, only 6 out of the total 926 respondents were undecided about their choice. This table also shows that 92, or almost 10%, wished to become craftsmen, craftswomen or technicians.

¹ Appendix A48: School Leavers: Three most important jobs for Botswana? (a) Urban/Rural, (b) Male/Female, (c) CJSS/SSS

The major feature of their responses was the very small proportion who wished to become farmers or blue collar workers.

Table 8.4: School Leavers: Ranked Job Aspirations

	Frequency	Valid %
Teacher	228	24.6
Scientist/Engineer	134	14.5
Nurse	132	14.3
Craft/Technician	92	9.9
Doctor	87	9.4
White Collar	74	8.0
Police	40	4.3
Soldier	31	3.3
Computers	26	2.8
Social Worker	22	2.4
Service	12	1.3
Blue Collar	10	1.1
Farmer	9	1.0
Other	23	2.5
Undecided	6	0.6
Total	926	100

An analysis of the results shown in Table 8.5 was undertaken to enable gender driven job aspirations to be identified, and to allow comparison to be made between these job aspirations and the formal occupational structure of Botswana. As might be expected, the boys rated Science/Engineer as the most favoured occupation, with a frequency of 106 or 23.5%, with Craft/Technician scoring 66 or 14.6%, whereas only 28 girls (5.9%) showed interest in Science/Engineer and 26 (5.5%) or considered Craft/Technician to be a suitable job.

Table 8.5: School Leavers; Ranked Male/Female Job Aspirations

Male			Female		
	Freque.	Valid %		Freque.	Valid %
1. Scientist/Engineer	106	23.5	1. Teacher	136	28.7
2. Teacher	92	20.4	2. Nurse	127	26.8
3. Craft/Technician	66	14.6	3. Doctor	50	10.5
4. Doctor	37	8.2	4. White Collar	43	9.1
5. Police	34	7.5	5. Scientist/Engineer	28	5.9
6. Soldier	31	6.9	6. Craft/Technician	26	5.5
7. White Collar	31	6.9	7. Social Worker	21	4.4
8. Computers	14	3.1	8. Computers	12	2.5
9. Others	41	8.8	9. Others	31	6.5
Total	452	100		474	100

An examination of the Labour Statistics 1999 provides formal data on the occupational structure of Botswana against which some of this school leavers survey may be compared.¹ The Botswana Standard Occupational Coding Scheme (BOSCO) uses a more formal description of jobs, occupations and groupings of semi-related occupations than the average Setswana speaking school child might easily understand.² The grouping of occupations in the Labour Statistics 1999, is significantly different to that produced by the school leavers' survey, for instance, school leavers category of 'teachers' is shared between 'technical/associate professionals' for primary school teachers, and 'professionals' for secondary school teachers. However, in 1999, there was a shortage of trained teachers in Botswana, with 1,166 (6.9%) untrained teachers at primary level and 1,515 (16.5%) untrained teachers employed in secondary schools: sufficient potential vacancies for the 228 school leavers in this survey with aspirations towards teaching.³

Several factors could have contributed to some of the preceding results. At the time of the school survey, for instance, the pupils had not sat their final year examinations. Had they already done so and had received their results, some may have changed their minds because they had not met the entry requirements for their choice of further education and

¹ Republic of Botswana (2001) Labour Statistics 1999

² Appendix A34: Botswana Occupational Coding Scheme

³ Republic of Botswana (2001) Education Statistics 1999

training. Good career advice may not have been available. Government rhetoric concerning the virtues and promises of a high skills economy may have misled some of the pupils, especially the aspiring professionals. A further possibility is that the professional's job had partly supplanted the white collar worker as the goal to work for through the recommendation of good exam results. Given the marked difference between their parents' jobs¹ and those to which the children aspire and what appeared to be a scarcity of consistently good and realistic careers advice for the children in the schools, a strong element of wishful thinking was likely to have influenced the children when considering their future employment, so that many of these young people may become seriously disappointed when their ambitions are thwarted, or when they realise that they have misunderstood the entry requirements for a course or the job they want.

3. Factors Influencing the Choice of VET

Parents' Jobs

Parents' jobs may well provide the school pupil with their strongest, most immediate impression of a career, its rewards and its demands. In the traditional family, where the father is a farmer and the mother is a housewife, the children are provided with probably the most direct experience of the work entailed. However, the picture may not be as idyllic as that imagined in the West. For example, the father may spend several months at a time at the cattle post, which may be fifty kilometres away and, in addition to her domestic responsibilities, the mother would have the responsibility, with the help of her children, for crop growing on the much nearer arable land. There would be no piped water or electricity to the house, consequently the children would be heavily involved in collecting water and wood (for cooking) as soon as they were strong enough to carry them. These, and other household chores, became their responsibility as soon as they were able to undertake them unsupervised. This way of life is lived in harsh and uncertain climatic conditions. It should not be surprising that many young people look elsewhere for employment. Many young men have sought employment in the mines of South Africa. Although greatly reduced since independence, there were still 5,867 migrant workers in the mines at the end of 2000 and many fathers have remained there for years, having left their families in Botswana.² For many rural young people, the potential opportunity of obtaining employment in the towns through the process of obtaining VET

¹ Table 8.6: School Leavers: Ranked Fathers' Jobs v Mothers' Jobs: 185

² Republic of Botswana (2003) Labour Statistics 2001

skills may appear to be appealing. On the other hand, the young people already living in an urban setting may already realise that, even in towns, jobs are difficult to obtain without a suitable skill.

In order to analyse other factors which have influenced pupils' decisions to consider taking up a VET course, questions relating to family, friends, teachers, careers advisers and their capacity to contribute to the pupils' knowledge or understanding of what a VET job might entail, and the reasons why related school subjects are important, were also included enabling a better informed choice to be made.¹ Since the parents' own jobs could influence children's own job aspirations, Table 8.6 provides a breakdown of the jobs and careers undertaken by the parents of the school leavers. A comparison between this table and Table 8.5 shows some quite dramatic inter-generational differences between personal aspirations and parental realities.

Table 8.6: School Leavers: Ranked Fathers' Jobs v Mothers' Jobs

Fathers' Jobs			Mothers' Jobs		
Rank Order	Frequency	Valid %	Rank Order	Frequency	Valid %
1. Blue Collar	165	22.4	1. Housewife	285	33.5
2. Farmer	162	22.0	2. Services	110	12.9
3. Craft/Technician	102	13.9	3. White Collar	82	9.6
4. White Collar	73	9.9	4. Unemployed	80	9.4
5. Unemployed	52	7.1	5. Self-Employed	73	8.6
6. Self-Employed	37	5.0	6. Teacher	61	7.2
7. Soldier	26	3.5	7. Farmer	55	6.5
8. Teacher	23	3.1	8. Nurse	35	4.1
9. Police	21	2.9	9. Craft/Technician	29	3.4
Scientist/Engineer	21	2.9	10. Blue Collar	23	2.7
10. Others*	53	7.3	11. Others*	18	2.1
Total	735	100		851	100

* included service, doctor and computer for the fathers and social worker, doctor and police for the mothers. All of whom received 1% or less of the population surveyed for this table

¹ Appendix A17: Schools: Self-Completion Questionnaire: School Leavers

Only Craft/Technician occurs in the top five listed in both Tables 8.6 (Father's Jobs) and 8.5 (Son's Job Aspirations) and a more complex situation exists between mother and daughter. It is important to distinguish between job aspirations and the reality of the job market for women; the job titles which occur in the top five parents' jobs include unemployed, housewife, service (usually as a maid); self-employed and others, occupations which would not be expected in a list of female school leaver's aspirations and therefore make direct comparisons of minor differences of limited validity.

It should also be noted that in Botswana it is relatively common for children to live away from their family home, usually, in order to be near a school. Of the children surveyed, just over a quarter lived away from home. The occupations of the heads of these households revealed a very similar pattern and spread of jobs as had been noted in the family homes of the other pupils. There is a close relationship between certain jobs and their geographical locations, for instance farming in rural areas and white collar jobs in urban areas.¹ The unemployment rate of fathers for rural areas was 8.7%, which was more than twice that in urban areas at 4.2%. Of the 87% responses for mother's status, there were a high number of housewife jobs (43.2%) coupled with high female unemployment (11.3%) which meant that over 54% of the 'jobs' in rural areas are not conducive to the development of a career for girls, if that is what is desired. It also indicates that there are many less job opportunities in rural areas.

Parents' Job Aspirations for their Children

If, it is assumed that parent's jobs strongly influence the aspirations of their children, it may be relevant that 35.6% of the mothers of CJSS pupils were classified as housewives and 9.5% were unemployed, giving a total of 45.1%,² and for mothers of SSS pupils it was 27.4%, indicating that more mothers were in employment, probably because the SSSs are more usually positioned in, or near, urban areas, where more jobs are available.

In order to clarify whether it was the parent's own job or their job aspirations for their offspring which had the greatest influence upon the children's own job aspirations, it was

¹ Appendix A49(a): School Leavers: Ranked Fathers' Job v Urban/Rural
A49(b): School Leavers: Ranked Mothers' Job v Urban/Rural

² Appendix A50(a): School Leavers: Ranked Fathers' and Mothers' Jobs: CJSS
A50(b): School Leavers: Ranked fathers' and Mothers' Jobs: SSS

decided to compare the school leavers job aspirations (Table 8.4) with the parent's aspirations for their children and the parents own jobs.¹ The most popular jobs from each of these tables have been ranked and combined to form Table 8.7, which shows that the most notable feature is the lack of commonality between the contents of the parents' own jobs column and those of the other two columns. The popularity of a potential teachers' job, shown in both of the aspirations columns, may well have owed something to the daily and positive presence of teachers in their lives. It may well have been influenced (in 1999) by the continuing shortage of teachers and the chances of acquiring a reliable job. In general terms, it would appear that the parents may have a significant influence on the job aspirations of their children, though not a positive recommendation resulting from their own job experience. If the parents have only had a poor direct experience of a job, for instance, blue collar worker, the farmer or the self-employed, these jobs would not be expected to appear on their job aspirations for their children, or on the list of job aspirations of their children.

**Table 8.7: School Leavers: Ranked Job Aspirations,
Parents' Job Aspirations for their Child and Parents' Own Jobs**

School Leavers' Job Aspirations		Parents' Job Aspirations for Child		Parents' Own Jobs	
Rank Order	Valid %	Rank Order	Valid %	Rank Order	Valid %
Teacher	24.6	Teacher	23.8	Blue Collar	14.5
Scientist/Engineer	14.5	Nurse	15.0	White Collar	14.2
Nurse	13.0	Craft/Technician	13.1	Farmer	10.8
Craft/Technician	9.9	Doctor	12.1	Teacher	9.3
Doctor	9.4	Scientist/Engineer	10.9	Self-employed	9.3
White Collar	8.0	White Collar	7.4	Craft/Technician	7.2
Others	20.6	Others	17.7	Others	34.7
Total	100	Total	100		100

The question of 'where do parents obtain further information and advice?' was referred to in Chapter 7, where it was shown that teachers provided by far the majority of careers and job advice.² The school leavers, however, claim to obtain such advice from their parents/guardians (31.5%), their teachers (13.9%) or from an unspecified combination of

¹ Chapter 7: Table 7.7: Parents: Ranked Job Aspirations for their Children v Parent's Own Jobs: 167

² Appendix A38: Parents: Who provides job advice? Urban/Rural

sources (44%).¹ It would appear that, either directly or indirectly, the teachers are again the largest supplier of such information.

Knowledge of VET

Questions were put to the pupils with the aim of identifying their knowledge of VET courses, jobs, the advice upon which it was based and possible constraints on the knowledge of VET and of access to jobs. The school leavers' knowledge of VET jobs was found to be very poor, considering that the majority of them would be looking for a job, or a VET course, in the near future. Urban pupils were significantly better than rural in their knowledge of craftworkers and technicians' jobs: craftsmen work with their hands, using tools, other equipment and technical drawings, and when qualified should be able to work with little or no supervision; a technicians are technical workers who, usually working on their own, they develop and deliver modern technical services and equipment for the control of production processes and quality control, often using information technology and electronic engineering skills. These definitions, or their equivalent, were used as the 'correct' answers. The many missing responses for these questions probably reflected the lack of data upon which career decisions of the school leavers are made, or the ambiguous framing of the question: 'If you know anyone who is a craftsman/technician, please state what he/she does'.

To find out if school leavers were aware of the basic entry requirements of VET courses, they were questioned on their knowledge of which school subjects would be important in preparation for such courses. Answers were categorised as correct or incorrect and are shown in the Table 8.8. The subjects of Maths, English, Science, Design and Technology for craft courses, plus Information Technology for technician courses (or their equivalent), were expected for the 'correct' answers. The responses were summarised in Table 8.8. Of rural school leavers, 55.9%, as compared with 67.6% of urban school leavers, correctly named the important school subjects for VET, as did 54.2% of CJSS leavers and 85.2% of SSS leavers. This is in direct contrast to the needs of the respective school leavers: the CJSS pupils, who leave school two years before the SSS pupils, have lower academic qualifications and less chance of obtaining a job or VET training.

¹ Appendix A51: School Leavers: Ranked source of job advice

Table 8.8: School Leavers: What school subjects are important for vocational training?

	Valid %					
	Urban v Rural		Male v Female		CJSS v SSS	
Correct	67.6	55.9	62.6	59.6	54.2	85.2
Incorrect	32.4	44.1	37.4	40.4	45.8	14.5
Total	100	100	100	100	100	100

To discover the extent to which school leavers were aware of some basic facts concerning the training of VET students they were asked to state where a carpenter apprentice would train and where an electronics technician would train. At the time of the survey, the brigades dealt with craft certificates, all apprentices and some craft students were trained in the vocational training centres (VTCs) or the Automotive Trades Testing School (ATTS), technicians were trained at the University of Botswana (UB), Botswana College of Agriculture (BCA), the Roads Training Centre (RTC) or private training schools.

Table 8.9: School Leavers: Where would (a) carpenter apprentices and (b) electronic technicians train? (Percentages)

Institute of Training	Carpenter Apprentice		Electronic Technician	
	Urban	Rural	Urban	Rural
Brigade (Craft Certificate)	46.9	61.2	8.2	12.6
VTCs (Apprentices)	38.8	30.6	39.0	46.1
University (Technician)	13.4	7.9	50.6	40.7

N.B. Boldface indicates highest percentage of correct responses.

There were a few alternative answers, such as 'abroad', hence the total percentage for each column is not necessarily 100.

The correct responses of 38.8% and 30.6% (urban and rural respectively) for apprentice training at the VTC, and 50.6% and 40.7% (urban and rural respectively) for technician training at the University are shown in Table 8.10. The findings indicate limited knowledge of the VET facilities that potential apprentices and technicians require when deciding on their career planning. Urban pupils have the advantage over the rural pupils because most VET facilities and employment are urban based. However, career teachers, supposedly appointed to give career guidance to the pupils are, in my experience, usually young, with little or no experience outside school, qualities which attract little respect

from senior teachers. The subject is non-examinable and therefore not always taken seriously.

Summary

The pupils were revealed as being highly idealistic in their choice of reasons for wanting a job, the majority choosing 'to serve the family and community', only 4.5% wanted to 'earn a lot of money, apparently at odds with human capital theorists that the driving force behind investment in education and training is to obtain a 'better job', usually with better pay. This claim was further undermined by the 67.8% of the respondents who chose 'to serve the family and community' as the reason for wanting a job, which is indicative of the power of the traditional African culture, as revealed in the focus group discussions. They showed their serious intent by placing 'preparation for work' as the main benefit that they hoped to gain from their time in school. Their job aspirations were significantly different in character to the jobs already held by their parents. This illustrated the greater variety and number of jobs now available to the pupils, as compared with the experience of their parents' generation. They were also different from those appearing in Botswana's occupational structure,¹ where the practice of including several occupations under one category made direct comparisons difficult, but generally the number of aspirant job applicants appeared to be several times greater than the number of posts available, especially in the professional employment area.

In most cases, pupil's ranking of jobs in order of prestige and their estimation of the three most important jobs for Botswana showed that they appeared to possess a general awareness of the status of various jobs, if not always of their job requirements. Their understanding of the needs and the work done by craftworkers or technicians was limited, and it appeared that pupils have very little data upon which to form a balanced decision on their preferred career, particularly those pupils in the CJSS and those from rural backgrounds. From earlier discussions with career advice teachers, I learned that their classes always appear to be the first to be disrupted if other teachers are absent and teaching time is then lost from their own subject.

The two main sources of information from which children were expected to base their future careers appeared to be their parents and their teachers. The children's perception of their

¹ Appendix A34: Botswana Standard Occupational Coding Scheme

parent's jobs may be derived from daily contact with their parents, rather than a conscious analysis and, if the parent disliked his/her job, it appears to be passed on to the child. The other source of more general information on jobs dispensed by the parents came from many sources, but mainly from the teachers. Hence, the teacher's role in the choice of career/job was important, both directly in the school and indirectly via the parents.

A further general point concerns the comparative difference in knowledge of job opportunities and job requirements between groups, for instance, between male/female, urban/rural and CJSS/SSS pupils. This results in one of each of the above pairs having an advantage over the other in the competition for jobs, with female, rural and CJSS pupils being disadvantaged, possibly leading to social segregation, loss of opportunity and social exclusion.

When pupils were asked to place ten jobs in order of prestige, they unexpectedly, but logically, ranked them mainly in order by the amount of training required, with those requiring the least training at the bottom, with the notable exception of the carpenter's job. Knowledge of VET course entry requirements, VET institutes and VET job opportunities was very limited, inadequate and insufficient for most school leavers to make well-informed decisions about their careers.

Tackling the problem of providing school leavers with adequate knowledge of the jobs available, what they entail and, where relevant, what further training is required and what pre-entry qualifications are needed, is probably the single most important objective in preparing them for the world of work. It is also one of the most difficult since the information required is often not easily available. Improved career counselling was a major recommendation of the 1993 National Commission on Education and yet has remained the one which has resulted in least improvement. Better methods of relating the education and training to the needs of the labour market and of facilitating the transfer of pupils from the school to work are required, if school leavers are not to be disappointed, disillusioned and demotivated by unrealistic expectations, which originally have probably arisen from Botswana's diamond wealth and the consequent high expectations.

In the next chapter, the role of school teachers will be investigated in relation to their opinions on the purpose of teaching, their attitudes to their pupils and how they see their teaching as a preparation for the world of work in general, and for the area of craft and technician workers in particular. The quality of and problems encountered teaching the key subjects, such as English, Mathematics, Science, Design and Technology and Careers Advice will be canvassed. Reasons for and effects of pupil deficiencies will also be examined.

CHAPTER 9

School Teachers

Introduction

Government ambitions and policies for the development of commerce and industry in Botswana have depended in large measure upon an appropriately educated workforce. Education has been used as a source of trainable manpower in Botswana since independence. At that time, the very limited school output was linked to the putative needs of the white collar workers for employment in the public sector. However, the importance of manpower planning more generally soon emerged in reports on the development of Botswana and its need for educated personnel to support that development. The need to expand the education system was again argued in the Manpower Survey of 1972,¹ and the National Development Plan of 1968/73,² stated that the primary aim of education was to provide a pool of well-trained manpower to serve the country. This aim has remained a primary recommendation of all subsequent national development plans. The 1993 National Commission on Education³ and the consequent Revised Policy on Education of 1994⁴ both recommended that the primary aim of the education system should be to prepare children for the world of work.

In the state secondary schools in Botswana, the Junior Certificate (JC), is taken at the end of the CJSS, and acts as a selection filter of pupils from the CJSS to the SSS, and to the craft certificate courses at the brigades. The Cambridge Certificate, or its equivalent, is the terminal qualification of the SSS and is used for selection on to technician programmes. Adequate fluency in English is a requirement for most of the brigade and VTC courses which are mainly taught in the medium of English, and in most of the occupations taken up after qualification where the instructions for installation, commissioning and maintenance of the equipment is in English.

In the context of examining the understanding of the Ministry of Education and teachers' interpretation and application of the government policies on the preparation of the pupils for the world of work, teachers of final year pupils were asked questions about the requirements for VET orientated courses, and about pupil deficiencies and their causes. The subject

¹ Republic of Botswana (1972) Manpower Survey

² Republic of Botswana (1968) National Development Plan 1968-1973

³ Republic of Botswana (1993) Report of the National Commission on Education

⁴ Republic of Botswana (1994) Revised National Policy on Education: March 1994

teachers concerned were those of English, Maths, Science, Design and Technology (D&T) and Career Guidance. The opinions of both CJSS and SSS teachers on the performance of pupils in the key subjects of English and Maths were canvassed. This data is used to indicate the role of the teachers in preparing their pupils for possible entry onto VET courses. It should be realised, however, that teachers and their work are circumscribed by both the internal ethos and the external requirements of the school, which are largely beyond the control of the average teacher. For example, government policies and their translation into curricula and other requirements of the Ministry of Education; the demands of the school's headteacher, the school's hierarchy, discipline and exam performance; the teaching methods, initial training and in-service training; the attitudes and support of parents, the children's background and even the method of examination affect the apparent effectiveness of the teacher's instruction of their pupils. The teachers' own opinions and comments would, however, provide a relevant method of identifying how their understanding of the more general needs of the world of work and those of prospective VET students in particular.

Teachers of English, Maths, Science, Design and Technology (D&T) and Careers, who have worked with the school leavers, were targeted via self-completion questionnaires or structured interviews. The results are presented in three sections:

1. the general characteristics and background of the teachers;
2. the quality of VET related school subjects;
3. the teachers' understanding of the requirements and applications of VET related courses.

Under these three headings, the major factors which may have an influence on the type, quality and purpose of education provided, with special emphasis on the preparation of the children for the world of work, as seen by the teachers themselves.

It should be noted that many of the teachers would have been brought up in a village environment with its customs and culture, as depicted in Chapter 7, which could have influenced their attitudes and approach to work. A small minority of teachers declined to answer some of the questions relating to personal background information, despite repeated assurances of the utmost confidentiality. However, the overwhelming majority of teachers involved with this chapter were most helpful.

1. General Characteristics and Background

A total of 163 teachers, of whom 33 were SSS teachers, took part in the survey. They represented schools in all areas, with the same criteria for countrywide inclusion as for school leavers'.¹ For preference, structured interview were undertaken, but where the teachers concerned were not available, self-completion questionnaires and stamped addressed envelopes were left for completion and return. The information obtained about the teacher's specialism, qualifications, and experience was obtained.² Those interviewed showed that they were generally well qualified, with a relatively high proportion of expatriates and a steadily growing number of young Batswana teachers.

Table 9.1: School Teachers: Reason for Becoming a Teacher

Why Teach?	Frequency	Valid %
I liked it	62	38.5
Element of compulsion	37	23.0
Benefit children's future + country	28	17.4
Other*	34	21.1
Total	161	100

*included: family tradition, by chance and to obtain reliable and permanent job

An interesting feature of Table 9.1 was that for 23% an 'element of compulsion' existed in making their decision. This probably referred to the selection process, which operated for Maths or Science students at the University of Botswana where, after the first year, only the best were allowed to continue and complete their degree programme in Maths or Science. The remainder were directed into teacher training (Yandila, 1993). It is also confirmed in some of the responses to the survey questionnaire, which referred to 'an element of compulsion' as the reason for becoming a teacher. Unfortunately, a few such teachers still felt victimised by this decision, which in my opinion, had negatively influenced their performance. However, when questioned, 92.8% of all respondents agreed that their subject was very interesting, and ranked teaching as the top job in order

¹ Chapter 8: 177

² Appendix A52: School Teachers: Subject Taught by Interviewees
A53(a) School Teachers: Qualifications v Subject
(b) School Teachers: Experience v Qualifications

of prestige out of a list of ten jobs.¹ When Botswana was newly independent and before diamonds were discovered, it was accepted that, in their desperate situation, it was necessary to send anyone who had done well at standard seven in primary school to teach in a primary school anywhere where there was a chronic shortage of teachers. However, it is taking many years to resolve with the resulting legacy of untrained teachers forming a continuing problem.

To find out about the teachers' general approach to their profession, they were each asked to identify the purpose of teaching. The results are presented in Table 9.2, which shows that the dominant reason in each category: urban, rural and expatriate, is 'to prepare children for the world of work'.

Table 9.2: School Teachers: Purpose of Teaching v Home

Reason	Urban		Rural		Expatriate	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
To prepare children for the world of work	25	83.3	67	77.9	22	66.7
To promote the traditions, culture and customs of Botswana	1	3.3	5	5.8	2	6.1
Both the above	3	8.3	10	11.6	2	6.1
Other	1	3.3	4	4.7	7	21.2
Total	30	100	86	100	33	100

With the low frequencies involved, especially for the urban teachers and expatriates, together with the large majorities favour of 'to prepare children for the world of work', the resulting low frequencies for the remaining options can only be indicative. However, when the direction of skills required for a high skill future development of greater initiative and problem solving, this sentiment does not sit easily with the use of rote learning for almost every situation which, with certain honourable exceptions, universally characterises pedagogy in Botswana (Monkge, 2001). The traditional 'good memory'

¹ Table 9.6: School Teachers: Ranked Most Prestigious Jobs

which has, in the past, provided good exam results is not likely, on its own, to enthuse the high skills employer.

In the top-down, rote learning approach, the teacher is cast in the role of the provider of information, whilst the responsibility of the pupil is to learn that information by repetition, which rests easily with the traditional Botswana culture but is not generally appropriate for a high skills approach and the challenges of the global economy. Here the requirement is for personnel (i.e. in this case, the product of the schools) to have enquiring minds and the initiative, responsibility and ability to find out information for themselves. In the particular case of the qualified craftworkers and technicians, they have always been, and always will be, fully responsible for their own work and that of those who work for them. Although Botswana's secondary school teachers realise, by a very large majority, that the preparation of their pupils for the world of work is their top priority, their own training and approach to teaching may need some revision in order to equip the pupils for these new demands.

2. Quality of VET Related School Subjects

The Teaching of English

Botswana is a member of the Commonwealth and Southern African Development Community (SADC). It is surrounded by Commonwealth/SADC countries, where the *lingua franca* for commerce and industry is English in which fluency is essential for success in the region alone let alone in the global marketplace. The instructions for installation, commissioning and operating many of the devices within the area of expertise of a VET graduate are in English. If a mistake is made due to his/her ignorance of English, the mistake may lead to litigation. English, consequently, has a special place in all secondary schools, vocational training colleges (VTCs) and most brigade programmes, where it was the medium of instruction. The Junior Certificate (JC), which is the leaving certificate at the end of the CJSS education, is in English. The low standard of English of some of the students entering the VTCs has created problems, which have resulted in the VTCs having to provide a remedial English programme. The standard of English in schools was discussed during the structured interviews, in order to obtain the viewpoint of the teachers concerned. Teachers of Maths, Science, Design and Technology and Careers were also questioned, as their subjects are frequently used in

VET. Teachers were asked to state what proportion of their final year students had problems with understanding, speaking, reading and writing English.

The size of the problem is identified in Table 9.3, which dramatically indicates the teacher's estimates of the pupils' reading, speaking, understanding and writing difficulties in using the English language.¹ It is a broad-brush measurement, as the standards, expectations and differences between the CJSS and the SSS. Senior secondary schools are generally situated in urban areas, are selective, and only pupils who are more fluent in English are permitted entry. Their problems in this area were therefore much less. In both CJSS and SSS, the teachers in areas other than English were generally of the opinion that the standard of English was none of their concern. One teacher (who wished to study law but was directed into teaching) responded to the question about the proportion of pupils with problems with English was 99% for all aspects of the subject! The frequencies which resulted from this sub-division were small but indicate that the problem exists in all subjects.²

Table 9.3: School Teachers: Percentage of Teachers Claiming That More Than 40% of Pupils Have Difficulties With English

Aspect of English	All Pupils (inc. CJSS)		CJSS Pupils (only)	
	Frequency/Total	Valid %	Frequency/Total	Valid %
Reading	65/134	48.5%	56/116	48.3%
Speaking	97/136	71.6%	89/121	73.6%
Understanding	73/133	60.9%	73/73	61.3%
Writing	85/133	63.9%	78/120	65.0%

It was interesting to note the percentage of English teachers who believed that a high proportion of the school leavers had difficulties with all aspects of the English language. It was concluded that pupil's difficulties with English were very serious in all subjects, and could easily reduce the pupil's overall performance and could contribute to negative attitudes and even indiscipline. This situation could be replicated for VET, where English is also the language of instruction.

¹ Appendix A54(a) School Teachers: Pupils' Difficulties with English
(b) School Teachers: Pupils' Difficulties with English, CJSS

² Appendix A55(a) to (c): School Teachers: Pupils' Difficulties with English, CJSS Subject Teachers

Answers to the question: 'Have these problems increased or decreased during the last three years?' indicated a marginal growth in these difficulties, possibly attributed to changes in intake to the CJSS.¹ More children, some of lower ability, were taking advantage of the opportunity of CJSS education for all, which was changing from nine to ten years, thus extending the time spent in the CJSS from two years to three. Appropriate teaching material and training for these changes were not adequate. However, the tables all show that the problems with English had not changed and needed to be addressed because of their adverse impact on other subjects, and the severe limitation on opportunities which the pupils may have had in obtaining access to many jobs and further training, including VET.

The Teaching of Maths

Mathematics is a subject, like English, upon which others, such as Science and D&T, depend. Its role in VET subjects and applications is essential in many areas. Because of its wide-ranging importance, especially in VET, it was considered necessary to investigate the standard of Maths. The number of pupils considered to have difficulties in Maths is shown in Table 9.4. One of the problems is the low standard of Maths in many primary schools. When my wife was leaving one primary school, the three Standard 7 teachers approached her and asked for assistance with a Maths question from an old examination paper. It wanted to know how much paint was required to paint a room, given the specifications of a rectangular structure and the paint cover. The teachers lived in a large village in the Kalahari Desert, in rondavals with clay and cow dung finish to the walls, and they had no idea how to tackle the question. Many of the practical questions in Maths books are outside the experience of many of the teachers and, although basic arithmetic can be taught by rote, the application of Maths frequently reveals problems in understanding, a point raised by several science teachers .

Mathematics is required by virtually all branches of craft and technician work. For construction work alone, the operator must be able to calculate the areas and volumes of a variety of shapes in order to estimate the quantities of building material required for the construction, to ensure its strength and to estimate its cost. In other areas, whether it is

¹ Appendix A56: School Teachers: Change in the state of English?

plumbing, electrical, or carpentry and joinery, a firm understanding of the application of the appropriate basic Maths is necessary.

The results shown in Table 9.4 were obtained from the teachers' opinions and represent the pupils' ability in their final year. The percentage of secondary school teachers who claimed that 40% or more of their pupils had difficulties with Maths is 71.8%, i.e. almost three-quarters. A University of Botswana lecturer in the Mathematics Education Department, whose duties included visiting students in secondary schools during their teaching practice periods, reported that headteachers often stifled new initiatives in the teaching of Maths by making it very clear that a teacher's function was to ensure that pupils passed their exams, and that understanding the practical applications was an unnecessary extra.

Table 9.4: School Teachers: Pupils' Difficulties with Maths

% with problems	Frequency	Valid %
0 – 10	15	14.6
11 – 20	4	3.9
21 – 30	4	3.9
31 – 40	8	7.8
41 – 50	31	30.1
51 – 60	13	12.6
61 - 70	7	6.8
71 – 80	9	8.7
81 – 90	12	11.7
91 – 100	2	1.9
Total	103	100

Mathematics is a fundamental subject, its applications are found in many fields of enterprise and employment. Lack of sound understanding of its applications, at the high level of over 70%, indicated in Table 9.4, are sufficient to prevent pupils from entering many fields of employment or taking up further training, such as VET.

Teachers' Comments on the Education System, Teaching and Teacher Training

These comments were obtained during the teachers' structured interviews when they were invited to add 'further relevant comments'. These ranged over a very wide variety of topics, many related to the standard of English. The comments came from virtually all CJSS and SSS teachers. These are summarised below and, together with the previous results of the quantitative survey of English and Maths allow a more complete picture of the teachers' opinions of the teaching of VET related subjects to emerge. Since all teachers used English as the language of instruction, this subject is dealt with first.

English: On the positive side, it was stated that the re-introduction of English Literature as a subject in the Junior Certificate examination was beneficial, as it provided for the practical application of the language in speaking and listening groups, role play, topic presentations in assembly and the like. It was suggested that 'English should be introduced in Standard 1 in the primary schools, when children are of an early age and can pick up languages more easily'. In fact, English as the medium of instruction was introduced from Standard 2 in 2002.¹ In my own experience, most children (and adults) in Botswana do not read for pleasure and it was stated that 'it is difficult for most rural dwellers outside school, domestic chores and the importance attached to social conversation leave little time for individual activities' and, 'in a village rondaval there is no electricity, a candle is needed to read after dark'. 'This is unfortunate', it was said 'as the command of language could be improved by reading'. A further problem in some areas is the existence of two, or more, local language groups. A child learning all of their subjects in English could well be learning in their third language, the first their mother tongue, then Setswana for early years' education and finally English. Teachers complained that 'pupils refused to speak English because of their negative attitude', others used the allegation that because a child is 'not serious' or that their negative attitude has caused their poor fluency in English. Some Maths teachers claimed that the level of English was poor, but that 'it has nothing to do with me'. The negative attitude of some teachers inferred by their comments could be detrimental to the confidence and performance of their pupils. In service training could contribute to a greater understanding of pupils' problems and needs, particularly those of lower ability who require a different approach, preferably in special, smaller classes or groups. Teachers in

¹ Top ranking official in the Ministry of Education, Jan.2005

other subjects, such as Science and D&T, complained ‘that English is being taught by means of rote learning and memorising’, but when children were asked to apply the language it was beyond them, which showed that they did not understand. Others stated that ‘the exam must be simplified, and the text books used must also be written in simple English language’.

Maths, Science and Design and Technology: It was claimed that ‘Most children have an attitude problem, not an English problem, with Maths’ and that ‘there are no problems with their English, they have a negative attitude and just refuse to understand Maths’. ‘They are trying not to study their Year III Maths this year’, were among the most extreme complaints. Rather more logically, it was stated that ‘difficulties occur when the children try to apply their Maths to Science’. It was also claimed that a large gap existed between the standards of Maths, English and Science particularly in the rural primary schools ‘where up to a quarter of staff are untrained’, and those of the secondary schools where ‘many of the problems of the secondary school arose from the poor teaching in the primaries’. It was also said that ‘the science syllabus needed updating’ and that ‘the depth of meaning of the objectives in the syllabi were not clear to most teachers’. (The last two points appear to carry the most creditability.) Apart from their complaints about the teaching of English shown in the previous paragraph, they also believed (with some justification) that ‘if the Government wants to introduce Design and Technology into the CJSS successfully, then it should revise the syllabus and supply the necessary materials and equipment so that the practical aspects of the subject can succeed’.

VET and Career Guidance: It was claimed that ‘career guidance should be emphasised’, because ‘it makes children aware of the qualifications and qualities, including English, required for various jobs and/or further training’. ‘This approach would open up the minds of children to life in general’ ‘you should not have to go to the University of Botswana to be employed’ and: ‘pupils should be told about the importance of VET, so that they do not take it only as a last resort’. It was also stated that ‘many people do not know what ATTS (Automobile Trades Training School) is’, and ‘there is a need for the VTCs and Brigades to issue prospectuses showing the entry requirements and the need for the skills’. Others among the teachers, however, still view VET as ‘a training only for the less academic and less able’. There was also a call for ‘better quality

lecturers/instructors in the VTCs', and for 'more jobs to be created for the VTC graduates'.

Miscellaneous Items: Some factors which were mentioned raised systemic issues over the whole school. It was claimed that 'links between the CJSS and the SSS, between the schools and VET or between the school and industry do not appear to exist'. It was also suggested that 'employers should have input into the syllabi if we are to prepare the children for the world of work'. Parents 'should be made to understand the importance of education, lack of parental guidance is a problem'. This, it was stated, 'has a big effect on pupils' morale' and 'in the rural areas, allows up to a quarter of the staff to be untrained'. In addition, 'the Government should provide a conducive environment so that pupils can learn effectively and later yield vocational skills for the workplace'. 'In schools with a high proportion of Basarwa and Bakalagadi', it was claimed that 'language is a major problem, there is a high drop-out rate and massive indiscipline' and 'class sizes should be reduced'.

Teaching and Teacher Training: Several teachers, mainly in Science and D&T, complained that: 'the use of rote learning, which is common in primary schools, and is continued in many cases in the secondary schools, has produced children who cannot understand or apply what they have memorised'. Secondary school teachers found it: 'hard to deal with the poor fluency in English' (the medium of instruction). The other major problem was: 'having to deal with mixed ability classes'. Most of the CJSS teachers had trained to deal with children in a selective system, when only the better grade pupils, as judged by the results of the Primary School Leaving Certificate (PSLC), were allowed entry into the CJSS, whereas now, all children who have completed their primary education were eligible to continue into the CJSS. Further, in Botswana, tradition does not encourage children to question adults. This was illustrated by a conversation overheard between two pupils, where the one reassured the other that 'it is OK to talk to and ask for help from any white teacher, but not from a Motswana'. Such attitudes and expectations make a didactic style of teaching almost unavoidable.

Other Causes of Deficiencies in Pupil Performance

In Chapter 8, several factors, such as the more limited availability of local jobs and lack of trained teachers in rural areas, appeared to place school leavers from such areas at a disadvantage compared with those from urban areas. This lack of opportunity could reduce their performance in school, and hence reduce their options for later training and employment. Teachers were asked if they thought that any of the following factors were responsible for deficiencies in pupil performance: family size, urban or rural conditions, parent's job or income, single parents, parent's attitude and the home environment. Comments were invited and Table 9.5 was compiled from the responses of the teachers.

Table 9.5: School Teachers: Negative Effect of External Factors on Pupil Performance

Rank	Negative Effect	Frequency	Valid %
1	Poor attitude of parents	146/154	94.8
2	Poor home environment	142/151	94.0
3	Parents' job	112/139	80.6
	Large families	129/160	80.6
5	Parents' income	129/163	79.1
6	Rural environment	120/153	78.4
7	Single parents	93/163	57.1
8	Urban environment	61/153	39.9

N.B. Frequency = Number agreeing/ Total

Teachers' Comments on Pupils' Deficiencies

The following comments represent the same, or related sentiments that have been presented under the specific headings used in Table 9.5, inevitably, many of these factors overlap. They were obtained during structured interviews, during which teachers were asked to comment in response to open questions on each of the factors used in this table.

Poor Attitude of Parents: Some of the specific comments made by teachers included 'parents resent having to let their children go to school because they get left with more household chores'; 'parents and pupils develop a negative attitude towards school'; 'in many villages the school is looked on as a foreign place with a virtual boundary between it and the village'.

Amongst the criticisms of the schools expressed by the focus group meetings it was claimed that the schools were, indeed, isolated from the villages, that the schools were looked upon as a foreign place and that it was ‘difficult to get involved with anything in school ... to work together with the teachers to talk about changes. The school puts itself first and puts parents against teachers’.¹ Villagers also complained that the children were not available for household chores or for cattle ranching, and that they therefore were not taught the customs and culture of their parents. In fact, many saw the curricula as being generally irrelevant.

These, and other comments, emphasised the fact that many rural parents and focus group elders do not have a positive attitude towards education because it has no obvious place in their lives. It is often considered much more important for the boys to go to the cattle post to learn the skills of cattle ranching and for the girls to learn domestic tasks from their mothers. Some educated women who have migrated from the village to the town still have reservations about education taking precedence over the traditional approach to life, particularly for girls. However, when these comments were raised with a top official at the Ministry of Education in January 2005 they were accepted as being representative of attitudes in certain areas, but it was pointed out there is now a substantial amount of cooperation between teachers and villagers involved in a new strategy. It is a pilot scheme, developed on three areas of common interest: English language, HIV/AIDS and Mission 2016 (the target date by which Botswana intends to have progressed to the extent of being a developed country). Activities include the development of radio tapes and library material and were in progress in five education centres around the country.

Poor Home Environment: Teachers stated that ‘pupils spend time on household chores’; ‘they cannot study at home’; and ‘there is no space for studying’, all emphasising the fact that the distraction of other activities hindering serious study, this was particularly evident in the villages, but not unknown in the urban environment. The extra family responsibilities for older children in large families, and the consequent lack of parental support for education, were also mentioned by several teachers. Electricity is rarely available in rural areas and ‘candles are used for lighting in many villages’ (it is always too dark to work inside without light by 6.30 p.m.) was cited as a feature of a poor

¹ Chapter 7: 155

environment. Other criticisms included 'exposure to domestic violence'; 'child abuse and bullying' and 'the use of the home as a *shebeen*' (illegal drinking, which usually continued late into the night). Thankfully, there was also some praise for the beneficial effect of homes with a 'good' environment.

Parents' Incomes and Jobs: These factors were closely linked in the minds of the teachers: 'parents with good jobs have a good income and can afford TV, study aids, books etc. those on a low income cannot afford them'. A common concern, especially in rural areas, was: "the effect of low income resulting from low paid or intermittent jobs', these placed limitations on: 'the ability to purchase school uniform and supplementary materials' and they even: 'developed a negative attitude to education'.

Family Size: This was almost always interpreted as 'large families', however one response did admit that 'smaller families are usually well looked after'. Large families and the consequent 'lack of parental support' was 'a characteristic of the rural villages where large families are most prevalent'; 'older children often spend too much time looking after younger brothers and sisters and on household chores' and 'pupils may be left "holding the baby" ' were some of the comments received.

Rural Environment: 'Lack of experience' prevented the pupils from understanding of the wider world. This, coupled with 'lack of better facilities', such as 'teaching materials and libraries' and 'exposure to the use of English' emphasised the disadvantages that were thought to be experienced in rural living. The lack of electricity for televisions etc. within the home was cited. Teachers' comments under 'Poor Attitude of Parents' are also applicable in this section. 'Few teachers are willing to work in rural areas', and so it was claimed that 'a quarter of the staff are untrained'. One positive aspect is that, because of the traditional cultural attitudes, the pupils were well behaved and discipline is good!

Single Parent Families: This question was not liked by some of the respondents, possibly because of cultural attitudes to such matters, or possibly because of feelings of personal criticism. (I know of highly educated mothers who admit that they leave their child with their family in the village so that they can continue with their own career by taking an overseas course, and then say that 'perhaps this is not the best for my child'.) Female

headed households were the only ones considered by the teachers in this question. It would be very unusual to have a single parent, male household in such a male dominated society as Botswana. In National Development Plan 8: 91, it was stated that: 'female headed households were poorer than male headed households'.¹ Some teachers commented that: 'the absence of a father in a household was the loss of a balancing factor, especially as a role model for boys'.

Urban Environment: many of the conditions in the towns were said to be the reverse of those found in rural areas. Parents had greater opportunity of obtaining higher paid employment and hence could provide a better home environment, supplementary educational materials and better conditions for study and homework, whilst 'children are exposed to shops, museums, libraries and TV'. They had 'better access to the VTCs'. However, teachers were of the opinion that 'pupils can be distracted by too many entertainments'. Unless 'controlled wisely by their parents', they could get drawn into 'social ills, such as tobacco, alcohol and drugs abuse'.

Children who were the victims of adverse conditions, quoted by the teachers, were unlikely to reach their potential in school, may later develop negative attitudes to school and therefore lose training and employment opportunities. It should be noted especially that the majority of the causes of deficiencies occurred in rural rather than urban environments. Some of the more blatant material advantages of the urban dwellers may also have fuelled the nascent envy of the rural villagers and have added to their sometimes negative attitudes towards their schools, as expressed more strongly in the focus groups.²

3. Teachers' Understanding of the Requirements and Applications of VET Courses

School leavers and their parents both claimed that teachers were a major source of career advice. It was therefore important to investigate the effectiveness of this role and their general knowledge of careers. Teachers were asked to rank ten jobs in order of prestige, stating their criteria for this ranking. They were also asked for criteria used when giving career advice and their knowledge of the characteristics required for craftworkers and technicians and the appropriate VET institutes for their training.

¹ Republic of Botswana (1997) National Development Plan 8

² Chapter 7: 155

The scores and order of prestige in which the teachers have ranked a variety of ten jobs are shown in Tables 9.6. Overall, teachers ranked themselves first, Airline Pilots second and Electronics Technician third. Both urban and rural teacher respondents considered their own job to be the most prestigious and were in agreement on the lowest four jobs. However, the urban dwellers only rated the electronic technician's job at sixth, whereas the teachers working in the rural areas ranked it second. The computer operator was ranked at three and five respectively.

When compared with the three topmost ranked jobs of all school leavers, it was found that the school leavers rankings were 1. Airline Pilot, 2. Computer Operator 3. Electronics Technician and 4. Teacher.¹ The school leavers bottom three, were 8. Carpenter, 9. Farmer and 10. Bus Driver. Apart for the teacher's job itself the two lists were surprisingly similar and seemed driven by the same logic. The teachers also ranked the prestige of the carpenter's job as ninth overall, again illustrating the lack of understanding and appreciation of the skill and training required to produce a competent craftworker.

Table 9.6: School Teachers: Ranked Most Prestigious Jobs, Urban/Rural

	All	Urban	Rural
1	Teacher	Teacher	Teacher
2	Airline pilot	Airline pilot	Electronics technician
3	Electronics technician	Computer operator	Airline pilot
4	Land surveyor	Land surveyor	Land surveyor
5	Computer operator	Nurse	Computer operator
6	Nurse	Electronics technician	Nurse
7	Police	Police officer	Police officer
8	Farmer	Farmer	Farmer
9	Carpenter	Carpenter	Carpenter
10	Bus driver	Bus driver	Bus driver

The criteria used by the teachers to rank the ten jobs are shown in Table 9.7. 'Service to the community' was chosen by most respondents as the most suitable for evaluating the

¹ Chapter 8: Table 8.3: Ranked Most Prestigious Jobs, Urban/Rural:180

prestige of a job. It agrees with ‘to serve the family and community’ as the most popular reason of school leavers for wanting a job.¹

Table 9.7: School Teachers: Ranked Criteria Used for Evaluating Prestige of Jobs

Criteria	Frequency	Valid %
Service to the community	73	46.2
Earning power	43	27.2
Both	13	8.6
Other	29	18.4
Total	158	100

However, when it came to giving careers advice (Table 9.8), the teachers placed ‘abilities of the pupil’ as being by far the most important factor, with ‘service to the community’ coming only slightly ahead of the career’s ‘earning power’ as the second most important factor influencing the advice. Other minor influencing factors included job availability, interest of the child, job satisfaction, child’s attitude and job security.

To a large extent, these results reflect the views expressed in the Botswana Orientation Centre Report on the focus group discussions on careers choice, which claimed that ‘many people no longer look at ‘service to the community’ as the most important factor. They consider the skills and interest and the status of the job and money as being more important’.² In the long run, the desire for higher income may provide the drive for further education and training. The teachers’ criteria for careers advice appears to lie between those with traditional rural and modern urban lifestyles.

Teachers were asked the question: ‘What type of pupil would you advise to pursue VET?’³ Their responses for potential craftworkers or technicians were compared with the following descriptions. The ‘craftworker’ would require an interest in the subject, good basic Maths, communication skills and the relevant science, plus a strong interest in hands-on practical work. The ‘technician’ would need good Maths, plus good

¹ Chapter 8: Table 8.1: School Leavers: Ranked Reasons for Wanting Job: 178

² Appendix A33 Focus Group: Botswana Orientation Centre Report

³ Appendix A58: School Teachers: Characteristics needed for VET?

communication skills, information technology, science and practical science and testing (or their equivalent). The results are shown in Table 9.9.

Table 9.8: School Teachers: Ranked Factors Influencing Careers' Advice

	1 st Choice		2 nd Choice		3 rd Choice		4 th Choice	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Abilities of pupil	118	86.8	12	9.0	4	3.1	1	1.5
Service to community	5	3.7	47	35.3	68	52.3	11	25.4
Earning power of job	7	5.1	62	46.6	45	34.6	17	56.7
Other	6	4.4	12	9.0	13	10.0	38	16.4
Total	136	100	168	100	130	100	67	100

The knowledge of the teachers regarding the correct characteristics needed of potential VET students varied between 53% and 63%, a lower than expected level of understanding when they were reported as being the most consulted source of careers' advice by the parents¹ and the second most important for the school leavers,² but this is not unexpected considering that most have no training in this area themselves.

Table 9.9: School Teachers: Characteristics of (a) Craftworkers and (b) Technicians

Teachers' Answers	Craftworkers		Technicians	
	Frequency	Valid %	Frequency	Valid %
Correct	78	53.1	88	63.3
Incorrect	69	46.9	51	36.7
Total	147	100	139	100

The teachers were questioned on their knowledge of which were the correct VET institute for craft and technician courses respectively.³ (Craftworkers train in the VTCs and Technicians at the University of Botswana [Faculty of Engineering and Technology], the Agricultural College, the Roads Training Centre, Botswana Telecommunications or Botswana Institute of Administration and Commerce.) Results indicated that teachers had

¹ Appendix A38: Parents: Who provides job advice? Urban/Rural

² Appendix A51: School Leavers: Ranked source of job advice?

³ Appendix A58: School Teachers: Institute of training for VET?

a reasonable idea of the training establishments, though it should be noted that nobody suggested the Agricultural College, the Roads Training Centre or Botswana Telecommunications for VET training.

Summary

In this chapter, the role of the teacher of final year pupils of CJSS and SSS have been investigated in the light of the government's plans for the development of commerce and industry in Botswana, thus lessening its dependence upon diamonds, and increasing employment and requiring an educated, trainable workforce, prepared in school, for the world of work.

This survey used structured interviews and, when this was not possible, self-completion questionnaires. It found that the majority of respondents became teachers because they liked it, and that they agreed that preparation for the world of work was the main purpose of school education. The great majority of the teachers found their subject very interesting, and placed teaching as the most prestigious out of a variety of ten different jobs. However, some of the Science and D&T teachers in particular criticised their colleagues for their excessive use of rote teaching and memorising as their method of teaching. Pupils from this regime, they claimed, were not able to apply their learning for use in practical situations because of their lack of understanding.

Because of their critical role in supporting other subjects, factors which might affect performance in English and Maths negatively, were examined in more detail. In the opinion of many teachers the negative attitude of the parents and a poor home environment produced the most serious causes of deficiencies in pupil's performance, with the effects of parents' poor jobs, low incomes and large families close behind. These factors, it was noted, were more prevalent in rural rather than urban areas. The contrast between the views of the teachers and those of the focus groups from rural areas indicated a breakdown in communication between school and home and gave considerable cause for concern.¹

Teachers were also questioned about their awareness of VET related topics, for example, the qualities that they would look for in potential craft or technician students, the institutes where

¹ Chapter 7: 155

VET courses were held and the entry requirements for such courses. Few were familiar with such facts and yet, parents in Chapter 7 and school leavers in Chapter 8, claim that teachers were a major source of careers advice. A good supply of VET brochures and better careers guidance would help most school teachers and pupils.

Teachers were generally very forthcoming, aware and concerned in their comments about the schools, teaching methods, education system and their problems. Their comments were both professional and helpful. Particularly worrying was the claim that the poorer conditions which existed in the rural schools led to less qualified staff, poorer education and exam results, and consequently lesser chances of further education and training and, therefore, fewer job opportunities and greater potential for social exclusion. These factors are indicators for the possible development of a two tiered nation.

In the next chapter, the results of the survey of the opinions of VET leavers studying in VET institutions will be presented. The characteristics and backgrounds of the students will be considered; the factors influencing their choice of VET and their opinions of VET and their thoughts on employment.

CHAPTER 10

VET Leavers

Introduction

In this chapter, the focus changes from that of the schools with their pupils, teachers and parents, to the Vocational Education and Training (VET) institutions of training and their final year students, lecturers, instructors and workshops. The purpose is to examine how the provision of VET programmes¹ fulfils the functions expected of them as their contribution to the government's development policies² in practice. Through the implementation of these policies, the government has tried to promote Botswana's industrial and commercial development, reduce national dependence upon revenues from diamonds, provide a much wider industrial base and hence create jobs. VET plays a key part in creating the necessary educated and skilled workers for these policies. The opinions of the VET leavers were of particular importance in an evaluation such as this, to help assess the effectiveness of the VET programmes and their contribution to development policies. The data for this was obtained by the use of self-completion questionnaires and structured interviews.

The training institutions offer training in applied subjects at various skill levels. The situation is complex, involving a variety of governing bodies, as illustrated in the simplified figure overleaf. It should be noted that most training courses were originally set up within the various ministries for the benefit of their personnel. Many of them were later transferred to the Vocational Training Colleges (VTCs) and the Polytechnic and were opened up to all with the prerequisite qualifications. Some of the remainder were retained within specific ministries, but were also opened up to non-government personnel, for instance the Roads Training Centre (RTC), under the Ministry of Works, Transport and Communication and the Botswana Institute of Administration and Commerce (BIAC), which is under the Directorate of Public Services and Management (DPSM), within the Office of the President which controls the recruitment of all government staff. The Botswana Polytechnic later became the Faculty of Engineering and Technology (FET) of the University of Botswana (UB) in 1995. All graduates of VET programmes, except those from the Brigades and the VTCs, have been classified in this document as technician courses.

¹ Republic of Botswana (1998) National Policy on Vocational Education and Training, Dec. 1997

² Republic of Botswana (1998) Government Paper No.1 of 1998: Industrial Development Policy for Botswana, 1998

Figure 10.1: Vocational Education, Training Institutes Visited and Governing Bodies

Institute	Acronym	Type of Courses ¹	Governing Body
Brigades	N/A	Trade Tests B & C Education with production	<u>Education</u> : Ministry of Education; <u>Production</u> : Community owned cooperatives, registered with the Ministry of Commerce and Industry; <u>Testing</u> : Ministry of Labour and Home Affairs
Vocational Training Centres	VTCs	Apprenticeships & National Craft Certificates (NCC)	<u>Education</u> : Ministry of Education <u>Industrial Training and Testing</u> : Ministry of Labour and Home Affairs
Botswana College of Agriculture	BCA	Certificate & Diploma (Technical)	Ministry of Agriculture
Botswana Telecommunications Training Academy	BTTC	Diplomas: City & Guilds Institute of London	Parastatal
Faculty of Engineering & Technology (previously Botswana Polytechnic, now part of University of Botswana)	FET UB	Certificate & Diploma	University of Botswana
Roads Training Centre	RTC	Certificate & Diploma	Ministry of Works, Transport and Communications
Botswana Institute of Administration & Commerce	BIAC	Certificate & Diploma (Non-Technical)	The Directorate of Public Service & Management (DPSM) within the Office of the President
Damelin	N/A	Certificate & Diploma	Private Commercial College

A total of 1024 VET students in the final year of their courses participated in a survey to identify their opinions of the effectiveness of their schools' preparation for the VET courses, and the suitability of the VET courses themselves in providing adequate technical knowledge and skills for their use in the workplace. Their general knowledge and expectations of the workplace environment and their reasons for choosing their VET course were also

¹ Chapter 3: 60

investigated. Three categories of VET students were targeted: 365 from the brigades, 223 attending the VTCs and 436 attending technician courses in a variety of institutions. The results are presented in four sections concerning:

1. the characteristics and background of the students: their age, gender and qualifications;
2. factors influencing the choice of VET: including reasons for choice and parent's jobs;
3. VET Leavers' opinions of VET: student responses to the various aspects of training;
4. employment: status and expectations when students start work.

1. Characteristics and Background of the Students

This section set out to identify the type of person who had been attracted by craft/technician work as a career and wished to obtain VET training for that purpose. It included information such as their age, gender, rural or urban origin, type of school attended and pre-VET qualifications in order to establish an insight as to the baseline with which VET personnel have to work to produce the employable skilled workers needed by the government's industrialisation policies.

Age, Gender, Urban or Rural Origin

The age range of the VET Leavers was predominantly between twenty to twenty-four years (57.8%) and had the largest number of students in each type of VET institution.¹ This VET leaving age would be compatible with the normal school leaving age of seventeen for the Community Secondary School (CJSS) and nineteen for the Senior Secondary School (SSS). In the twenty-five to twenty-nine year age group, the VTCs had the largest proportion (39.7%), reflecting the longer, four year apprenticeship programmes. The 41.3% employment rate in the 20–24 age group may also be a contributing factor to the high uptake of training within this age range.² The smaller numbers in the older age ranges can be attributed mainly to two reasons. Firstly, pupils are allowed to start school at a later age because, for instance, there has been a lack of schools in remote areas until recent years. Secondly, the Botswana system allows for the theoretical progression of the best students, starting from brigades and then progressing to VTC to technical institutions.

¹ Appendix A59: VET Leavers: Age

² Chapter 6: 121

Further, it may be seen that almost three-quarters of the students were male. This compares poorly with the corresponding male and female percentages of 49.4% and 50.6% of school leavers (a remarkable achievement for a developing country).¹ The unequal distribution amongst the VET leavers reflects the gender-influenced distribution, which has its roots in the social pressures found in society as a whole, does not necessarily allow the individual to attain their full potential and indicates an area of social exclusion. This process may, by default, exclude good female graduates from assisting in fulfilling the country's development policies. Table 10.1 shows that the lowest concentration of males (34.8%), was at the Botswana Institute of Administration and Commerce (BIAC) where the courses are more female orientated and the highest (87.0%), was among the technicians. Many of the courses contain a strong scientific or engineering component. This element is strongest and most advanced among many of the technician courses and least among the brigade and BIAC courses. Overall, the percentages of male and female VET leavers were 73.1% and 26.9% respectively.

Table 10.1: VET Leavers: Gender Distribution

	Brigades		VTCs		Technicians		BIAC	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Male	269	75.3	177	80.8	221	87.0	55	34.8
Female	88	24.6	42	19.2	33	13.0	103	65.2
Total	357	100	219	100	254	100	158	100

The data in Table 10.2 illustrates the clear popularity of VET courses among rural students over urban students in each type of VET institutions, this ranges from almost 3 to 1 in the brigades to 7 to 4 in the technician courses. Several factors may have contributed to this popularity. First of all, almost all of the brigades were located in the larger villages in the rural areas, whereas all of the technician and BIAC programmes were in the capital, Gaborone, and the VTCs are mainly in the smaller towns. In addition, these figures support the contention that the rural students were looking for a way of obtaining work in the towns, which was where the VTC and technician graduates would be in most demand.

¹ Appendix A43: School Leavers: Male/Female v Urban/Rural

Table 10.2: VET Leavers: Urban/Rural

	Brigades		VTCs		Technicians		All	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Urban	92	25.6	67	31.9	153	36.1	312	31.4
Rural	268	74.4	143	68.1	266	62.7	677	68.1
Expat.	0	0	0	0	5	1.2	5	0.5
Total	360	100	210	100	424	100	994	100

Type of School and Qualifications Obtained

A few of the students attending VET institutions, particularly brigades, may only have attended primary school for seven years and are not included on Table 10.3. Those who had completed their school-based education in the CJSS would probably have received nine years of education, whereas the SSS pupils were expected to have experienced twelve years of schooling. There was an element of flexibility as the CJSS had changed from two to three years of free education and, as education was not compulsory, some children dropped out and returned to training at a later date.

Table 10.3: VET Leavers: Previous School v Training Institute

	Brigades		VTCs		Technicians		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
CJSS	257	79.3	60	32.4	15	4.0	332	37.7
SSS	67	20.7	125	67.6	356	96.0	548	62.3
Total	324	100	185	100	371	100	880	100

The entry qualification profiles of the brigades and the VTCs had changed over recent years due to the increase in the number of secondary schools, both community junior secondary schools (CJSS) and senior secondary schools (SSS). Brigades were originally set up for primary school completers who could not get work, when a primary school leaving examination (PSLE) being regarded as sufficient entry qualification for the brigades, now that many more CJSSs have been built, and were free,¹ a junior certificate (JC) is necessary.

¹ In 2005 fees were reintroduced because of the expense of HIV/AIDS

Table 10.4: VET Leavers: Pre-Course Qualifications¹

	Brigades		VTCs		Technicians		All	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
JC/TTC	289	79.6	87	39.0	37	9.1	413	41.6
GCE	28	7.7	27	12.1	26	6.4	81	8.2
COSC 3	39	10.7	98	43.9	271	66.6	408	41.1
COSC 1/2	1	0.3	3	1.3	7	1.7	11	1.1
Other*	6	1.7	8	3.6	66	16.2	80	8.1
Table	363	100	223	100	407	100	993	100

JC – Junior Certificate

TTC – Trade Test Certificate

GCE – General Certificate of Education

COSC – Cambridge Overseas School Certificate

* usually a foreign qualification

The job market for young people has become more difficult over the years. I had noticed during my employment with the Botswana Government (1987–1997) that, as more children were obtaining education, many more pupils were leaving the CJSS and SSS with better qualifications than they would have obtained previously but were unable to find employment. Since then, during my biennial visits, I have seen that this trait has increased and in this climate, the apprenticeship programmes (or equivalent), which were originally designed for CJSS completers, were often taken up by SSS completers with GCE or COSC, so that almost two thirds of the VTC students no longer came from the CJSS completers.² Until more employment has been created, this problem will continue to multiply.

2. Factors Influencing Choice of VET

Reasons for Choice of VET

When VET Leavers were asked why they wanted a job, the most popular reason was ‘to serve the family and community’ with 33.8% (Table 10.5) and there was little variation between urban and rural participants.³ The percentage for the same question for school leavers and their parents were 67.8%⁴ and 90%⁵ respectively. This major fall in the

¹ Chapter 3: 60² Principal of a VTC³ Appendix A60: VET Leavers: Reasons for Choice, Urban/Rural⁴ Chapter 8: Table 8.1: School Leavers: Ranked Reasons for Wanting Job: 178⁵ Chapter 7: Table 7.8: 168

strength of support for the traditional reason for the choice of job ‘to serve the family and community’ may be the most important factor to come out of this study so far. This support for the most popular option probably resulted from a more realistic appraisal of the reasons for their choice of job, both at the time when they left school and later when they would leave their VET course. However, it should be noted ‘to earn a lot of money’, their least important reason, attracted only 4.1% of support, much the same as the 4.5% attained for the same reason given by school leavers, thus confirming a weakness of human capital theory in this context.¹

Table 10.5: VET Leavers: Reason for Choice of Job

Reasons	Frequency	Valid %
To serve the family and community	338	33.8
To use a great interest or vocation	186	18.6
To never be unemployed	38	3.8
To earn a lot of money	41	4.1
Combination	389	38.9
Other	9	0.9
Total	1001	100

Sources of Advice for Choice of VET

Potential sources of advice for selecting their careers were listed and put to the VET leavers, who were asked to indicate which they had used. This information, in Table 10.6, may help to improve the standard of advice in the future. The students claimed that most advice was given by parents (53.4% in the towns and 54.2% in the country). Career guidance featured in a very low position, with only 2.6% overall acknowledging that they received assistance from personnel trained in advising on career choice. In the context of the government’s development policies this is a cause of great concern. The Report of the National Commission on Education (1993,) recommended the strengthening careers guidance to include the relevance of the world of work into each subject.² Considerable improvements in the quality of Guidance and Counselling, who were responsible for careers guidance, were also advocated.

¹ Chapter 8: Table 8.1: School Leavers: Ranked Reasons for Wanting a Job: 178

² Republic of Botswana (1993) Report of the National Commission on Education

Table 10.6: VET Leavers: Source of Advice for Career Choice

Advisor	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Parents	124	53.4	274	54.2	398	53.9
Teachers	43	18.5	107	21.1	150	20.3
Family members	13	5.6	27	5.3	40	5.4
Friends	30	12.9	59	11.7	89	12.0
Career guidance	5	2.2	14	2.8	19	2.6
Other	17	7.3	25	4.9	42	5.7
Total	232	100	506	100	738	100

Influence of Parents' Jobs

Another potential influence on the choice of career is parental occupation.¹ The young person can become familiar with both the benefits and the drawbacks of the parent's career, and may choose their own career accordingly. The high percentage of parents were farmers, 40.5% of fathers and 12.4% of mothers, and represent a potentially harsh way of life in Botswana, and may result in a source of young people who are looking for other ways of earning a living. With the comparatively lower numbers of job opportunities in the rural areas, their logical reaction is to look for other ways of obtaining employment in the urban areas, possibly by first qualifying for a VET course. Perhaps the main advantage that a student can obtain from a parent's career is a direct knowledge of the actual working conditions of the parent's job which can be expected. The higher proportion of farmers among the fathers of VET Leavers (40.5%) compared with school leavers (22.0%), reflects the rural bias in the proportion of VET students to school leavers. In addition, the school leavers' homes were more evenly divided between urban and rural settings,² whereas among the VET leavers, rural students outnumbered the urban students by almost 2 to 1.³ As there are fewer jobs available in rural than in urban areas, the rural child will have less opportunity of obtaining work near home. VET is one of the few ways in which many can raise their chances of obtaining work in urban areas

¹ Appendix A61: VET Leavers: Fathers' Job
A62: VET Leavers: Mothers' Job

² Appendix A43: School Leavers: Male/Female v Urban/Rural

³ Appendix A60: VET Leavers: Reasons for Choice, Urban/Rural

Influence of School Subjects on VET Choice

Career choice may depend upon performance in school. VET leavers were asked to state their favourite school subject and the VET course they were studying, thus giving an outline of the relationships between subjects studied in school, and the vocational and technician qualifications obtained. This is summarised in Table 10.7. In it, the six most preferred VET courses are compared with the six most favourite school subjects, or combination of subjects. It can then be seen that those students who were drawn towards Construction were those whose favourite subjects were likely to be Maths, Design and Technology (D&T) and Technical Drawing, or English, that Mechanical Engineering students were also more likely to have enjoyed D&T and Technical Drawing, and that Business/Secretarial students favoured English. This does not prevent students on any one course coming from one of a variety of backgrounds.

Table 10.7: VET Leavers: Summary of Favourite School Subjects v VET Course Studied

Subject	Freque. Valid%	Constru- -ction	Elec- -trical	Mechan- -ical	Comp -uters	Bus/Comp /Secr	Tele- -comms	Others	Total
Maths	Freque Valid%	50 28.6	19 10.9	17 9.7	11 6.2	35 20.0	2 1.1	41 23.4	175 100
Maths + Science	Freque. Valid%	28 16.9	33 19.9	31 18.8	8 44.8	16 9.6	4 2.4	46 27.7	166 100
Maths + English	Freque. Valid%	20 29.0	7 10.1	9 13.0	4 5.8	12 17.4	0 0	17 24.6	69 100
Science+ English	Freque. Valid%	26 20.2	20 15.5	11 8.5	8 6.2	19 14.7	2 1.5	43 33.3	129 100
D & T+ Tech draw	Freque. Valid%	41 40.5	11 10.9	25 24.8	2 2.0	2 2.0	0 0	20 19.8	101 100
English	Freque. Valid%	32 31.7	3 2.9	7 6.9	4 4.0	26 25.7	1 1.0	28 27.7	101 100
Others	Freque. Valid%	50 25.9	14 7.3	23 11.9	5 2.6	36 18.7	4 2.1	61 31.6	193 100

N.B. Boldface indicates more than 25% of a favourite subject opted for a particular course.

Many courses have stringent entry requirements, both for the school subjects required and the level at which they were passed. A heavy responsibility therefore rests upon the school teachers to ensure that all students achieve their maximum potential. Thus, by advising them on the best subjects with which to satisfy the entry requirements of the maximum number of suitable post-school courses available, compatible with their strengths, which may well affect the rest of their pupils' working life. For instance,

facility in certain subjects, such as Maths, Science, English, D&T and Technical Drawing could be influential in providing a basis for future VET courses, and provide the opportunity for school pupils to become better equipped to judge their own aptitude for taking up a VET course.

The expansion of D&T as a subject, at the expense of agriculture in secondary schools, was first mooted by the National Commission on Education in 1993. D&T requires well trained teachers, expensive equipment and materials, but has the potential, when correctly delivered, to revolutionise the approach in teaching method from the current tendency to 'chalk and talk' to an enquiry based, problem solving model, which encourages the positive approach and enquiring attitude that many employers claim to require in their high skills workforce. In view of its potential importance, students were asked if they had studied D&T in school. Just over a third of the students who answered claimed to have done so.¹ Unfortunately, in my experience, it is possible that D&T was interpreted as Woodwork and Metalwork in the opinion of many, both of which develop good manual skills but little positive initiative.

Almost three-quarters (71.4%) of all students claimed that they had been well prepared for VET.² However, this response included, not only engineering based VET courses, but also other disciplines, such as secretarial, textiles, computers and agriculture and forestry, where the existing subjects may be considered to be an adequate preparation. Students considered that the school curriculum is generally good, this should have had a positive effect in persuading pupils to proceed to further education and training. The process of recruitment for apprenticeships, and the parallel NCC courses, was carried out for the VTCs (Ministry of Education) by the Madirelo Training and Testing Centre (MTTC) which is part of the Ministry of labour and Home Affairs, and did not include aptitude tests or any consultation with the VTCs – a typical top down approach.

Range of Recruitment

Table 10.8 shows the most popular range of full-time courses which are selected from the wide variety of VET courses available.³ The expected qualifications range from Trade

¹ Appendix A63: VET Leavers: D&T in School

² Appendix A64 Did your school education prepare you well for VET?

³ Appendix A65: VET Leavers: Course Studied

Test C in the brigades to Higher National Diploma for technicians in the university.¹ This gives an indication of the wide variety of levels categorised as vocational education and training. At the time of the survey (1999), only a few of the courses were run on a part-time or evening class basis. In response to burgeoning demand, such courses have been developed more recently (2006) into a fast growing area, mainly in the private sector. The government sector is still debating the finer details of its response to this demand. The need to respond quickly and effectively to the demands of industry, in order to upgrade the skills of the workforce is essential, if Botswana is eventually and realistically to be a player in SADC, let alone the global economy.

Table 10.8: VET Leavers: Type of Course v Numbers Enrolled (Ranked)

Course	Frequency	Valid %
1. Construction	261	26.7
2. Business/Accounts/Secretarial	161	16.1
3. Mechanical	135	13.5
4. Automotive	110	11.0
5. Electrical	109	10.9
Others*	225	22.5
Total	1001	100

* 'Others' is comprised of those with 5.0% or less

Job Prestige

To examine their ability to evaluate the relative prestige of specific jobs, the VET leavers were asked to rank ten jobs in order of prestige, to ascertain if there were any substantial differences between the VET leavers' evaluations and those of the school leavers and school teachers. Their opinions differed only slightly from those of the school leavers and teachers, the top four places being technical and more consistently ranked between Brigades, VTCs and Technicians. However, the occupation of Land Surveying illustrated the difference. Teachers ranked it as fourth overall and fourth for both urban and rural responses (they ranked themselves first),² whereas school leavers had ranked it as seventh³. Land surveying is a fundamental skill which is necessary for most construction

¹ Appendix A66: VET Leavers: Expected Qualifications, All

² Chapter 9: Table 9.6: School Teachers: Ranked Most Prestigious Jobs, Urban/Rural: 208

³ Chapter 8: Table A8.6: School Leavers: Ranked Most Prestigious Jobs, Urban/Rural: 180

work. It is also used to establish accurate property boundaries, which have been the cause of litigation in Botswana as, for instance, traditional grazing rights are coming under threat because of the encroachment of urbanisation. Traditionally land surveying requires a high standard of Maths, although much of this has been removed with the developments in data processing and the global positioning system (GPS). With just over 25% of all VET recruitment being in Construction,¹ the importance of land surveying was seen more clearly by the VTC and technician students, who ranked it second and who were much more likely than the brigade construction workers (who ranked it seventh) to take on supervisory roles with responsibilities which would include land surveying. This implies that a change in the perception and knowledge of an occupation has most likely taken place after the student has left school, and the school career counselling is where this deficit should be improved if government industrialisation policies are to succeed. The low-ranking position of the carpenter was worrying. It was hoped that once the skills and training required for the carpenter had been understood, they would have been appreciated at least by the other VET students.

Table 10.9: VET Leavers: Ranked Job Prestige, Brigades/VTCs/ Technicians

Brigades		VTCs		Technicians	
1.	Electronic technician	1.	Electronic technician	1.	Electronic technician
2.	Computer operator	2.	Land surveyor	2.	Land surveyor
3.	Airline pilot	3.	Airline pilot	3.	Airline pilot
4.	Teacher	4.	Computer operator	4.	Computer operator
5.	Land surveyor	5.	Teacher	5.	Teacher
6.	Nurse	6.	Nurse	6.	Nurse
7.	Carpenter	7.	Carpenter	7.	Police officer
8.	Police officer	8.	Police officer	8.	Carpenter
9.	Farmer	9.	Farmer	9.	Farmer
10.	Bus driver	10.	Bus driver	10.	Bus driver

3. VET Leavers' Opinions of VET

When evaluating the training programmes within Botswana's VET system, it is appropriate to relate them to both the skills needed by industry and to the ability and capacity of the system to produce those skills. Most of the training programmes at

¹ Table 10.8: VET Leavers: Type of Course v Numbers Enrolled (Ranked) 223

certificate level which operated in the public, private and parastatal sectors were developed and approved by the Directorate of Apprenticeship and Industrial Training (DAIT), which operates under the Ministry of Labour and Home Affairs (MLHA).¹ The formal testing for the apprenticeships and the trade tests and the evaluation of the experiences and skills gained during the industrial placement periods, which occupied three quarters of the time of apprenticeships, was the responsibility of the Madirelo Training and Testing Centre, which is also part of the MLHA. However: 'there was never enough money to pay for the inspectors'.² Diploma courses and a substantial number of the more technical certificate courses had to be approved by the Department of Public Service Management (DPSM).

Under the 1998 Vocational Training Act, however, the Botswana Training Authority (BOTA) was set up in response to the recommendations of the 1993 National Commission on Education.³ Since this umbrella organisation has been established, some of the duplications and schisms of the previous system have been resolved. However, the problems of the responsibility for trainees' theory has remained with the MOE and practical industrial placements have remained with the MLHA⁴. As this component had been one of the weakest aspects of the training in the past, questions were put to the VET leavers concerning their satisfaction with the various components of their training, particularly the practical skills, as well as theory, employer' expectations, the use of instruction manuals, writing technical reports and supervisory skills. The results have been used to construct Table 10.10.⁵

The categories of opinions 'satisfied' and 'very satisfied', and 'dissatisfied' and 'very dissatisfied' have been combined and simplified to form two categories 'satisfied' and 'dissatisfied' respectively. The arbitrary criteria of 75% for satisfied and 25% for dissatisfied were adopted to draw attention to the good and poor aspects of training. Only when 75% was exceeded, or over 25% attained, are the actual percentages of opinions stated: under 75% means low satisfaction, over 25% indicates severe dissatisfaction. It should be noted that, although the overall majority of responses were 'satisfied', the

¹ Republic of Botswana (1983) Apprenticeship and Industrial Training Act 1983

² A senior member of staff at the Government Madirelo Training and Testing Centre (MTTC)

³ Republic of Botswana (1988) Vocational Training Act No. 229: December 1998

⁴ Senior Officer of the Botswana Training Authority (BOTA)

⁵ Appendix A67(a) to (f): VET Leavers: What are your opinions of the training provided on your course?

method adopted for the survey did not allow for a response between ‘satisfied’ and ‘dissatisfied’. Even so, with the exception of the brigades, the dissatisfied responses were, in my experience, extremely high for mature students who had actively chosen to take up a VET career where reliability, accuracy and safety are paramount.

Table 10.10: VET Leavers: Opinions of Training (%)

Aspects of Training	Satisfied (75% or more)			Dissatisfied (25% or more)		
	Brigades	VTCs	Techns.	Brigades	VTCs	Techns.
Theory	92.2	86.0	90.7	-	-	-
Practical Skills	88.4	-	-	-	34.5	39.0
Employer’s Expectations	79.0	75.0	-	-	25.0	31.9
Use of Instruction Manual	80.4	81.6	-	-	-	33.5
Writing Technical Reports	-	-	77.8	77.8	28.1	-
Supervisory Skills	78.0	-	-	-	27.1	29.5

The categories of opinions ‘satisfied’ and ‘very satisfied’, and ‘dissatisfied’ and ‘very dissatisfied’ have been combined and simplified to form two categories ‘satisfied’ and ‘dissatisfied’ respectively. The arbitrary criteria of 75% for satisfied and 25% for dissatisfied were adopted to draw attention to the good and poor aspects of training. Only when 75% was exceeded, or over 25% attained, are the actual percentages of opinions stated: under 75% means low satisfaction, over 25% indicates severe dissatisfaction.

Theory: This appears to have been considered very successful for each type of VET and should be seen as a real strength upon which the rest of the system is built. However, in my experience, the importance of understanding and application of the theoretical knowledge would not have been adequately addressed.

Practical Skills: Interestingly, the brigade students, who were the most satisfied with their instruction in practical skills, which combined learning with the production and sale of the goods produced and the services provided. Their students therefore, often obtained not only technical skills but also the experience of the ethos of the workplace and the people who organise it, together with the discipline of working within the commercial limits of the market place. Unfortunately, the market can also limit the variety of skills

required and therefore the time and opportunity permitted to hone those skills. The strong dissatisfaction expressed by the VTC apprenticeship students may well have resulted from their poor industrial placements, which occupied three quarters of their courses. In Botswana these were often small or specialist companies, which provide only a limited number of processes and operations from which useful skills could be derived. However, these were often sufficient to highlight the lack of experience possessed by their lecturers/instructors. Most technicians, on the other hand, had no organised industrial experience in their courses. However, the majority, who were sponsored, received practical hands-on experience of their sponsors workplace during their college vacation.

Employers' Expectation: The strong satisfaction expressed with their understanding of the employers' expectations shown by both brigades and VTC students could well have followed from the work experience of their respective courses. The dissatisfaction expressed by 25% of the VTC students could also be down to the substantial number of inappropriate work placements given to the students. Few technicians have had structured work experience but returned to their sponsors' workplace during the college vacations and, in my experience, frequently considered that their training preparation was inadequate as a consequence of not having had appropriately wide, structured and monitored work experience.

Use of Instruction Manuals: These manuals contained the manufacturers' instructions for installation, commissioning, maintenance and use of most equipment. Technicians and apprentices receive instruction in technical English to help them in the use of instruction manuals, which were almost inevitably in English. The high level of satisfaction with the training in the use of instruction manuals expressed by both brigade and VTC students may be connected with the high level of usage in the workshop setting. The practical industrial setting of brigade production units would make the instructions even more meaningful, especially when it is realised that the incorrect use or misuse of instruction manuals could lead to litigation. The high level of dissatisfaction for the technician students, who were competent in English, for the use of instruction manuals could be explained by the lack of any instruction in that field.

Writing Technical Reports: Technicians expressed strong satisfaction with the teaching of this topic contrast strongly with the dissatisfaction shown by almost 1 in 4 of the brigade and 1 in 4 of the VTC students. This may have resulted from the false assumption that brigade and VTC graduates will not need this skill and it was therefore not taught. In fact, technician students had normally obtained English 'O' level or its equivalent, whereas brigade and VTC students had not. However, whatever the level of employment, it is necessary for workers to be able to communicate succinctly and effectively – skills which are developed by writing reports during training.

Supervisory Skills: From the viewpoint of the VTC and technician students, this appears to be an area of misconception on the part of the individuals who design the curriculum. As graduates of a vocational training institute, all ex-students could be expected to supervise others during their working lifetime, these would include members of the unskilled workforce who are an essential component of many multi-disciplined undertakings.

Overview: These results show that the brigade students are comparatively well satisfied with their programme of study, with only one 'dissatisfied' score, as opposed to five 'satisfied', however, this could reflect lower expectations.¹ Both the VTC and technician students have four 'dissatisfied' scores, the highest of which occurred for the important 'practical skills', which for most students and employers, is the most important outcome of all of these courses. 'You have to get it right, you can't half hang a door', was the comment of one high up official. These defects should be rectified as a matter of urgency if the government is to make progress with its industrial development policies.

4. Employment

VET leavers were asked to state their expectations on the next stage of their career and how they expected to deal effectively with employment.

Job Expectations

For many, the promise of a job at the end of a course was reason enough to persevere and to complete the course successfully. In the case of many VET students there is little,

¹ Table 10.10: VET Leavers: Opinions of Training: 226

except anecdotal evidence, which concerns the availability of jobs at the end of a course, and that was not favourable. The overall impression is that a very high number of young people were entering the job market at the end of the academic year when only third (33.3%) have jobs to go to. These leavers include craft students (5.1%); VTC apprentice students (38.1%); BIAC students (46.7%) and technicians (60.3%).

Table 10.11: VET Leavers: Jobs Promised v Institute Attended (1999)

Students	Brigades (Craft)	VTCs (Apprentices)	Technician BIAC	Technician Others*	Total
Number Responded	355	223	167	247	992
Jobs Promised	18	85	78	149	330
% with job promised	5.1%	38.1%	46.7%	60.3%	33.3%

* 'Other' Technician Institutes includes:

Botswana College of Agriculture (BCA);

Botswana Polytechnic;

Botswana Telecommunications Training Academy (BTТА);

Roads Training Centre (RTC)

University of Botswana (UB), Faculty of Engineering and Technology (FET)

Employers who sponsor VET students receive tax rebates, whereby two times the cost of VET fees, plus any other course costs, may be deducted from a company's taxable profits. Due to the legal long-term employment obligations, which form part of the agreements signed between employer and apprentice, many companies are cautious about entering into sponsorships because of their low profit margins. However, they are not unknown and, together with the sponsorship of VET students by government departments, they provided just a third of these students with financial backing and jobs.

Of the VET leavers from the technician courses, the highest number of sponsored students, 107 out of 128, occurred in the Business/Accounts/Secretarial section of BIAC, which services the government departments. All Telecommunication students were sponsored, as were the brigade and VTC staff who were seconded to the City and Guilds, Vocational Training Instructors Certificate course at the Polytechnic and were government sponsored

Job Distribution, Urban/Rural: Data used to investigate the distribution of 'promised' jobs between the urban and rural origins of VET leavers respectively, is presented in

Table 10.12. In all three cases, brigades, VTCs and technicians, the number of jobs promised to students from rural origins was substantially less than those promised to students of urban origin, as most jobs would be located in urban areas.

Table 10.12: VET Leavers: Jobs Promised, Urban/Rural

	Brigades				VTCs				Technicians			
	Urban		Rural		Urban		Rural		Urban		Rural	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Yes	2/92	2.2	16/268	6.0	16/67	52.2	50/143	35.0	55/153	35.9	94/266	35.3

N.B. The terms urban and rural, when referred to students, indicated their origins; almost all jobs were found in the towns.

The brigades' figures are so low that they can only be considered as indicative. The number of VET leavers amongst whom the jobs are distributed is much greater for students from the rural areas however, the number of students is also much greater (160 jobs amongst 677 graduates). For the students from the urban areas there were 73 jobs between 312 students. That indicates that 23.6% of the rural based students and 23.4% of the urban based students obtained promises of jobs.

The number of jobs promised for the 360 brigade students is 18 (5.0%) making their employment much more problematic than for either the VTC or technician graduates. The explanation given by brigade staff for this lack of jobs at this point was that the brigade students did not usually start looking for full-time employment until much nearer the end of their course, when they would have time to travel the large distances often involved, and stay in the towns for a substantial period of time where jobs may become available. I had no access to these results and past job hunting efforts as there had been little record keeping. The exceptionally low figure of 5.0% of the brigade students who have been promised jobs on qualifying contrasts strongly with the 5,863 students registered as brigade students in 2001 seemed to demand further consideration.¹

¹ Ministry of Education (2001) FAS International Consulting Ltd.

There have been several reviews of the brigades since the first one was founded in 1965.¹ They are based upon education with production and are legally autonomous, community based, predominantly rural organisations. The governance of each brigade is vested in a Board of Trustees. They provide CJSS leavers, possessing junior certificates with vocational training in employable trades. The villagers already feel marginalised and in danger of losing their identity, and looked to the brigade as an organisation that is a link with possible employment.²

The village brigades, which are partially funded by the government, trained 3952 students (compared with the VTCs' 4016 students) per annum in 1997. Under the current legal arrangement, the Board of Trustees are the sole owners of the brigades on behalf of the community they represent, with responsibility for their management. The brigades and the VTCs use the same examining body to grade the skills of the workforce: the Madirelo Training and Testing Centre (MTTC) in Gaborone. Where were all of these trained graduates going to find employment?

The major problems with balancing much more closely the numbers of skilled workers available with the numbers of skilled workers required appears to be with:

- (a) the difficulties in obtaining good quality training in a country where local trainers have a poor reputation;³
- (b) the availability of suitable jobs to ensure employment for the great majority of graduates.

For an improvement to occur a negotiated agreement between all major stakeholders, including the brigade trustees, government ministries (an appropriate VET student grant/loan system, would be necessary). Such an all embracing consensus would include targets for appropriate skills and should redress the imbalance in terms of the demand and supply of employable skills. It should also enable students to plan their future with more certainty and less disappointment.

¹ *ibid*; Franz, 1997

² Chapter 4:

³ Chapter 1: 4

Chapter 7: 158

Table 10.10: Vet Leavers Opinions of Training: 226

The results of the preceding section and the comments of the VET leavers on employment expectations were not promising. They do not give great confidence in either the quality of much of the VET training, where expatriate workers continue to be employed in preference to poorly trained local graduates who have often not received the structured, practical experience which provides the greater understanding of the application of their theoretical knowledge to the needs of industry, or in the success of the government's industrialisation policy for creating jobs which would be suitable for VET graduates.

VET Leavers Feelings of Confidence on Entering Employment: Students were asked: 'if you are not confident about starting work, where do you think the blame lies?'(Table 10.13). About a quarter of the brigade leavers blamed the schools for their lack of confidence, and a fifth considered that their VET was to blame. The VTC leavers placed less blame (16%) on the schools, but more (34%) blamed their VET for their lack of confidence in the workplace. This may well tie in with their criticism of the practical skills training provided, which would have become apparent during their industrial placements. As the technician courses generally contain significantly higher academic content than the craft courses, the 30.3% of them who blame schools is probably related to the standard and application of basic Maths and Science taught in the schools. Whereas, the 24.0% who attributed their problems to VET was possibly an indication of the lack of satisfaction with the practical element of their training. Whether the schools or the VET institutes were perceived to be at fault, the high blame levels of more than 30% as a contributory factor to their deficiencies must be a matter of concern.

Table 10.13: VET Leavers: If you are not confident about starting work, where do you think the blame lies?

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
VET	70	20.3	68	34.0	92	24.0
School	85	24.6	32	16.0	116	30.3
Own efforts	160	46.4	76	39.0	148	38.6
Other (own confidence)	30	8.7	22	11.0	27	7.0
Total	345	100	200	100	383	100

However, probably the most worrying factor which can be derived from Table 10.13 is the high level of self-blame (average 41%) admitted by the students when criticising their own efforts. The resultant lack of confidence, performance and possible concomitant, negative attitude were not likely to impress the employers of benefit to the government's industrialisation policies.

When asked: 'are you pleased to be a craftperson/technician?' 74.7% of brigade students answered 'yes', 82.0% of VTC's agreed, but only 60.3% of technicians felt they were happy in their roles, with 23.7% neutral on the subject and 16.0% reported that they were dissatisfied.¹ This links with the technicians' opinions of their training, where approximately a third of students expressed dissatisfaction with their training in practical skills, employer's expectations, use of instruction manuals and supervisory skills.² As the most highly qualified of the VET cadre, perhaps they are uncomfortable with the possibility of inadequate performance in the workplace because of insufficient training, particularly in practical skills, or they may compare themselves unfavourably with their peers in other forms of employment.

Self-Employment

There were not enough jobs to go round in the formal employment field and self-employment was an option to lessen the number of registered unemployed, encouraged by government pressure which, in 1999, had culminated in a course for qualified VET leavers. However, it did not result in the creation of any jobs.³ In addition, the traditional approach expects the younger workers to accept and to follow the decisions made by their elders, a role, which once accepted, can be difficult to change. Risk-taking and initiative, as required in self-employment, could be necessary in order to release new ideas of the younger generation, in the response to new or perceived threats and opportunities.

The willingness of the VET leavers surveyed to take up self-employment, either alone or with a partner, was investigated. In addition, variations in the popularity between occupations were determined in order to find out whether some occupations were more amenable as a basis for self-employment than others. Given the small numbers of VET

¹ Appendix A68: VET Leavers: Pleased to be a craftperson/technician?

² Table 10.10: Opinions of Training: 226

³ Senior Government Official

leavers opting for some of the less popular occupations, a modified version of those results are shown in Table 10.14, where only the five most popular disciplines were considered. It may be seen that the proportion of students interested in self-employment was substantial and almost doubled if a partner was included. A real increase in the range of skills offered would be expected in a low technology, multi-skilled occupation such as construction (82.4%), which may help to explain its popularity as a basis for self-employment. Generally, the picture for VET appears to be much more encouraging than that painted by members of the focus groups in Chapter 7.¹

Table 10.14: VET Leavers: Self-Employment Alone or with Partner by Occupation

Self-Employment – Alone						
Occupation	Yes		No		Total	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Construction	97	42.4	132	57.6	229	100
Electrical	40	48.8	42	51.2	82	100
Mechanical	56	50.9	54	49.1	110	100
Business/Accounting	57	45.2	69	54.8	126	100
Auto	37	42.5	50	57.5	87	100
Self-Employment with Partner						
Construction	201	82.4	43	17.6	244	100
Electrical	75	77.3	22	22.7	97	100
Mechanical	87	69.6	38	30.4	125	100
Business/accounting	91	72.2	35	27.8	126	100
Auto	81	81.8	18	18.2	99	100

Table 10.15 shows that students from rural areas were overwhelmingly in favour of self-employment, either alone or with a partner (66.5% and 71.9% respectively) expressing a desire to become self-employed eventually. The need to encourage opportunities for self-employment in rural areas was considered to be of great importance by both focus groups and parents, who claimed that the vocational education programmes were not designed with the rural, agricultural economy in mind. A great deal of effort would be required in, for instance, identifying the markets, providing start-up grants (as suggested by the focus

¹ Chapter 7: 157

groups¹), and providing training in basic business methods, if sustainable success is to be achieved.

Table 10.15: VET Leavers: Do you hope to become self-employed eventually?
Urban/Rural

Self-Employed – Alone					
	Urban		Rural		Total
	Frequency	Valid %	Frequency	Valid %	
Yes	115	33.5	228	66.5	343
No	127	29.3	307	70.7	434
Self-Employed – With Partner					
Yes	180	28.1	460	71.9	640
No	83	38.2	134	61.8	217

An encouragement to starting up a business might be to provide a comprehensive toolkit as a prize for the best graduate in each department every year. This should raise the awareness of the importance of excellence and the value of their training to the community. In a project which we visited in Cambodia, linked to producing artefacts for tourism, the best graduates were closely supervised for a period of time to ensure that goods of a high standard were produced. When the required standard was attained they were allowed to set up their own business in subsidised workshops. In Tanzania, a fully equipped workshop was provided for the use of graduates, who paid a minimum fee for the service.

Employment Responsibilities

It is claimed that: ‘the logic of globalisation, so the argument goes, is forcing all governments to adopt neo-liberal market policies’ (Brown *et al* (2001): 10). In this case, employers should be driving VET because they are the best placed to foresee the demand for specific skills, and the government’s role should be limited to the ‘supply side’ of skill formation. The state is then responsible for providing the opportunity to gain the necessary skills, and the individuals are then responsible for obtaining employment. However, in a developing country, where knowledge and understanding of job opportunities and requirements are extremely limited because the lack of experience of

¹ Chapter 7: 158

both the students and their families, very few individuals have the necessary backgrounds to make realistic judgements about future job opportunities. They require assistance, both when leaving school and when leaving their VET institution. More relevant data should be compiled and disseminated effectively (at the appropriate times, such as when subject or further education choices are being made) by career advisors if VET is to become more efficient and youth unemployment is to be reduced.

Even if the deficiencies relating to some students' poor attitude to work and poor practical skills were to be corrected, there remains the more fundamental criticism of the VET system. If the government is serious about raising the chances of obtaining employment for those young Batswana, who have spent several years of their lives preparing for the opportunity of obtaining employment relating to their specific training, more fundamental actions than those indicated under human capital theory will be needed.¹ Only one third of the 1999 graduates had been promised jobs at the end of their training.² The target should be much higher if the system is not to risk psychological damage to graduates' self-esteem and motivation, and their perception of the competence of the government, coupled with the financial implications of inappropriate training, could produce a substantial disillusionment, which, if the situation is not acknowledged and suitable remedial action undertaken, could lead to understandable dissention and unrest. A more holistic approach, such as that advocated through Brown *et al*'s systemic pressure points should be considered.³ This could provide a much sounder basis upon which to create a less wasteful training, and help to reduce the current wide gap between the supply and demand of skilled, well-trained individuals and the number of jobs available.

Summary

This chapter began with a brief outline of the VET institutes surveyed and the characteristics and backgrounds of the VET leavers. The majority were aged between the late-teens and mid-twenties, with the males outnumbering the females by almost 3 to 1. This suggests a strong denial of opportunity for females, leading to social exclusion, which also increases the chances of using only the second-best candidates to work on the realisation of the official,

¹ Chapter 4: 67

² Chapter 10: Table 10.11: VET Leavers: Jobs Promised v Institute Attended: 229

³ Chapter 5: 107

government, development policies. Students of rural origin were found to outnumber those from an urban background by just over 2 to 1. To a small extent the latter imbalance results partly from the slightly higher rural to urban population, and to the rural location of most of the brigades.

The next section dealt with the factors which had influenced the choice of VET course to be pursued. The most popular reason for wanting a VET based job was similar to that given by the school leavers: 'to serve the family and community', with 'to earn a lot of money', at 4.1%, as the least popular in both cases, which is not very supportive for the human capital theory advocates. Parents and teachers were again the main, and most influential, sources of advice on job choice. The parents' jobs, and in the rural areas, the sparsity of jobs, often had a very negative and limiting influence on the students' choice of career. The students' favourite school subjects, when compared with the VET courses they studied, gave good general guidance on the likely, but limited, link between the two. In particular, the influence of Design and Technology when investigated was found to have a marked relationship with the choice of some engineering disciplines. Careers guidance was perceived as an area in schools which required a great deal of improvement in order to provide both pupils and staff with the appropriate understanding of the requirements of VET and the subsequent job opportunities available in industry and commerce.

This most important section contains the VET leavers' opinions on their VET courses as a preparation for work. This was divided into five critical, but not comprehensive, areas. Theory was classified as being well taught, however, the remaining four areas, especially 'practical skills' (with the exception of the brigades), were considered to be poorly taught. It should be noted that the brigades controlled their own manufacturing and production processes and their students often spent the majority of their time in the workplace. In VTCs' apprenticeship courses spent three quarters of the students' time was devoted to mainly unstructured industrial placements, and that the majority of technicians had other hands-on industrial experience at the workplace of their sponsors during the college vacations. The 'practical skills' element of a course should be probably the most important immediate outcome of VET. The lack of efficient, effective and important branch of training may have a major negative impact on employment potential and does damage to the government's commercial and industrial development policies. In addition, the opportunity of obtaining

effective work experience with a modern approach to matters of organisation and management of work also appeared to be left to chance.

Employment of VET leavers, as measured by the jobs promised, was poor; overall only one in three had jobs to go to. The minimum rate (for brigades) was just 5.0%, or 1 in 20 with jobs promised and the best rates were for BIAC students, many of whom were seconded from government ministries. However, some non-sponsored students may obtain appropriate employment at a later date. Even so, these figures implied a massive over-production of graduates for whom there will be no job relevant to their training. This is especially for rural area brigade leavers and has contributed to high youth unemployment.

One important reason for this imbalance between supply of and demand for skilled personnel was the lack of labour-intensive industrial and commercial developments. It is important to develop a strong consensus among the majority of stakeholders, in order to coordinate the supply of and demand for skilled personnel much more closely so that skills may be appropriately used. Whilst Botswana government managed and controlled the Vocational Training Centres (VTCs) skill formation, the ownership of each brigade was held in trust by boards of trustees on behalf of their communities. Brigades were training approximately the same number of students as the government, but few of them obtained employment, suggesting that the future status of the brigades under the challenge of the impact of globalisation is uncertain.

The great majority of VET leavers were pleased to become craftpersons or technician. 34% of VTC students blamed the VTCs for their lack of confidence in the workplace, probably because of their negative experience of the practical skills training, and 30.3% of technicians blamed the schools for their deficiencies, where the standard of Maths and Science teaching may not have been high enough for the more academic requirements of their courses. It was established that, for the five most popular occupations, the principle of self-employment was seen as a real possibility by many of the students. When investigated further, it was found that the idea was more popular with the rural students than those from the towns, but that a great deal of care and preparation in the areas of organisation and management would be needed to produce a successful outcome.

A different but complementary view of VET is anticipated in the next chapter 'VET Lectures/Instructors'. Many of these personnel were expected to perceive VET differently because of their longer years of service and experience, and may have other explanations for some of the problems perceived by the VET leavers. Similar issues will be raised, so that comparisons may be made and conclusions drawn from earlier chapters.

CHAPTER 11

VET Lecturers/Instructors

Introduction

The success of the government's development policies depended upon the availability of trained craft and technician workers, which in turn depended upon the calibre and abilities of the members of the education and training systems. In this chapter, the way in which the VET lecturers and instructors fulfilled their key-role of producing employable technical staff will be examined. This will include their opinions of the students' qualities and the sources of their problems.

One of the unique difficulties faced by developing, agrarian countries in this situation is the very limited knowledge and experience of industry on the part of their training staff because, initially, there is little or no industry from which to obtain that knowledge and experience. The application of both theory and practical skills often involves unfamiliar technical and management techniques, where the solutions are not found in books. Consequently, the background of the staff and their reasons for choosing a career in VET are important for assessing the quality of the outcomes. This chapter is therefore divided into three sections concerning:

1. The background and characteristics of the VET lecturers/instructors, including their training institutions, qualifications and experience;
2. Factors influencing the VET lecturers/instructors choice of career;
3. VET lecturers/instructors' opinions of student performance and deficiencies.

1. Background and Characteristics of VET Lecturers/Instructors

Age, Gender, Urban or Rural Origin

Botswana is a young country. Its poverty at independence, with its isolation and agricultural economy, was unsuitable for setting up an industrial base and this was not seriously considered until the revenue from diamonds was assured. Education and VET started from a very low level, so that, even today, the VET staff was made up of predominately young men and women. Just under three quarters of these were between the ages of 25 and 39 and, in a male dominated traditional society, just over a quarter

were female.¹ Table 11.1, shows that only 19.6% came from an urban background whilst 62.3% had rural origins, with an additional 18.1% classified as expatriates. This, in a country with an almost equal ratio of urban to rural population, illustrated the use of VET as a means of obtaining employment for the male members of the rural community, where there was very little employment other than farming. Of the Batswana citizens, the urban staff consisted of an almost equal number of males and females, but of the rural background staff alone it can be calculated from Table 11.1, that 81.4% were males and 18.6% were females.

Table 11.1: VET Lecturers/Instructors: Gender v Urban/Rural

	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid%
Urban	13	13.1	14	35.9	27	19.6
Rural	70	70.7	16	41.0	86	62.3
Expatriate	16	16.1	9	23.1	25	18.1
Total	99	100	39	100	138	100

Training Institutions and Qualifications

The wide range of qualifications required for VET training illustrates the wide variety of skills which were categorised under the overall heading of Vocational Education. Table 11.2 shows that there were four major sources of VET lecturer/instructor qualification: the Brigades for Trade Tests B and C;² the Vocational Training Colleges (VTCs) and the Automotive Testing and Training School (ATTS) for Trade Test A and the National Craft Certificate (NCC); the University of Botswana (UB), Roads Training Centre (RTC), the Polytechnic and Botswana Agricultural College (BAC) for the technician level diplomas and certificates, and abroad (mainly UK and Germany) for both craft and technician training. The Vocational Training Instructors course at the Polytechnic accepted candidates only if they had previously obtained a technical qualification. At the time of this survey (1999) many of the teaching certificate and diploma courses, including the Vocational Training Instructors (VTI) Certificate, still led to the qualifications of the City and Guilds of London Institute.

¹ Appendix A69: VET Lecturers/Instructors: Age v Gender

² Chapter 3: Figure 3.2: Overview of Vocational and Technical Education: 60

Table 11.2: VET Lecturers/Instructors: Institution of Training

Institute	Frequency	Valid %
Brigade	25	15.7
VTC/ ATTS	44	27.7
UB / RTC / Polytechnic / BAC	28	17.6
Other	2	1.3
Abroad	30	18.9
Teacher Training Institutes	30	18.9
Total	159	100

The distribution of the VTI Certificates (labelled + Ed. in Table 11.3), were always linked with a previously obtained technical qualification. Among the 130 lecturers/instructors it can be calculated that only 30 (i.e. $30/130 \times 100 = 23\%$) possessed a teaching qualification. It illustrated the outstanding need for professional training for the remaining 77%. The numbers needing such training varied widely and may be calculated from Table 11.3 as 93.3% for the Trade Test B/C holders (craft instructors), to 67.3% for the Certificate/Diploma holders.

Table 11.3: VET Lecturers/Instructors: Qualifications, Urban/Rural

Qualifications	Urban		Rural		All	
	Frequency	Valid%	Frequency	Valid %	Frequency	Valid %
Trade Test B/C	2	8.3	12	11.3	14	10.8
Trade Test B/C + Ed.	-	-	1	0.9	1	0.8
NCC/Trade Test A	6	25.0	25	23.6	31	23.8
NCC/Tr/Test A + Ed.	3	12.5	2	1.9	5	3.8
Diploma/Certificate	9	37.5	28	26.4	37	28.5
Dip/Cert + Education	2	8.3	16	15.1	18	13.8
HNC/HND	-	-	3	2.8	3	2.3
HNC/HND + Ed.	-	-	1	0.9	1	0.8
Degree	-	-	12	11.3	12	9.2
Degree + Education	1	4.2	4	3.8	5	3.8
Other	1	4.2	2	1.9	3	2.3
Total	24	100	106	100	130	100

It should be noted that a relatively small number of Trade Test B/C qualified staff were employed as workshop instructors in the brigades, but they still required appropriate education training. All teaching and technical qualifications have now been localised and, after a period of seven years waiting for European Union approval, a purpose-built Technical Teachers' Training College was due to open in 2005. This should help to raise the number of trained technical teachers and the standard of their teaching and improve their contribution to the provision of an effective technical cadre for the development of new industrialisation.

The complexity of VET in terms of its variety of qualifications and disciplines may present problems when the allocation of funding is considered by governments and private industries in many countries, as in Botswana, where most of the relevant government officers were educated in the classical, non-technical approach, and the leaders of industry may not be aware of, or interested in, the latest technical advances and may not understand their potential.

Industrial and Lecturing Experience

Botswana has an almost equal ratio of urban to rural population, and yet Table 11.3 shows that there are big differences in numbers of male VET staff, of urban origin (24) and rural origin (106). The wide range of qualifications which are recognised illustrates the wide variety of skills and occupations which were categorised under the overall heading of Vocational Education.¹

In a country at Botswana's stage of development and limited industrial base, the availability of suitable experience is likely to have been insufficient for potential VET staff. Almost 60% of VET lecturers had industrial experience of only between 0 and 2 years (Table 11.4), hardly a satisfactory situation. The figures shed light on the validity of the problems highlighted by the village focus groups, who commented on 'the poor quality of the lecturers' who 'lack practical experience and therefore teach from books',² as well as the VET leavers, particularly from the VTCs and technician institutions, many

¹ Appendix A66: VET Leavers: Expected Qualifications, All

² Chapter 7: 158

of whom were dissatisfied (25% or more) with the instruction in practical skills and employer's expectations.¹

Table 11.4: Lecturers/Instructors: Industrial Experience

Years of Experience	Frequency	Valid %
0 – 2	78	57.8
3 – 7	46	35.1
8 – 12	8	5.9
13 – 17	3	2.2
Total	135	100

It should be realised that effective industrial experience should entail the refining of practical skills and their application in the workplace environment and that depends upon an effective form of industrial experience for both lecturers and instructors as a prerequisite for training students in vocational education.

Information on the lack of lecturing experience of the VET staff, compounds the problems, with 26.1% of VET staff with 0–2 years lecturing experience, and 40.9% with 3–7 years, this represents a total of 67% with less than seven years experience, many of these with little or no industrial experience.² This scenario illustrates one of the greatest problems that Botswana has to overcome if it is to raise its standards sufficiently to expand its industrial base and become a realistic player in the global economy.

2. Factors Influencing Choice of VET

Unlike the subjects of earlier chapters, the VET staff had made not one, but two career choices. The first, usually made on leaving school, being the choice of a VET course and the second the choice of lecturing/instructing in VET. It should therefore be realised that their second choice was generally decided upon several years after making their first choice (of VET) was made.

¹ Chapter 10: Table 10.10: VET Leavers: Opinions of Training (%): 226

² Appendix A71: VET Lecturers/Instructors: Lecturing Experience

Generational Change in Occupations

It has been argued in previous chapters that a parent's occupation may influence the choice of their offspring's career. However, the interest in the teaching of VET would probably come from the course content and/or its teaching whilst the potential VET lecturers/instructors were themselves training. The great majority of VET staff were of rural origin, this may possibly be a significant factor since the rural upbringing of most future VET lecturers and instructors, when compared with that of their urban counterparts, would not have included familiarity with many modern, everyday technologies of that era and VET may well have opened up a new world for many.

The lists of parents' and siblings' occupations,¹ reveal a generational change in which there has been a growth in the percentage of brothers (35.9%), taking up craft/technicians jobs compared with their fathers at 7%., and also the 8.9% of sisters following that occupation compared with zero for their mothers. Nevertheless, the comparison between brothers and sisters is still heavily weighted towards the males.

Reasons for Choice of Career

In Table 11.5, the proportion of VET staff (32.9%) gave the reason for their choice as 'to serve the family and community', which is approximately the same proportion as the VET leavers (33.8%),² but much lower than the 67.8% of the school leavers.³ A further quarter gave 'to use a great interest or vocation', this was a little more than both the 18.6% of the VET leavers and the 20.5% of the school leavers. The percentage who chose 'to never be unemployed' and 'to earn a lot of money' were in single figures for all three groups canvassed (school leavers, VET leavers and VET lecturers/instructors) weakening the human capital theory case that people are driven to become more skilled on the expectation that they will make more money and/or obtain a better job as a result.

¹ Appendix A72: VET Lecturers/Instructors: Father's Job

Appendix A73: VET Lecturers/Instructors: Mother's Job

Appendix A74: VET Lecturers/Instructors: Brothers' Job

Appendix A75: VET Lecturers/Instructors: Sisters' Jobs

² Chapter 10: Table 10.5: VET Leavers: Reasons for Choice of Job: 219

³ Chapter 8: Table 8.1: School Leavers: Ranked Reasons for Wanting Job: 178

Table 11.5: VET Lecturers/Instructors: Reasons for Career Choice

	Frequency	Valid %
To serve the family and community	46	32.9
To use a great interest or vocation	35	25.0
To never be unemployed	8	5.7
To earn a lot of money	4	2.9
Combination of above	35	25.0
Other	12	8.6
Total	140	100

Why did you become a lecturer/instructor?

Some typical responses of the VET lecturers/instructors to this open-ended question are shown in Table 11.6. It resulted in a variety of answers, some of which contained more than one reason, for instance: ‘because I wanted to help my fellow citizens in technical education so as to create a sustainable economy’; ‘to further my studies and serve the community’ and ‘better chance of upgrading my skills in brigades’. The only female-specific responses appeared to indicate the sort of concerns which they felt applied especially to women: ‘to show other females that women can work in welding and pass on information to students’ and: ‘it is better for a woman carpenter to work in VET than for a (building) contractor’.

Table 11.6: VET Lecturers/Instructors: Why did you become a lecturer/instructor?
Ranked

Reason	Frequency	Valid %
1. To help students	47	35.3
2. For myself	23	17.3
3. To help the nation and individuals	20	15.0
Like teaching/ for interest	18	13.5
5. Negative response	7	5.3
6. Other	18	13.5
Total	133	100

Many responses were difficult to categorise, even in the terms used in Table 11.6. Only 2 of the 133 respondents mentioned pay, and then one of them claimed it was slightly better than working for the government. The ambition of 23 (17.3%) of those who fell into the ‘for myself’ category was to further knowledge, experience or qualifications, presumable to help obtain a better job. This was a higher proportion than for any of the other groups analysed in earlier chapters and could possibly represent an initial foothold for a form of human capital theory in Botswana, or the onset of family responsibilities.

3. **Lecturers/Instructors Opinions of VET Students’ Performance and Deficiencies**

The aim of VET is to enable commerce and industry to grow and develop by means of the effective application of technical knowledge and practical skills in the context of the social organisation of the workplace. There may well be important differences within any one of these three components, depending upon the sector of industry concerned. These differences are catered for by a large number of courses, which cover the relevant ranges of theory and practical skills concerned. This has resulted in a large number of areas of interest, one of which, together with the appropriate education and training, may well provide the logical choice of career for those who have the relevant interest or vocation.

As new, relevant factors are discovered, further upgrading will often be required. By their 96% positive response to the question ‘should VET train for future jobs?’,¹ virtually all lecturers/instructors acknowledged that need. In the current state of development in Botswana, many of those who were already graduate apprentices or technicians should expect to take on supervisory roles in their lifetime. VET training of students for this eventuality was advocated by 90% of the lecturers/instructors.² The inclusion of ‘a good attitude to work and the workplace conventions’ as an area of student training was also advocated by 90% of the lecturers/instructors.³ The interest that was shown in these latter two points was encouraging, since many of those concerned with the future of VET are interested in the factors involving the social organisation in which VET graduates will operate. The differences between African and Western social organisation of work can be distressing to those who cannot understand them, but very rewarding for those who succeed in reconciling them.

¹ Appendix A76: VET Lecturers/Instructors: What should VET train for?

² *ibid*

³ *ibid*

The very positive responses to the preceding questions show a willingness to broaden the context of the application of VET skills instruction so that they may be more effectively applied to practice in the workplace. However, many of the lecturers/instructors had themselves experienced very little time in industry (57.8% having had only two years or less of such experience).¹ The implementation of such training would suggest the need for an initiative from industry itself for providing suitable initial training of the VET lecturers/instructors if it is to succeed.

The key role of VET lecturers/instructors in producing skilled employees for the developing industries makes their opinions and expectations crucial. In the next section of the chapter, the lecturers/instructors evaluations of the successes and deficiencies of the system and its products will be investigated.

Degree of Satisfaction with the Students

Lecturers and instructors were asked to rate their satisfaction with their students' progress during training in the areas of theory, practical work and attitude to their training. These simplified presentations of results (Tables 11.7(a) to (c)) are based on their opinions. Data for these tables has been obtained by combining the categories of 'satisfied' and 'very satisfied' to form 'satisfied', and 'dissatisfied' and 'very dissatisfied' to form 'dissatisfied'. Criteria of 75% for satisfied and 25% for dissatisfied respectively, were adopted to emphasise the good and poor aspects of training, as perceived by the trainers themselves. Where criteria have been exceeded the percentages have been printed in boldface.

Table 11.7(a): VET Lecturers/Instructors: Degree of Satisfaction with Students' Training: Theory

	Urban		Rural		Expatriate		All	
	Freque.	Valid%	Freque.	Valid%	Freque.	Valid%	Freque.	Valid%
Satisfied	23	92.0	75	92.6	21	95.4	119	92.9
Dissatisfied	2	8.0	6	7.4	1	4.5	9	7.1
Totals	27	100	75	100	22	100	128	100

N.B. Boldface indicates satisfaction rate greater than 75%

¹ Table 11.4: VET Lecturers/Instructors: Industrial Experience: 244

Table 11.7(b): VET Lecturers/Instructors: Degree of Satisfaction with Students' Training: Practical Work

	Urban		Rural		Expatriate		All	
	Freque.	Valid%	Freque.	Valid%	Freque.	Valid%	Freque.	Valid %
Satisfied	20	73.3	62	82.7	17	89.5	99	83.9
Dissatisfied	42	16.7	13	17.3	2	10.6	19	16.1
Totals	24	100	75	100	19	100	118	100

N.B. Boldface indicates satisfaction rate greater than 75%

Table 11.7(c): VET Lecturers/Instructors: Degree of Satisfaction with Students' Training: Attitude

	Urban		Rural		Expatriate		All	
	Freque.	Valid%	Freque.	Valid%	Freque.	Valid%	Freque.	Valid%
Satisfied	14	53.9	50	61.0	15	65.2	79	60.3
Dissatisfied	12	46.2	32	39.0	8	34.8	52	39.7
Totals	26	100	82	100	23	100	131	100

N.B. Dissatisfaction greater than 25% shown in boldface

It is very noticeable that, although the lecturers/instructors were almost unanimous in expressing their satisfaction with their students' training in theory and practical work, they were no less constrained when expressing their strong, minority dissatisfaction with the students' attitudes. These apparent inconsistencies are difficult to explain, are probably cultural in origin, and may arise from the different expectations and respect in which the students and lecturers/instructors hold each other. Many lecturers/instructors appeared to assume that the students would give them the respect which is due to the elders and people in authority. This supposition may be better understood when considered against the traditional social background of the village, where there was a deliberate policy of nurturing respect between all members of the village hierarchy, as illustrated by this quotation from a focus group participant:

Previously (over 100 years ago), village regiments were formed when young people came of age, 16 to 18 years. The parents of each child were considered to be the parents of every other child in that regiment. All parents therefore had the right to correct and discipline any misbehaviour or misdemeanour of any member of that regiment.

Some of this attitude lingers on, especially in the villages where many villagers still consider that ‘anybody who, whatever else they may have, has no respect for others will get no respect for themselves’.¹ In addition, the villagers were of the view that ‘teachers are too scared to chastise children today because they (the parents) might get angry with them (the teachers). This means that our children are not learning in school (any level of education is often termed ‘school’) and are ill-mannered’.² This traditional attitude to young people frequently regarded them as being too immature to have ideas or make decisions in their own right, as their elders knew best!

However, many of the lecturers were themselves young and inexperienced, both as lecturers and instructors³ and in industrial experience.⁴ This may have contributed to a lack of confidence and respect for the lecturers/instructors by the students, an attitude which was slightly more pronounced in urban than rural areas. Such attitudes had grown more quickly for those on VTC apprenticeships, where students spent an initial three months in college and then the next nine months on industrial placement, a pattern which was repeated over each of the following three years. During that period of time many realised that they had acquired more practical experience of the workplace than many of their lecturers/instructors.⁵ Thus, when students were taught by VET lecturers and instructors who were often of a very similar age to themselves and, in addition, had very little industrial experience, it was not surprising that the students were confused about their own status, and that their attitude sometimes left much to be desired. In addition, there was a general lowering of respect which had appeared in recent years in young adults for their elders, which may be due, in part, to the growth of urbanisation. The often large, geographical distances involved contributed to the consequent gradual breakdown of village social relationships and may eventually affect the influence of the extended family. The growth in population is greater than the number of jobs created, a situation which has led to high youth unemployment and restlessness.

If this perceived poor attitude of the students, as implied in Table 11.7, is carried into the workplace, then serious, long-term damage could be attributed to the reputations of the

¹ Chapter 7: 157

² Chapter 7: 157

³ Appendix A71: VET Lecturers/Instructors: Lecturing Experience

⁴ Appendix A70: VET Lecturers/Instructors: Industrial Experience, Urban/Rural/Expatriate

⁵ Senior member of VTC staff

students even before they take up employment on completion of their courses, as implied by the focus group comment that: ‘the VTC graduates have no pride in their work’.¹

Deficiencies in Student Performance

The student deficiencies investigated were concerned with different forms of communications, each of which could be very important in the workplace, but which do not form a specific subject or discipline in the curricula. The opinions of the lecturers/instructors were sought and the following two tables were compiled.

In the worst case in Table 11.8(a), 81.0% of all respondents believed that some of their students had deficiencies in understanding and acting upon *written* instructions, whereas 57.5% of all staff claimed that students had deficiencies in understanding and acting upon *oral* instructions.

Table 11.8(a): VET Lecturers/Instructors: Deficiencies in Students’ Understanding and Acting on Instructions, Urban/Rural/Expatriates

	Urban		Rural		Expatriate		All	
	Frequ.	Valid %	Frequ.	Valid %	Frequ.	Valid %	Frequ.	Valid %
Oral instructions	14	53.8	40	58.8	11	57.8	65	57.5
Written instructions	22	81.5	59	81.9	13	76.5	94	81.0

Table 11.8(b): VET Lecturers/Instructors: Deficiencies in Students’ Ability to Report Back on Technical/Business Activities, Urban/Rural/Expatriate

	Urban		Rural		Expatriate		All	
	Frequ.	Valid %	Frequ.	Valid %	Frequ.	Valid %	Frequ.	Valid %
Reporting orally	15	65.2	49	75.4	11	68.7	75	72.7
Reporting in writing	15	65.2	48	68.6	10	52.6	73	64.6

¹ Chapter 7: 158

In Table 11.8(b), 72.7% of students, when reporting back to the lecturers/instructors orally, had deficiencies, and 64.6%, when reporting back in writing, were not considered competent. In all cases, the level of communication in English was inadequate. It should be noted that when the responses had been divided into sub-groups, the numbers became relatively small and should be considered as only indicative. These results indicated an unsatisfactory level of competence in English in each of the activities, suggesting that much more emphasis on communications skills and basic English was required.

Reasons for Deficiencies

As the deficiencies investigated were all concerned with communication and the language of instruction was English, it should not be surprising that competence in that area was given as the greatest cause of the deficiencies, as illustrated in Table 11.9 . According to this table there were three main causes of deficiencies: poor English, poor general education and culture, either alone or in combination with English. Splitting up the table into Urban, Rural and Expatriate columns, whilst giving an indication of variation, does not really involve sufficient responses to allow valid numerical analysis.

Table 11.9: VET Lecturers/Instructors: Why do you think students' deficiencies exist?

	Urban		Rural		Expatriate		All	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Poor general edn.	3	12.0	17	22.1	4	19.0	24	19.5
Problems in Eng.	8	32.0	24	31.2	6	20.5	38	30.9
Culture	2	8.0	4	5.2	4	19.0	10	8.1
Gen. Edn + Eng.	7	28.0	15	19.5	4	19.0	26	21.1
Eng.+ Culture	3	12.0	15	19.5	1	4.8	19	15.4
Other	2	8.0	2	2.6	2	9.5	6	4.8
Total	25	100	77	100	21	100	123	100

In their responses, several VET lecturers/instructors claimed that 'in general, culturally, we expect to be trained, not to train ourselves'. There were also a number of opinions of lecturers/instructors in their responses to the structured interview which elaborate on the reasons behind the results in Table 11.9 with respect to the poor level of English. The largest number of comments concerned with the high numbers of students admitted with failures in English in Form 2 or Junior Certificate (JC) level (at that time the JC

examination was taken at the end of Form 2 in the Community Junior Secondary School (CJSS) this has since been extended to a three years). Another group of comments claimed that, in classes where both JC failures and Cambridge 'O' level students had been recruited, many JC holders were embarrassed to use their poor English in front of more competent students. Other reasons referred to poor eyesight, students having to use their third language and poor selection before admission, but very few poor lecturers/instructors were cited.

Future Options

In an attempt to obtain the opinions of VET staff concerning the related, but non-technical, curricula topics, they were asked if they thought that VET should include: the current job only, future job requirements, work attitudes and supervisory skills.¹ Apart from a sizable minority (42.9%) who opted for 'current job only', the remaining responses in favour of including the other three topics was over 96.7% in each case. Such responses showed a positive attitude to their work among VET lecturers/instructors. In positively accepting that there were non-technical factors which should be part of the VET curricula, they opened up the possibilities of developing better attitudes and understanding between the students, the graduates and their employers. Whilst the curricula does not yet go into high skills, it would appear that it may be possible to move in that direction using VET staff (if properly trained) as the motivators and instructors. At least the students, and many of their lecturers/instructors, could begin to develop a better understanding of the workplace and begin to achieve a sense of identity.

Finally, it should be noted that, in response to the question 'Do you find your trade/profession very interesting?' more than 96% of the total number of lecturers/instructors (127) answered in the affirmative.²

Summary

The roles of the VET Lecturers/Instructors were particularly important in an era in which Botswana was developing industrialisation policies and was depending upon the availability of well trained craft and technician workers who were capable of meeting the needs of

¹ Appendix A76: VET Lecturers/Instructors: What should VET train for?

² Appendix A77: VET Lecturers/Instructors: Do you find your trade/profession very interesting?

modern industry. In turn, this will depend upon the ability to deliver effective education and training systems by efficient staff who understand and provide those needs.

It was noticed that the number of male lecturers/instructors of rural origin greatly outnumbered both the rural origin females and the males of urban origin. In a country where the numbers of males and females were very similar, as were the number of town and country dwellers, to become a male member of staff was a useful means of escaping from the rural area, with its limited number and variety of jobs to an urban environment with its better employment prospects. This drift may have inadvertently produced a generation of very young and inexperienced staff. Almost 60% of VET staff had under two years, industrial experience and almost 70% had seven years, or less, lecturing/instructors experience. In a culture where age is given respect and status, the relatively small age difference between students and staff could lead to problems when compounded by both the staff and students' lack of appropriate industrial experience.

The reasons given by lecturers/instructors for choosing a career in VET, were firstly 'to serve the family and community', 32.9% and then 'to use a great interest or vocation'. As with earlier such responses in this thesis, there was very little support 2.9%, for 'earning a lot of money'. This result gave little support to the arguments of human capital theorists. The main reason for becoming a lecturer/instructor was to help students.

This sentiment provoked a mixed response to the question regarding the lecturers/instructors satisfaction with the students' training. With regard to the students' performance in theory and practical work, staff gave a near unanimous vote of confidence. However, great dissatisfaction was expressed by the lecturers/instructors for the students' attitude to their training. This apparent contradiction, it was suggested, may be due to different expectations and the respect in which the students and staff hold each other. The lecturers/instructors appeared to assume that the students would give them the respect which is due to their elders and people in authority in traditional Tswana culture. The students however, according to their comments saw many of the lecturers/instructors as young, inexperienced and incompetent figures who they did not regard with respect, especially as when compared them with the skilled craftworkers that they may have witnessed during their first industrial placement. In addition, the staff may have had low, but incorrect, expectations of the

students, which would have led to their high evaluation of the students' theory and practical work. This was an important and potentially damaging factor, which may have contributed to their poor reputation, and may have indicated the difficulties of all parties to meet the changes which were needed in modern industry.

Serious deficiencies in the students' ability to communicate were revealed by staff. The medium of communication was English and incompetence in English was the major factor of deficiency, followed by poor general education and culture. A number of students who had failed English in their Junior Certificate (taken at the end of junior secondary school) were enrolled on unsuitable courses. Others said that, in classes which included good English speakers as well as students who had failed, the less-able were inhibited from speaking in front of those who were more successful, a problem that they had also experienced in main stream education. This problem must be overcome if modern industry is to compete successfully in the world market.

Finally, when lecturers and instructors were asked what VET should train for, 42.9% wanted to restrict training to only the needs of the current job, however, nearly all included future job requirements, good attitudes to work, workplace conventions and supervisory skills.

The next chapter will examine employment from the viewpoint of VET graduates who had graduated during the previous four or five years, and the relevance of their previous VET training to their work.

CHAPTER 12

Recent VET Graduates in Employment

Introduction

The experience of the recent VET graduates, who have developed their skills at the vocational education and training institutes, and whose livelihood depends upon those skills, are analysed in this chapter. As they have recently left their VET to work as fully qualified craftworkers or technicians in an industry of their choice, their training is probably still uppermost in their minds. However, the workplace is likely to be a very different social and technical world to that with which they were familiar. No longer is their job done for practice, but for profit. They will be expected to apply many correct procedures without reference to other staff. In this situation, they will be in a unique position to compare directly the usefulness of their training, to the needs and immediate expectations which arise out of each job in hand. Thus, they will be in the critical position to provide an evaluation of many aspects of their training and employment. The intentions are to obtain their perceptions of VET, to determine how successful VET has been and how it may be improved and made more effective. In order to obtain a broad overview, many industries, over wide a spectrum, were involved in the time available.

Range of Industrial Sectors Surveyed

The range of industrial sectors in which the recent VET graduates respondents were employed, are shown in Table 12.1. There were thirteen of the eighteen sectors recognised by the International Standard Industrial Classification.¹ Of these thirteen, only four, mining, manufacturing, construction and hotel and tourism were operated on a significant scale in Botswana by private enterprise. Detailed information about specific companies was obtained from the Ministry of Commerce and Industry. This included all companies and, because of the importance placed on the localisation of jobs, distinguished between companies run by citizens, citizen/foreign and licensed foreign companies, the size of their workforce and nature of their business.

¹ Appendix A12: Botswana Standard Industrial Classification

Table 12.1: Recent VET Graduates: Employment by Industrial Sector

Sector	Frequency	Valid %
Mining	5	6.8
Manufacturing	2	2.7
Construction	8	11.0
Hotel and Tourism	3	4.1
Brigades and VTCs – Training	6	8.2
Central Transport Organisation	16	21.9
Department of Electrical and Mechanical Services	7	9.6
Department of Architecture and Building Services	6	8.2
Botswana Telecommunication Corporation	2	2.7
Water Utilities	1	1.4
Local Authorities/Land Boards	8	11.0
Others	3	4.1
Botswana Defence Force	6	8.2
Total	73	100

This chapter is divided into two sections:

1. background and factors which have influenced the choice of VET by the VET graduates;
2. VET and employment: the opinions of the VET graduates concerning their training and its relevance to employment;

1. Background and Factors which have Influenced the Choice of VET

At independence it was very difficult to attract key personnel or private investment into a country with such a harsh environment, poor infrastructure and few resources as Botswana. The government became involved in providing living accommodation and amenities as part of developing the infrastructure of a modern state. For some time, an emphasis on localisation has been considered of great importance in many sectors, with the consequent awareness of the necessity of improving skill levels amongst citizens. However, government has sometimes been slow to relinquish some of its earlier responsibilities to the private sector. As it became more aware of the need to develop private industry, and the skills required to service such developments, it introduced inducements, for example, up to twice the cost of approved training fees can be excluded

from a company's profits for tax purpose, to encourage training. The recent VET graduates who participated in the survey were products of this government training system. Do they consider that they have been adequately prepared for employment?

General Characteristics of Recent VET Graduates

Age, Gender, Institute of Training and Home Base (Village or Town)

The wide age range of recent VET graduates illustrated, in Table 12.2, was influenced by the considerable flexibility of the Botswana education system. The school age normally started at seven years, but some pupils did not begin their education until they were into their teens. This, coupled with repeat years and temporary drop-outs, meant that the age range within a primary school class could be as much as ten years, sometimes wider.

The youngest pupils were fourteen when they started their two-year junior secondary course and the earliest they could take their Junior Secondary School Certificate was when they were sixteen but many were older.¹ A further three years at senior secondary school was required to obtain 'O' levels.² These ages are reflected by the minimum enrolment ages at Brigades (17), VTCs (19) and Technician Colleges (19). Many were older because they had started school after the minimum age of enrolment and some, after completing a VET course at a low level institution, for instance a brigade, before continuing to the higher level VTC. Such a progression would influence the average leaving age of the VTC graduates.

Table 12.2: Recent VET Graduates: Age v Gender

Age	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
21-25	22	36.7	7	50.0	29	39.2
26-30	28	46.7	4	28.6	32	43.2
31-35	6	10.0	3	21.4	9	12.2
36+	4	6.7	0	0	4	5.4
Total	60	100	14	100	74	100

¹ CJSS later changed to 3 years

² SSS later changed to 2 years

There were two main reasons why the age of the recent VET graduates in the survey were skewed heavily to the 21 to 30, age range (Table 12.2): firstly the survey targeted recent VET graduates who had started work within the previous five years and, secondly, the first output of the apprenticeship scheme, which was the responsibility of the VTCs, occurred in 1991. This survey was carried out in 1999, eight years later. There was a low proportion of females to males, Table 12.2 shows that there were 19% of females and 81% of males.

There were 66.7% VTC graduates (Table 12.3) but only 11.6% brigade graduates, probably because that the VTC graduates were considered to be better qualified. Almost twice as many VET graduates came from rural homes as from urban homes, approximately 66% and 34% respectively.¹

Table 12.3: Recent VET Graduates: Gender v Institute of Training

Institute of Training	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
VTC	37	66.1	9	69.2	46	66.7
Brigades	7	12.5	1	7.7	8	11.6
Private	1	1.8	0	0	1	1.5
MTTC	2	3.6	0	0	2	3.0
Technician	9	16.1	3	23.1	12	12.0
Total	56	100	13	100	69	100

The most notable feature in Table 12.4 was the relatively low numbers in this survey who had graduated from the brigades and obtained jobs, especially among those from rural areas where the majority of the brigades are located. Of the thirty brigades surveyed, twenty-four were located in rural areas, whereas five of the six VTCs were in urban areas. Both had similar overall numbers of enrolments: brigades with 3952 and VTCs with 4425.² The low number of brigade VET graduates employed is consistent with the low level of students promised jobs for VET leavers (5.1%) after their graduation.³

¹ Appendix A78: Recent VET Graduates: Gender v Home Base

² Ministry of Education, DVET Annual Report: 1996/97

³ Chapter 10: Table 10.11: Recent VET Leavers: Promised Jobs v Institute Attended: 229

Table 12.4: Recent VET Graduates: Institute of Training v Home Base

Institute of Training	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid%	Frequency	Valid %
Brigade	1	4.3	7	15.6	8	11.8
Vocational Training	17	73.9	31	68.9	48	70.6
Centre	5	21.7	6	13.4	11	16.2
Technician	0	0	1	2.2	1	1.5
Total	23	100	45	100	68	100

Areas of Employment and Skills

Details of graduates' subject or trade skills show individual frequencies to have been small, but they provide an indication of the range of industries and skills covered by the survey.¹ By far the largest employer of VET graduates was the government (66.2%). Closer inspection of these tables suggests that three main areas provided by far the largest source of employment. These were Construction plus Electrical Installation (which is closely associated with construction), with 39.7%; Automotive plus Mechanical Technology (again closely associated), with 41.2% and Electrical/Electronic Engineering combined with Telecommunication Engineering providing 13.2%. Together these three groups provide 94.1% of the VET graduate respondents' employment. These figures should not be surprising since construction and the automotive industries have experienced the greatest growth rate in Botswana (apart from mining) since independence. The diploma holders in Electrical/Electronic Engineering and Telecommunication Engineering, serve the needs of computer and communication technology and would be well placed for developments in that area of advanced technology and high skills. Virtually all of the VET graduates worked in urban areas (where the jobs were) though 2.5 times more originated from the rural areas,² suggesting that:

- (a) many young Batswana have used VET as a means of escape from life in their village and their potential rural poverty and have migrated to towns and large villages;³

¹ Appendix A79: Recent VET Graduates: Trade/Subject v Employment Type

² Appendix A78: Recent VET Graduates: Gender v Home Base

³ Jeffries, 1997; Hudson and Wright 1997

- (b) the rural graduates are capable of surmounting the difficulties which may have arisen during their transfer to the towns, including their acceptance of workplace conventions and westernised industry.

Qualifications and Rank

Whilst the frequencies involved in each case in this section were statistically low, taken together with data from earlier chapters, they were highly indicative of national trends within the country. The effect of the brigades system, which were mainly located in rural areas, with 11 of graduates with Trade Test B/C,¹ as opposed to 4 in urban areas,² emphasised the benefits of the availability and cost of such training to students from outlying areas. Conversely, the technician courses were invariably town based, and include accommodation, with 6 of the graduates obtaining diplomas originating from urban areas, as opposed to 3 from rural areas.

Table 12.5: Recent VET Graduates: Gender v Qualifications

Qualification	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
<u>Trade</u>						
Continued Training	2	3.4	1	7.7	3	4.2
Trade Tests B/C	14	24.1	1	7.7	15	21.1
NCC/Trade Test A	29	50.0	7	53.8	36	50.7
<u>Technician</u>						
Certificate/FTC	6	10.3	2	15.4	8	11.3
Diploma	7	12.1	2	15.4	9	12.7
Total	58	100	13	100	71	100

N.B. NCC = National Craft Certificate; FTC = Full Technicians Certificate (City & Guilds)

In Botswana many women have to live with a disadvantageous employment market. Examples of gender inequalities have appeared in earlier chapters. However, in Table 12.5, where the overall frequency of male to female qualification holders is 58 to 13 respectively, the ratio of male to female holders of Trade Tests B/C was 14 to 1. Discrimination was shown to continue even into employment where, in Table 12.6, it

¹ Chapter 3: Figure 3.2: Overview of Vocational and Technician Education: 60

² Appendix A80: Recent VET Graduates: Home Base v Qualifications

could be calculated that males receiving further training outnumbered females by 6 to 1.

Table 12.6: Recent VET Graduates: Gender v 'Rank'

'Rank'	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Continued Training	16	29.6	3	33.3	19	34.3
Tradesman	28	51.9	3	33.3	31	46.2
Senior Technical Assistant	3	5.6	0	0	3	4.5
Technician	2	3.7	0	0	2	3.0
Technical Officer	2	3.7	3	33.3	5	7.5
Senior Technical Officer	1	1.9	0	0	1	1.5
Assist. Lecturer/Instructor	2	3.7	0	0	2	3.0
Total	54	100	9	100	63	100

The responses to the questions concerning the 'rank' or 'position' of VET graduates in the company in which they were employed, confirmed expectations (Table 12.6) that there had not yet been time for the first few cohorts of the VTC graduate apprentices to have climbed higher than the positions of tradesmen. They could only have entered full-time employment, probably as trainees, eight years earlier at the most, since the first output graduated in 1991. As expected, the number of recent VET graduates in the survey employed by the government (45) was almost double the number employed by parastatals, private enterprise and the brigades together (23).¹

Factors Involved in Choice of VET-Linked Careers

Source of Advice on Careers²

Parents and family, together with teachers, However, the poor showing of the schools' careers guidance, coupled with weak selection processes, have led to wrong career decisions. These factors are of no help to a child, and may lead to lost opportunities or even social exclusion.

¹ Appendix A79: Recent VET Graduates: Trade/Subject v Employment Type

² Appendix A81: Recent VET Graduates: Source of Advice on Career Choice v Home Base

Reasons for Choosing VET

In Table 12.7, the reason most commonly used reason for choosing VET by most VET graduates (39.7%) was 'to further a strong interest or vocation'. However, the choice of 'to serve the family and community' given by some 29% should be noted as showing a degree of idealism. The reason 'to earn a lot of money' (21.9%) featuring third overall, represents a substantial increase over the 4.1% for this reason among the VET leavers.¹ Some of this increase may result from the increased responsibilities of having a young family, but another part may well be due to the increased importance of material goods in their lives.

Table 12.7: Recent VET Graduates: Reason for Choosing VET v Home Base

Reason	Urban		Rural		Total	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
To serve the family and community	7	25.9	14	30.4	21	28.8
To further a strong interest or vocation	14	51.9	15	32.6	29	39.7
To be never unemployed	2	7.4	5	10.9	7	9.6
To earn a lot of money	4	14.8	12	26.1	16	21.9
Total	27	100	46	100	73	100

Recognition of Qualifications and Availability of Training Places

It should be noted that the Botswana vocational training programmes had been in a state of flux since the mid 1990s. By August 2003, only the foundation units of their new programmes had been recognised in the Southern African Development Community (SADC) region, as compared with the Republic of Southern Africa (RSA) programmes, all of which were recognised over all of the region.² For this reason, and because of lack of capacity in the Botswana training institutions, 'hundreds' of Botswana students attend South African technician courses for their vocational training.³

¹ Chapter 10: Table 10.5: VET Leavers: Reasons for Choice of Job: 219

² Senior Ministry of Education Training Officer

³ Senior Ministry of Education Training Officer

2. VET and Employment

Opinions of Training

In this section the recent VET graduate's opinions of their training are scrutinised. As these graduates have had to apply their VET skills in their everyday work, their opinions form a particularly relevant measurement of success, or otherwise, of VET.

Practical Training and Workplace Experience: With a total satisfaction level of 78.3% (Table 12.8(a)), it would appear that majority of the recent VET graduates were satisfied with their practical training obtained whilst in college.

Table 12.8(a) : Recent VET Graduates: Satisfaction with Training: Practical Training

Satisfaction with Practical Training		
Satisfaction Level	Frequency	Valid %
Very Satisfied	14	20.3
Satisfied	40	58.0
Dissatisfied	15	21.7
Very Dissatisfied	0	0
Total	69	100

However, in response to open questions during structured interviews, recent VET graduates made complaints about 'lecturers being absent from lessons' and 'poor teaching, especially of practical work'. This latter, repeated complaint about the quality of practical work instruction was extended to 'poor supervision in the field', i.e. the practical workplace training, supposedly provided, during the industrial placement for apprenticeship students. No guidelines were issued to employers and many students were used for simple uninstructional jobs, for instance, cutting electrical conduit pipes to length or cleaning carburettors for months at a time. In many cases, no effort was made to provide students with opportunities to improve their skills within their chosen discipline. 'Log books were never checked' and 'no supervisory visits occurred', were comments made by the recent VET graduates, which referred to the time spent during industrial placement, which was under the supposed control of the MTTC.¹ When speaking about graduate apprentices, a supervisor at a large electrical installation company explained that

¹ Chapter 10: 225

‘the resultant graduates are what we in the UK would call semi-skilled labour that is always in need of supervision’. These comments imply a lack of concern about the standard of training by personnel from various ministries, training institutions and employers, possibly because of a failure to understand and appreciate the importance of the problems.

Relevance of Training: A large proportion of recent VET graduates appeared to be pleased with the relevance of their training, as shown in Table 12.8(b) where 80.6% of graduates were satisfied or very satisfied with their training and 19.4% dissatisfied. Interestingly, a senior DVET officer commented that: ‘when changes in curricula are required, it is becoming ever more important that the relevant companies are involved in the changes if Botswana is to compete in the global market’.

Table 12.8(b): Recent VET Graduates: Satisfaction with Training: Relevance of Training

Satisfaction with Relevance of Training		
Satisfaction Level	Frequency	Valid %
Very Satisfied	10	14.9
Satisfied	44	65.7
Dissatisfied	12	17.9
Very Dissatisfied	1	1.5
Total	67	100

Supervisory Skills: In Table 12.8(c), 76.9% of the recent VET graduates were found to be satisfied or very satisfied with the input from their training institute and 23.1% were not. This was the highest level of dissatisfaction registered. It is possible that the inexperienced lecturers/instructors do not appreciate the importance or relevance of such training. However, all ‘trained’ personnel could be expected to supervise other workers, to a greater or lesser extent’ as many ‘untrained’ workers require guidance and supervision. It was indicated by some of the graduates that they would be unlikely to receive such training within the industry.

Table 12.8(c): Recent VET Graduates: Satisfaction with Training: Supervisory Skills Training

Satisfaction with Supervisory Skills Training		
Satisfaction Level	Frequency	Valid %
Very Satisfied	8	12.3
Satisfied	42	64.6
Dissatisfied	10	15.4
Very Dissatisfied	5	7.7
Total	65	100

Theory: When the recent VET graduates were asked their opinion on the theoretical element of their VET course, 82.6% claimed to be satisfied or very satisfied with their training, however, 17.4% were unhappy with their training which, considering only the better graduates are selected for employment, gives cause for concern.¹

Employers' Expectations:² The recent VET graduates rated this as the most satisfactory part of their training, with 90.7% expressing a positive attitude and only 9.3% showing dissatisfaction. This contrasts with the VET leavers who rated satisfaction with training in employers' expectations at 73.4% and dissatisfaction at 26.6%.³ Perhaps the working graduates forget about their reservations about starting work once that they had become established in the workplace.

Deficiencies

The Use of English

Although the VET graduates who had been fortunate enough to obtain work, and were most likely to be amongst the more successful students from the VET output, the number who claimed to have experienced problems with English (28.8% with understanding oral instructions) was unacceptably high. Teachers have expressed their concern about the competence in English of many of the school leavers, which

¹ Appendix A82: Recent VET Graduates: Satisfaction with Theory Training

² Appendix A83: Recent VET Graduates: Satisfaction with Employers' Expectations Training

³ Appendix A67(c): VET Leavers: What are your opinions of the training provided on your course?
Instruction on Employers' Expectations

will include VET applicants. The desire for Botswana to be a significant player in the global economy will not be realised until this problem is addressed.

Table 12.9: Recent VET Graduates: Did you have problems with English?

	Frequency Yes	Frequency No	Frequency Total	<u>Yes x 100%</u> Total
(a) Understanding oral instructions in English	19	47	66	28.8
(b) Giving oral instructions in English	10	49	59	16.9
(c) Receive instruction in Technical English	57	8	65	87.7

Technical English was introduced in the brigades and VTCs to compensate for the reduction in the English tuition received when the community junior secondary school (CJSS) programme was converted from three years to two, in order to enable all pupils to have access to two years of secondary education. At the time (1987) this change in the CJSS programme was blamed for the fall in the standard of English. It was noticed in this survey that most of those who had not received Technical English were the oldest of the recent VET graduates.

The importance of a good standard of English for VET graduates cannot be overemphasised. Ability to use instruction manuals and to write simple technical reports in English are two essential parts of a craftworker's potential duties (which in Botswana are in English). It was found in this survey that 92.8% of the recent VET graduates had used instruction manuals and 74.6% had written technical reports as a routine part of their work.¹ Failure to do so adequately may lead to errors, which can be expensive to the company concerned and, in the worst case scenario, lead to litigation

Numeracy and Computer Literacy

Of the remaining factors which gave rise to difficulties, Table 12.10 reveals that 18.6% of recent VET graduates claimed to have had numeracy problems (which should have been resolved in school) and 55.3% had difficulties with computer

¹ Appendix A84: Recent VET Graduates: Use of instruction manuals?
Appendix A85: Recent VET Graduates: Write reports?

literacy, which is now recognised as an important requirement in both school and VET. Money has been made available to tackle the problem and complaints about the lack of computer instruction have now been largely rectified.¹

Table 12.10: Recent VET Graduates: Did you have difficulties?

	Yes	No	Total	$\frac{\text{Yes} \times 100\%}{\text{Total}}$
With numeracy	11	48	59	18.6
With computer literacy	26	21	47	55.3

Sources of Deficiencies

In order to identify the origins of the general sources of deficiencies in job preparation, recent VET graduates were requested to give their opinions on the most likely sources of these deficiencies.² Of the respondents, 71.2% claimed that they had arisen from their general or school education, 62.8% claimed that they came from VET and 39.0% felt that they resulted from cultural differences. In the latter case, the most common reasons given were ‘respect for the aged’ and ‘tribal nepotism’. These results clearly indicate that there are serious factors which lie outside the control of VET. The supporting role of schools, for example, if not successful can be responsible for difficult problems at a later stage, which may hinder the work of VET staff and will reduce the job opportunities and the usefulness of VET graduates to their employers.

The recent VET graduates were asked two further questions of a general, but relevant, nature about matters which had been omitted from their VET training.³ These were: ‘should VET train for future job requirements?’ To which the response of 94% was ‘yes’ and, ‘should VET also train for a better understanding of workplace conventions and practices?’ Here, 97.1% replied ‘yes’. These were strongly held opinions of recent VET graduates, most of whom had had more experience of their relevance and

¹ Senior Officer in DVET

² Appendix A86: Recent VET Graduates: Source of Deficiencies

³ Appendix A87: Recent VET Graduates: Should VET train for future job requirements and workplace conventions and practices?

importance than many of their ex-lecturers/instructors. Such topics should be addressed earlier, possibly in conjunction with the industrial placement episodes of their training.

Finding Work

The question 'How long did it take you to find work?' was used in the structured interview but not the self-completion questionnaire. It has been estimated that over 3,000 VET graduates qualify each year,¹ but that less than a third of VET leavers had already been promised employment at the end of their course.² The difficulty in obtaining work after graduation is further illustrated by the data in Table 12.11.

Table 12.11: Recent VET Graduates: Time Taken to Obtain Work after Qualifying (Interview Only)

Time Taken to Obtain Job	Number of Jobs Obtained
0 months (mostly sponsored)	12
Between 2 & 4 months	3
Between 5 & 8 months	5
Between 9 & 12 months	3
Between 1 & 3 years	4
Between 4 & 8 years	5
Over 8 years	1
Total	33

These were the lucky ones. The normal situation encountered by many graduates is unemployment within the areas for which they had been trained and, if they are fortunate, they may eventually obtain employment in jobs which are not necessarily directly related to their VET training, having benefited from their period of training and being more mature, which may give them an advantage over direct school leavers. The number of *employees* who completed the structured interviews (33) or the self completion questionnaires (41) in 1999 was very small when compared with the *unemployed* population with the equivalent qualifications in 2001, the first year that figures for the

¹ Ministry of Education, DVET Annual Report 1996-97

² Chapter 10: Table 10.11: VET Leavers: Jobs Promised v Institute Attended: 229

‘unemployed population by education’ were published.¹ That included, unemployed VET graduates with Brigade Certificates (2518), Apprenticeship Certificates (827) and Vocational Diplomas (199), a grand total of 6,084 without work. The amount of money apparently wasted on unused VET training indicates serious deficiencies in government’s analysis of the complex requirements of industry.

An accompanying rider to the question used to compile Table 12.11 was ‘Was it easy to get a job?’ to which the overwhelming answer was ‘No.’ This highlights one of the weakest links in the training system: why train for the non-existent jobs of a high unemployment economy? The large number of young people who have been trained and yet remain unemployed must, in time, turn potential trainees away from VET. The economists “may regard skills as acquired faculties that generate higher productivity and hence better wages or better employment prospects ...” (Ashton *et al*: 70). However, this does not provide much comfort to those who have no job and little chance of obtaining one. The most disturbing factor to emerge from this section was perhaps the difficulty experienced and the time taken by recent VET graduates to obtain employment after qualifying. This is a reflection of the difficulty of forward planning, which should identify the number of current and future jobs which will require filling, and attempt to equate these numbers to a sufficient number of appropriately skilled graduates in training.

Employment

Here, the type of organisation and management and the relationship between the recent VET graduates, the job, the culture of the workplace and their links, if any, to their earlier preparation with VET were examined through the opinions of the recent VET graduates. Some of the factors involved and the relationships of the recent VET graduates to employment have been introduced in the previous section on training. The focus here will move to employment, how the recent VET graduates have responded to this change of environment, whether their training was appropriate, and might be improved, to equip them to become more effective in the workplace.

¹ Republic of Botswana (2001) Labour Statistics 1999: 40

Organisation and Management

In order to further understand the context in which the recent VET graduates were working it was considered necessary to obtain an indication of the organisation and management system in which they operated.¹ These questions were included only in the structured interviews, so that, if necessary, the terminology could be explained fully. In the event, no explanations were required, and 61.0% claimed that their employer's management style was hierarchical, 33.3% that there were full discussion but the management made the decisions and 5.1% that there was a consensual decision making. 89.5% stated that the organisational structure was in the form of a hierarchical pyramid.²

Workplace Factors

The workplace is where the work is organised and carried out, and where the overriding purpose is to use one's knowledge and skills to provide a service, or to manufacture goods, at a competitive price. It is therefore important that the recent VET graduates are able to do so without hindrance and to the best of their abilities. This can involve several other factors besides their knowledge and skills, for instance, in Botswana personal status and respect can be a very important and sensitive issue.

The following factors were considered, and data obtained, to analyse the pervading atmosphere of the workplace:

Status:³ In Botswana personal status can be a very important and sensitive issue. However, in the recent VET graduates' survey, 25.9% believed that they were well respected, 57.4% thought that they were satisfactorily respected and 13% claimed that their status was not good.

Problems with Workplace Conventions:⁴ Here the responses were equally divided between those who had problems and those who had none.

Problems Working in a Team:⁵ Again, an almost equal split was found between those who had problems and those who did not.

¹ Appendix A88: Recent VET Graduates: Management Style

² Appendix A89: Recent VET Graduates: Organisational Structure

³ Appendix A90: Recent VET Graduates: Perceived Status within their Company

⁴ Appendix A91: Recent VET Graduates: Problems with workplace conventions?

⁵ Appendix A92: Recent VET Graduates: Problems working in a team?

Problems with Cultural Differences:¹ When questioned on this point, 41.9% claimed that there were problems and 58.1% said that they had no problems. In this context 'Cultural' could be interpreted as inter-generational, inter-tribal or expatriate cultural differences. Despite differing backgrounds, most of the VET graduates (who were of the younger generation) accepted these differences as inevitable.

Working Relationships:² 87.7% claimed to have good working relationships with both their superiors and peers.

Job Satisfaction

When the topics of their career prospects or their promotion were raised, only 37.% claimed that their chances were either OK or very good.³ However, 85.4% believed that qualifications were either essential or very important for good career or promotion prospects.⁴ Almost all said that they would retrain if their job depended on it and their employer paid for it. Two of those who opted for another job also voted to retrain at the company's expense!

The lack of opportunity for further training was their greatest disappointment (43.9%).⁵ This was confirmed by 95.0% of those who undertook the structured interview, who stated that they were willing to undergo further training.⁶ More positive indications of general satisfaction with their jobs arose when asked if they enjoyed their work, 96.2% agreed.⁷ The response to 'do you find your job interesting?' was 88.5% in the affirmative.⁸ Similar reactions were observed in answers to the question: 'with hindsight, do you wish that you had trained for a different job?' 88.9% answered 'no' and only 11.1% said 'yes'.⁹

¹ Appendix A93: Recent VET Graduates: Problems with cultural differences?

² Appendix A94: Recent VET Graduates: Made good working relationships?

³ Appendix A95: Recent VET Graduates: Promotion and Career Prospects

⁴ Appendix A96: Recent VET Graduates: Importance of Qualifications for Promotion

⁵ Appendix A97: Recent VET Graduates: The Greatest Disappointment on Starting Work: Lack of training opportunities

⁶ Appendix A98: Recent VET Graduates: Willingness to undertake further training?

⁷ Appendix A99: Recent VET Graduates: Do you enjoy your job?

⁸ Appendix A100: Recent VET Graduates: Interesting job?

⁹ Appendix A101: Recent VET Graduates: With hindsight, do you wish for a different job?

The general satisfaction of the recent VET graduates with their jobs in both the vocational and technical areas was high. This should not have been a surprise, since it was the positive culmination of the training ambitions of the relatively few of the recent, and possibly the best, VET graduates who had managed to obtain employment in their field of competency. However, there are several features of their responses which implied that VET could be improved.

Summary

The most important points arising from the recent VET graduates' responses concerned the strong gender bias against young women in the areas investigated in this survey. This untapped source of talent forms a great potential for the development of future industry in Botswana. Such bias should have little to do with the amount of manual work entailed in most of the trades since, traditionally, women are expected to work manually on the farms and in manual urban jobs. An urban bias in favour of a greater number of urban students in VET might also be expected, since town life provides greater exposure to radio, television, English, and access to practitioners of a wider range of careers whose experience and advice could be invaluable. However, unemployment and poverty are higher in rural areas, from which VET provides an avenue of escape and which is reflected in the ratio of rural to urban VET graduates.

While deficiencies from poor training, which resulted in problems at work, were attributed by 70% to school education and 61% to VET. Even so, there was a very positive approach to further training, which may have resulted from their more general satisfaction with the job and their realisation that their previous VET training was insufficient for the future. However, expecting the employer to finance future training reflected the fact that these recent VET graduates had all had their previous training paid for by the state.

The organisation and management of the work can be the biggest factor in the productivity and profitability of a process. Most companies in the survey used the traditional hierarchical model (which corresponds in many ways to that of the traditional village), sometimes modified to suit the needs of the specific industries. For example, after full discussion, supervisors could make small, local decisions, whilst major decisions were handed down from above. An interesting comment, made by one respondent, in relation to teamwork and

management was that ‘the manager often blames the workers for doing the work directed by the foreman’!

Culturally however, because of the traditional respect demanded by older people, it was claimed that some older workers might deliberately refuse to act upon legitimate instructions given by younger, better qualified supervisors. Another much less common explanation claimed that this reluctance was due to the older workers being ‘overtaken’ by their younger, better qualified colleagues.

In general terms, this section of the survey has revealed that, over a wide range of industrial sectors, many technically trained young people who have used their training to earn their living have found some of their training to be less than satisfactory, especially in the areas adversely affected by inadequate VET industrial placement experience and practical skills training. They appeared to be thankful to have a job in a country of high unemployment and, in spite of cultural and work organisation difficulties, were still anxious to improve their skills. However, the current perceived weaknesses, especially in practical abilities, may have contributed to the inability of many recent VET graduates to obtain employment in markets where jobs were scarce.

The purpose of this thesis has been to examine whether VET in Botswana is meeting the needs of the employer and the trainee, as they form an important requirement for many enterprises. The next chapter will therefore review the employers’ views on the current VET system. What are its good points? Can it be improved? Does it cater for future developments? And, what are the likely factors upon which such developments depend?

CHAPTER 13

Employers and Employment

Introduction

The original stimulus for undertaking this study was the worrying rate of dissatisfaction with VET that I encountered in my everyday dealings with employers, or their designated representatives, whilst working in Botswana. In this chapter, the opinions of the employers, whose business often depends upon the graduates of the VET, will be examined. The purpose was to determine the employers' perceptions of VET and investigate how it might be improved. The use of vocationally and technically trained personnel has made the development of many types of modern industry possible. Both the employers and other experts involved, have an especially important role to play in Botswana's industrial development.

Range of Industrial Sectors Surveyed

The range of industrial sectors (recognised by the ISIC¹) from which employers were drawn, shown in Table 13.1, included seven from the private sector and three from the public sector.

Table 13.1: Employers: Industrial Sectors of Surveyed

Sector	Frequency	Valid %
1. Agriculture	4	4.2
2. Mining	8	8.4
3. Manufacturing	9	9.5
4. Construction	18	18.9
5. Consultancy	2	2.1
6. Auto/Transport	13	13.7
7. Hotel/Tourism	8	8.4
8. Training (Brigades/VTC)	13	13.7
9. Local Government/Land Boards	9	9.5
10. Public Utilities	11	11.6
Total	95	100

N.B. 1 – 7 = private sector, 8 – 10 = public sector

¹ Appendix A12: Botswana Standard Industrial Classification

The status of VET, as seen through the eyes of the employer or their designated representative, in conjunction with the opinions of additional key personnel, will be considered under the following four headings:

1. The background of the employers.
2. The employers' satisfaction with VET graduate skills.
3. The major points arising from the employers' survey.
4. Comments: Additional Experts.

1. Background of Employers

The rank of the employers, or invariably their designated representatives, who took part in the survey was extremely varied, and included six different categories from Director to Training Officer.¹ There was also a wide variation in size of the companies surveyed. These were categorised by number of employees into six groups from 1 – 25 to 1001 – 5000.² The overall split of these companies between public and private enterprise was very nearly equal.³

Characteristics of Employers

As Botswana was one of the ten poorest countries in the world at independence, it has taken time to establish its industry, to train its personnel and to allow time for them to gain managerial experience. In Table 13.2 a comparison of the numbers of Botswana Directors / Managing Directors (6 out of 20), with those for Managers / Superintendents (18 out of 34), reveals the large extent to which top managerial authority remains in the hands of expatriates. Most of the Botswana, could only have started their climb to the top after the revenue for diamonds had been secured in the early seventies. In the late seventies and early eighties, much of that money was ploughed into an infra-structure for Botswana to attract industry. Only 10 out of the 23, with 21 to 42 years of experience, were Botswana.⁴ However, 17 Botswana respondents who have had between 1 to 10 years experience were in positions of responsibility, whereas only 5 of the other nationalities with so little experience were listed. This is an example of the effect of the pressure to localise.

¹ Appendix A102: Employers: Rank of Employers/Employers Representatives

² Appendix A103: Employers: Number of Employees in Companies Surveyed

³ Appendix A104: Employers: Public and Private Enterprise

⁴ Appendix A105: Employers: Years of Experience v Nationality

Table 13.2: Employers: Rank v Nationality

Rank	Nationality (Frequency)*						Total
	1	2	3	4	5	6	
Director / Managing Director	6	2	5	2	2	3	20
Manager / Superintendent	18	6	5	3	2		34
Technical Officer / Engineer / Supervisor	18			1	1	3	23
Administration Officer / Personnel Officer	1				1	1	3
Technician / Senior Technical Assistant / Technical Assistant	6			1			7
Training Officer	2	2		2	1		7
Total	51	10	10	9	7	7	94

* Key: 1. Batswana 2. British 3. South African
 4. Zimbabwean 5. Indian / Sri Lankan 6. Others

Both Tables 13.2 and 13.3 imply that a large proportion of well-qualified expatriates and Batswana are in the higher echelons of managerial staff. However, despite the equivalence in qualifications, the expatriates would normally have the greater experience, which is expected in the top management of a hierarchical structure. The policy of localisation, which is advocated by the Botswana government, is difficult to implement when the employers, who finance the ventures, are often themselves expatriates.

The overall imbalance between male and female employers contacted was approximately 93% for males to only 7% for females, with very similar proportions for citizens and non-citizens.¹ Consideration of qualifications and gender, indicates that only five females with higher qualifications are in positions of responsibility as opposed to fifty males.² There are no females below diploma level, whereas eighteen males hold such positions with qualifications lower than diplomas, which is indicative of a male dominated society. This cross-tabulation of gender and citizenship, may not show the complete picture, as citizenship may not always coincide with nationality, since some expatriates have obtained citizenship as a response to the increased pressure towards localisation.

¹ Appendix A106: Employers: Gender v Citizenship

² Appendix A107: Employers: Qualifications v Gender

Table 13.3: Employers: Qualifications v Nationality

Qualifications	Nationality (Frequency)*						Total
	1	2	3	4	5	6	
Degree	13	1	1	2	5	4	26
Higher National Diploma / Cert.	5		1	2		2	10
Diploma	12	2	2	1	1		18
Certificate / Full Technician Cert.	5	2		1			8
National Craft Cert. / Trade Test A	6						6
Trade Test B or C	3						3
In House				1			1
Total	44	5	4	7	6	6	72

* Key: 1. Batswana 2. British 3. South African
 4. Zimbabwean 5. Indian / Sri Lankan 6. Others

Ultimately, the younger generation of potential Batswana managers could provide the stimulus to develop more appropriate methods of organising work, which could resolve many of the differences between Tswana and western culture in the workplace.

2. Employers' Satisfaction with VET Graduates Skills, their Deficiencies and their Interaction in the Workplace

The Importance of Trained Employees to Employers

Three questions were put to the employers or, more frequently, their designated representatives in order to assess how important the role of vocationally trained employees was in their companies. Employers were asked to give their estimate of the importance of well-trained personnel for both craftworkers and technicians separately.¹ The totals for the combined categories of essential and important, taken together, were 92.4% for craftworkers and 93.4% for technicians. When the relevance of the initial qualifications to the job was questioned, 93% claimed that it was either essential or important for both craftworkers and technicians.² Finally, the employers were asked if they could manage without trained personnel, 86.6% answered 'No' for craftworkers and

¹ Appendix: A108 Employers: Importance of Well-Trained Technical Personnel

² Appendix: A109 Employers: Relevance of Qualifications to Job

80.0% responded 'No' for technicians.¹ Taken together, these three results appear to confirm the overriding importance of well-trained technical staff.

Type of VET Graduates Recruited and their Career Prospects

It was evident that the initial qualifications at recruitment were important, although the range of qualifications showed a wide variation, because of the different requirements of the companies surveyed for this study.² When asked about their policy when new skills were required, 87.5% of the employers questioned replied that they would train existing staff themselves and only 12.5% would recruit ready trained staff, possibly because they would have greater control and confidence in their own standard of training.³ The right qualifications were seen as a pre-requisite for promotion, with 42.3% of employers claiming that they were essential, 46.2% that they were important and 11.5% that they were desirable.⁴ When the employers were asked to comment on the career prospects of the recent VET graduates, it was noticeable that the more highly trained technicians were seen to have better prospects than the craftworkers; around 77% of employers thought that craftworkers and that 90% technicians had a very good, or excellent, chance of furthering their careers.

Table 13.4: Employers: Recent VET Graduates' Career Prospects

	Craftworkers		Technician	
	Frequency	Valid %	Frequency	Valid %
Excellent	13	17.1	23	31.1
Very Good	46	60.5	44	59.5
Poor	17	22.4	7	9.5
Total	76	100	74	100

Employers' Opinions on VET Graduate Skills

Of the total of 95 employers, 34 agreed to take part in a structured interview and 61 answered self-completion questionnaires, which asked their opinions of their VET graduate employees' work. The results were initially divided into three sections according to their training institution: brigades, vocational training colleges and

¹ Appendix A110: Employers: Can manage without trained personnel?

² Appendix A111: Employers: Initial Qualifications of Employees

³ Appendix A112: Employers: If new skills were required what would you do?

⁴ Appendix A113: Employers: Relevance of Qualifications for Promotion

technician training institutions. Assuming that the employers, or their representatives, are familiar with the work of their VET graduate employees, they should be in the best position to judge the efficacy of the training. These are summarised in Table 13.5 which was formed from an amalgamation of three other tables.¹ Employers' opinions are disturbing.

Table 13.5: Employers: Satisfaction with VET Graduates

Brigades (Trade Test B & C)					
Employer's Opinion	Theory %	Practical Skills %	Attitude to Work %	Relevance of Training %	Average %
Satisfied	77.5	78.1	62.5	79.3	74.4
Dissatisfied	22.5	21.9	36.5	20.7	25.3
Vocational Training Colleges (Apprentice – National Craft Certificate, Trade Test A)					
Satisfied	87.9	70.3	51.4	78.4	72.0
Dissatisfied	12.1	29.7	48.6	21.6	28.1
Technician Institutions					
Satisfied	91.4	64.3	75.5	86.3	79.4
Dissatisfied	8.6	35.7	24.5	13.7	20.7
All Institutions					
Average Dissatisfaction	14.4	29.1	36.6	18.7	

The VET graduate areas given the greatest criticism, according to the employers or their representatives were 'attitude to work' and 'practical skills'. Out of all of the participating employers of VET graduates, an average of 36.6% were dissatisfied with their 'attitude to work' and 29.1% with their practical skills. The heaviest criticism of this trait, at 48.6% of employers, was reserved for the 'attitude to work' of the Vocational Training College (VTC) graduates, which included the apprentices. This was especially unfortunate since the government had placed great store in the apprenticeship scheme. When asked whether VET should include 'attitude to work' as part of the courses, responses were 84.5% with respect to craft students and 76.2% for technicians.² The next heaviest criticism was for the graduates' practical skills. Here, the overall average

¹ Appendix A114: Employers: Satisfaction with VET Graduates: Brigades

Appendix A115: Employers: Satisfaction with VET Graduates: VTCs

Appendix A116: Employers: Satisfaction with VET Graduates: Technician Training

² Appendix A117: Employers: Should VET include instruction on good attitude to work?

dissatisfaction rate was 29.1%, with the most unsatisfactory rating reserved for the technicians at 35.7%. It should be noted that the corresponding, average dissatisfaction rate given by VET lecturers/instructors for their final year students were 3.7% for 'attitude to work' and 16.1% for 'practical skills'.¹ Greater satisfaction was shown among employers in their response to the question 'do VET graduates work well in a team? For craftworkers the affirmative response was 84.0% and for the technicians it was 89.6%.²

It would appear that the importance of well-trained technical staff was shown to be paramount according to the employers in the previous section,³ and yet, even where it has also been shown that there is a surplus of VET graduate job hunters in the market, presumably enabling employers to select the 'best' candidates, the employers are still not satisfied with them, particularly in the terms of 'attitude to work' and 'practical skills'. These can be sensitive areas, especially during times when there are continuous changes in jobs and culture due to globalisation and the overall differences to be accommodated when moving from a traditional agricultural village to an urban environment. These include the adaptation required during transition from the traditional Tswana to western working practices and the rapid changes in technology. Confusion can arise, for instance, when some good craftworkers or technicians, who have been promoted to managerial or lecturing positions, allow their little finger nail to grow longer, in order to show that they no longer work with their hands who, in their positions of role models, give very mixed messages to their trainees. Further, VET graduates, especially if they have been apprentices, will have realised that many of their lecturers/instructors have had little or no workplace experience and this gives little confidence to their students, so that having 'qualified' as tradesmen they may still be unsure of themselves, which can affect their attitude and performance within the workplace.

At a different level, it was explained to me by a senior civil servant that, as part of a localisation programme, a young Motswana was sent to the UK in order to obtain an M.Sc. in the field of Health and Safety. Upon his return he was allocated his own hut on a construction site, in order to obtain further experience of his studies' application on the

¹ Chapter 11: Table 11.7: VET Lecturers/Instructors: Degree of Satisfaction with Students' Training:
(c) Attitude and (b) Practical Work: 249

² Appendix A118: Employers: Do VET graduates work well in a team?

³ Appendix A108: Employers: Importance of Well-Trained Technical Personnel

site. Six weeks later, during a site visit, his superior officer asked the site agent for his comments on the young man. The site agent replied that they had not seen him, except when arriving at his hut in the morning or leaving in the evening. When challenged about the missed opportunities to learn from the site personnel, the young man replied that he could not be expected to reveal his potential ignorance of the job one week and then expect any site worker to respect and cooperate with him the next!

‘Face’ and ‘respect’ can be very important in Tswana society, where your position in society may depend upon the family into which you are born, your age or the number of cattle you owned, whereas, in western industry, respect depends much more upon the ability to apply knowledge effectively. If either party is unaware of the differences in background of the other, especially if the VET graduates have not been effectively trained, it is not surprising that ‘attitude to work’ and ‘practical work’ are problem areas. A much closer *rapprochement* between the vocational training institutions and the employers would assist in identifying the means of reducing such problems.

Recent VET Graduates’ Skills Deficiencies and the Causes

The skills investigated here refer to those of communication and numeracy, in which competency is often taken for granted, but inadequacy can be detrimental to the efficient running of a modern business or industrial enterprise. For clarity and ease of comparison, the employer’s responses to these questions have been summarised into Table 13.6.¹ In general, it may be seen that the technicians have markedly less problems than the craftworkers. This feature may be directly attributable to the different entry criteria for their courses: ‘O’ level for technicians and Junior Certificate (JC) for the craftworkers. At that time the JC holders had 2 or 3 years less instruction in English, the language of instruction, of examinations and, frequently, the upper echelons of the workplace. The resulting problems are illustrated in Table 13.6, where 39.1% of craftworkers were regarded as being inadequate at reading instructions, and 71.0% had problems with writing reports. A large majority of both the craft and technician recent VET graduates were said to have problems giving oral instructions (47.1% and 30.0% respectively). This could well have been because of the cultural difficulties, whereby the recent VET graduates may have had some resistance in persuading their elders to act upon their

¹ Appendix A119 (a) and (b): Employers: Do recent VET graduates craftworkers have problems?
Appendix A120 (a) and (b): Employers: Do recent VET graduate technicians have problems?

instructions because, although they were more highly qualified, they were also much younger and could be considered as disrespectful.

Table 13.6: Employers: Do graduate craftworkers and technicians have problems with?

	Craftworkers %		Technicians %	
	Yes	No	Yes	No
Reading instructions	39.1	60.9	15.2	84.8
Writing reports	71.0	29.0	29.7	70.3
Executing oral instructions	18.9	81.1	10.6	89.4
Giving instructions	47.1	52.9	30.0	70.0
Numeracy	33.9	66.1	18.3	81.7
Computer literacy	84.4	15.6	46.8	53.2

Neither the recent craft VET graduates nor the technicians had good computer skills. The craft graduates were mainly products of the community junior secondary schools which, whilst providing basic education, had not entered the computer age when these graduates were pupils. However, the situation was better with technicians who came from the senior secondary schools, which had longer courses and better facilities, including some computers. In the particular case of computer literacy, the lack of facilities and trained staff has been gradually addressed in VET, starting with the technicians and then the VTCs. Progress has been slower in the brigades, where the need for computer literacy is not as universal as it is for the technicians and apprentices.

Causes of Deficiencies

Employers or their representatives were asked to nominate which of the one or more of the four possible sources were responsible for the VET graduates skill deficiencies with a simple 'yes' or 'no' (Table 13.7). They decided that all four were culpable but that the greatest responsibility rested mainly with the schools, with 95.6% supporting that conclusion for the craftworkers, and 88.9% for the technicians. In addition, it should be noted, that significantly more employers supported this view than any other of the options and, as this provides the base upon which VET was built, and was also partly responsible for the Ministry of Education's career advice, it must receive most

blame. Cultural background, with 75.0% for craftworkers and 81.8% for technicians factor to deficiencies in performance, must also be considered an important factor. An example of the cultural problems, which may occur in the lower or middle management was explained to me by the director of a large construction company. He had some twenty-five years experience in that industry, starting in the UK and then working in several southern African countries before settling in Botswana. His problem was that, with only rare exceptions, was he able to get the expected work rate out of his bricklayers, labourers etc. in Botswana which he had previously obtained elsewhere. They simply would not respond to their well qualified, but younger Batswana supervisors and foremen. Several times a year, the director had to go to the immigration office in order to argue very strongly for new or extension work permits for expatriate workers, who were not constrained by traditional culture.

Table 13.7: Employers: Causes of Deficiencies in Recent VET Graduate Skills

Craftworkers								
	Faults in VET		Faults in Schooling		Cultural Background		Poor Career Choice	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Yes	25	78.1	43	95.6	21	75.0	20	74.1
No	7	21.9	2	4.4	7	25.0	7	25.9
Total	32	100	45	100	28	100	27	100
Technicians								
Yes	12	70.6	32	88.9	18	81.8	18	78.3
No	5	29.4	4	11.1	4	18.2	5	21.7
Total	17	100	36	100	22	100	23	100

It has already been illustrated that the career advice received in school is largely ineffective, and an average of 76.2% of the employers or their representatives considered that 'poor career choice' was the cause of deficiencies in the performance of VET graduates.¹ The option with the least blame was VET. However, with an average of 74.4%, this category also gives cause for concern. If young people are to attain their potential, then the goal of much closer communication between schools, VET and the employers, for the sake of mutual benefit, should be established.

¹ Appendix A51: School Leavers: Ranked Source of Job Advice
Chapter 10: Table 10.6: Source of Advice for Career Guidance: 220

3. Major Points Arising from Employers' Survey

The major points are presented here where they can be connected to those of the recent VET graduates. For convenience they are presented in the general order in which they have been dealt with in this chapter.

The employers, in spite of being associated with industries of a wide range of sizes and products, had certain points in common which may well have affected their attitudes towards recent VET graduates. Comments made elsewhere may apply equally to the employers in this chapter.¹ The places of origin of the employers were much more widely scattered than those of the recent VET graduates, many coming from other countries. A high proportion of the higher management posts of the private companies were held by expatriates, but these were in the process of being localised at virtually all levels in government bodies. However, although generally high levels of qualification were held at all levels, the middle and lower bands of management were predominately Batswana, who were gaining the necessary experience prior to further promotion. There was a very strong bias against the employment of women in management.²

All employers and their representatives emphasized the importance of having well trained staff. This confirmed the existence of a substantial and growing number of jobs for well trained VET graduates to jobs, although it was not enough to cater for more than one third of the output of graduates. Even where the employers could take their pick of the best recruits, however, their expectations were frequently not matched by the quality expected of those recruits, especially with regards to 'attitude to work' and 'practical skills'. The employers also found other deficiencies in the graduate's background in terms of literacy and numeracy, which adversely affected their efficiency and the productivity of their enterprises. These were attributed to: poor schooling, cultural background, poor career choice and faults in VET. It should be noted that when the German dual-system of apprenticeship was introduced in the VTCs (1985) an integral component of curriculum development involved consultation with industry, however, the required supporting finance was not forthcoming and that, coupled with inter-ministerial problems, resulted in an ever increasing, incorrect implementation of training programmes, for instance, the industrial placement of students lacked guidelines for

¹ Chapter 10: Table 10.1: VET Leavers: Gender Distribution: 216

² Appendix A107: Employers: Qualifications v Gender

employers and monitoring by trainers. The process of curriculum development which had been applied to almost all courses at the Botswana Polytechnic prior to its absorption in the University in 1995, included a strong input from the relevant employers, but only provided college based practical experience as most students had unmonitored experience with their sponsors. Some establishments, such as the Road Training Centre and Botswana Telecommunications Corporation, provided their own training curriculum to meet their specific requirements.

Even though some employers have an, often justified, reputation for unnecessarily criticising VET, all of the preceding factors should be taken seriously by both the employers and the VET graduates who have expressed their willingness to undertake further training,¹ for successful implementation of the government's human resource primary development strategy for industry which:

is directed at the employment of educated and skilled people in well paying and viable jobs which will in turn create the demand that will absorb many of the lower skilled and lower educated members of the labour force. Placing a priority on creating employment for educated and skilled workers is therefore not an alternative to a strategy of emphasizing unskilled labour. Rather it is complementary and supportive of it. (Industrial Development Policy for Botswana, 1998: 15)

Such development should provide new and efficient industries and place more emphasis upon the yet greater need, over and above the already existing need, for key skills, such as communication, team work, problem solving, creativity, self-reliance and individual initiatives (Brown *et al*, 2001), which challenge the routine, role following behaviour demanded by Fordist industries (the norm for most of Southern Africa) and corporate bureaucracies, as well as some of the more restrictive practices and sanctions of traditional cultures. Whilst discussing similarities between the traditional Botswana village hierarchy and that of government bureaucracy, the Senior Training Officer of a Botswana parastatal (a nationalised body) summarised the views of several other 'experts', that:

the rigid interlocking hierarchical levels of the traditional village have been recreated in the government civil service, which has led towards a similar rigidity in much of Botswana's industry, and excessive respect for one's elders have no place in modern industry.

¹ Appendix A98: Recent VET Graduates: Willingness to undertake further training?

In the context of rapid changes in technological innovation and built in obsolescence, which characterises many new, high skills industries, frequent retraining and teamwork could be required, both of which are accepted by many of the recent VET graduates, a great number of VET graduates are currently in need of retraining because of their existing deficiencies in communication, numeracy and computer literacy. However they might sacrifice potential opportunities of retraining as the employers will not select those with a poor attitude to work for retraining. All of those with a poor attitude to work should expect such negative treatment, especially in the new and efficient industries. However, for a greater impact upon the creativity of such industries, more employers will need to be persuaded to adopt the approaches of more efficient, modern methods of management appropriate to their enterprises, entailing a move away from the rigid, hierarchical forms of work management.

4. Comments: Additional Experts

Many comments attributed to additional experts have been included in the previous chapters, however, there are views, other than these, which contribute positively to the discussion concerning the quality of training of the VET graduates.

For many, the root causes of the problems lay with those aspects of traditional Tswana culture which influenced the actions of the individual at work. These would include, for instance, respect for one's elders, and would be firmly imprinted on the minds of the villagers from birth and would form the building blocks of the village hierarchy.¹ The deference shown to one's elders may also show itself as deference to authority, from apparently docile children in school to students' lacking initiative in college.² A VTC lecturer claimed that 'culturally we expect to be trained, not to train ourselves, and this results in spoon-feeding'. Many of the experts commented on the lack of motivation in the workforce, with social interaction often taking precedence over a positive work ethic. It was suggested that lack of understanding led to lack of interest in their work and that a more responsible approach to briefing the workers by management, coupled with praise and possible financial reward, could help to improve motivation. The Botswana National Productivity Centre is making some headway in this direction, but there are still many problems at mid and grass-root levels. An ex-Yugoslavian engineer in the civil service

¹ Chapter 2: 29

² Chapter 5: 101

complained that ‘the system here is very like the old communist system: you cannot fire anyone for poor workmanship and you cannot reward anyone who has worked particularly well.’ An expatriate training officer in an electrical installation company claimed that ‘the apprentices and technicians produced here (Botswana) are what we in the UK would classify as semi-skilled: they need constant supervision.’

The previous comments make disappointing reading, however, it must be realised that there are also many excellent, intelligent and hardworking individuals who, whilst admitting the implications above, can also suggest potential ways of making substantial improvements to Botswana’s VET system. The Motswana director of a parastatal stated that:

attempts to raise productivity have run into cultural difficulties which lead to lack of input, lack of creativity and lack of individualism. Big changes to a more positive attitude are needed for success in all areas of education and training; schools, VTCs and brigades. See what the English medium schools can do with the same basic material.

Another Motswana parastatal director made a very cogent argument that the school subject of Design and Technology should be strongly amended to include many more community based projects, which should be devised to have a much closer relationship with the major subjects of Maths, English, Science and Computing, as a means of improving creativity, understanding and high skills in a community context, and would contribute to overall improvement, and appreciation of practical skills.

The training manager for the Korean based Botswana Motor Company confirmed that they spent a lot more time training workers than most western companies of a similar nature even though the company had selected Botswana because basic education was considered to be better than that in the surrounding countries. He also emphasised that the Tswana trainees responded well to their training regime and that lessons could be learned from their experience.

The principal of a Botswana training company recommended that it would be sensible for Botswana to adopt the same craft and technology courses from South Africa, whose curricula were appropriate and were already accepted in the SADC region. This proposal was also supported by several highly placed company managers who were similarly

concerned about the appropriateness of the Botswana curricula, attitude to work and the poor standard of lecturers. Several curricula development committees had been established involving both training institutions and employers. These met intermittently but it was felt that, as yet, positive spin-off had been minimal. Finally, one consultant claimed that several sectoral organisations were so disgusted with the poor quality of the lecturers and the curricula, that they had banded together to organise a team of South African lecturers to provide more relevant courses in Botswana and better lecturers. The presentations were much better and the outcomes very positive, producing workers appropriately skilled to the level that the employers required.

In this section some of the difficulties of VET in Botswana have been affirmed, and ideas for the necessary improvements in the standard of teaching in the schools, brigades and colleges have been suggested. This indicates that there is the potential for support of a well organised consensus for developing genuine improvements in VET in Botswana.

Summary

Even though this was by far the most difficult group from which to obtain data, a total of ninety-five employers, or representatives, of the companies which had employed recently qualified VET graduates, had the time and interest either to complete self-completion questionnaires or to undertake the structured interview schedules.¹

They emphasised the importance of well-trained staff, and almost all stated that they could not manage without their VET graduate employees. However, of the number who graduated each year, only a third were obtaining employment. Whilst this created an employers' market, presumably allowing the employers to recruit the better, recent VET graduates, the employers were still not impressed with the level of training given by VET.

The areas in which most dissatisfaction was expressed were the recent VET graduates' attitude to work and their practical skills, with average employer dissatisfactions of 36.6% and 29.1% respectively.² When craftworkers and technicians' literacy and numeracy deficiencies were compared, they were reported to be much worse amongst the former than the latter, attributable to the higher academic calibre demanded of the technicians by the

¹ Table 13.1: Employers: Industrial Sector Surveyed: 275

² Table 13.5: Employers: Satisfaction with VET Graduates: 280

course entry requirements.¹ Of the causes of the deficiencies, as seen by the employer or his representative, ineffective schooling, with 92.3%, was considered to be the major contributor to inadequate performance.² Other factors, such as many inefficient and industrially inexperienced VET staff and inappropriate careers guidance were also rated as prime causes of deficiency. Cultural background was criticised as being an unnecessary complication in the workplace

However, employers state that the recent VET graduates work well in a team, giving 84% for craftworkers and 89.6% for technicians.³ This is one of the key skills which will be required, in addition to the existing traditional vocational subjects, if the government's Industrial Development Policies (1998) for developing new high skills industries are to be successful.

The success of VET in Botswana is clearly, though not solely, dependent upon the evaluation of the employers at whom it is aimed. However, it should also be able to meet future demands. It is dependent upon other factors, such as the calibre of the students; their lecturers and instructors; the quality and relevance of the curricula (which were criticised); the quality and appropriateness of facilities; the effects of the standards in schools; the overall cost implications; the increases in the number of jobs and their technical and other demands. The Additional Experts generally agreed with the comments of the employers, but also suggested some positive ideas which, properly developed and resourced, could improve the quality of VET at secondary school, craft and technician levels. These factors will be considered in the next chapter in the wider context of analysing and forecasting future industrial, economic, social constraints, opportunities and skills policies in Botswana.

¹ Table 13.6: Employers: Do graduate craftworkers and technicians have problems? 283

² Table 13.7: Employers: Causes of Deficiencies in Recent VET Graduate Skills: 284

³ Appendix A118: Employers: Do VET graduates work well in a team?

CHAPTER 14

Conclusions

Introduction

The purpose of this study was to investigate the role of vocational education and training (VET) in supporting the industry and economy of Botswana, to enable policy makers to develop a better understanding and appreciation of VET and to contribute to improving the efficacy of VET. Since the early 1990s Botswana has experienced a steady increase in the numbers of citizens who are unemployed, especially amongst the youth where, in 1998, 35.4% of the 15 to 19 year olds and 32.9% of the 20 to 24 year olds were unemployed.¹ This situation resulted in heavy criticism of the schools, with their academic curriculum geared towards the production of white collar workers and the perceived inadequacies of the vocational training institutions, to the effect that the pupils and the students were ill-prepared for the world of work. The government responded by pumping increasing amounts of money into the education and training system, on the basis that a more skilled workforce would attract more industry and hence provide more jobs.

Many general impressions and much factual information were obtained during my ten years of working in Botswana. Most of my work was with technicians at the Botswana Polytechnic but, when Principal, my involvement with high officials at the Ministry of Education extended my awareness of the wider issues challenging the country. The year seconded to the 1993 National Commission on Education further developed my understanding and desire to examine the role of VET in more depth. Much of the information used to clarify these issues for this thesis was collected during the five month, 1999 empirical survey, when nearly three thousand questionnaires or structured interviews were administered,² the views of five village focus groups were obtained³ and over one hundred and forty additional experts were consulted.⁴

In order to appraise the needs and achievements of VET in Botswana it was essential that the requirements and quality of the pre-VET and educational preparation were considered in relation to the skills required by industry. At that time the policies and practices based on

¹ Republic of Botswana (2000) Labour Statistics 1998

² Appendix A121: Numbers of Questionnaires and Interviews Administered

³ Appendix A10: Focus Groups: Villages Visited for Survey

⁴ Appendix A34: Additional Experts

human capital theory guided policy decisions in Botswana, but any relationship between the supply and demand of skilled labour which might have existed in a westernised, industrial society was virtually absent. Productivity levels were commonly low and youth unemployment high, particularly among the recently trained VET graduates, a holistic approach, different to that of human capital theory, which could evaluate a wide range of factors was required. The key aspects of analyses from earlier chapters will be brought together in order to apply a political economy of skill formation approach using Brown *et al*'s (2001) four systemic pressure points, as applied to Botswana and suggesting some possible solutions to the problems which have been delineated earlier.¹ These issues will be considered under the following headings:

1. Pressure Points.
2. Reflections on Methodology.
3. Responses to Research Questions.
4. Issues for Discussion and Policy Reform.

1. **Pressure Points**

(1) The Impact of Globalisation

Over recent years, globalisation has opened up the economies of most countries in terms of deregulated trade and financial investment. Thus, in the context of financial capital, the world forms virtually one market place and the whole world has been opened up to the capitalist relationships inherent in industrial production and services. Richer, industrialised, capitalist countries can more easily attract further capital for investment in more efficient plant and to utilise high skills in order to increase their productivity and profitability. In such a context Botswana's diamond revenue has to be seen in the light of its predominantly first generation, industrial, labour force with its poor productivity levels.² Nationally there has been some awareness that employers and employees need to accommodate each other's cultural differences and their mutual needs for respect, before they can become fully capable of meeting the challenge of globalisation and their full productivity potential can be realised.

¹ Chapter 5: 107

² Chapter 3: 44

The following comments made by His Excellency President Festus Mogae, when he was Vice President and Minister of Finance and Planning, illustrate the point. He stated that Botswana would:

“take advantage of the opportunities offered by globalisation,[and] respond creatively to its challenge”, it also demanded a new productive labour force, and high quality, adaptable human resources and thus “quality education and training [and] improved on-the-job skill formation” (Republic of Botswana, Budget Speech 1998: 1-2).

The strategy of developing Botswana’s full productivity potential, as part of the drive towards a high skill economy and as a response to the impact of globalisation, has been advanced by the Botswana government on several occasions. Realisation of such statements depends upon a strong and collective commitment between the government, the employers and the workers. However, it has been shown from the empirical data that, although the government uses the rhetoric of high skills and has invested heavily in education and training, there is little evidence to suggest that the employers are implementing the kind of skills upgrading and training that would be required to move their businesses up the value-added chain, and so produce more opportunities for high skill employment. Further, from the responses of the parents and the traditional villagers in general, there was little understanding of, let alone support for, the concept of a higher skill economy. Opinions of existing VET system were generally low because its often inappropriate curricula and standards had resulted in relatively few jobs for its graduates. In addition, there had been little attempt to retrain the school teachers in skills, such as problem solving and team working, initiatives which characterise the application of high skills, and few apparent changes from the rote learning and the didactic method of teaching commonly used in many schools. It would appear that the critical process of building a strong consensus in support of a high skill economy had not been attempted.

The high levels of youth unemployment were compounded by the difficulties in correlating the training of skilled workers with the type of skills demanded for trained workers by the employers (often referred to as the supply and demand of workers). In an effort to correlate the supply and demand of skilled workers, and in an endeavour to be more competitive in the global marketplace, the government introduced a double tax deduction scheme whereby a company may deduct 200% of the expenses incurred by an employer, on the training of their Botswana employees in approved skills from the

company's taxable profits.¹ However, for the 1995/96 income tax year only seventy-three applications were recorded. The main reasons for the limited effectiveness of the system appeared to be that some of the important private employers (e.g. mining) did not generate a taxable income, and that the employers' claimed that the administration of the scheme was little known and complicated.² This was confirmed during interviews with private training companies.

In order to increase employment, the government extended schemes such as the Financial Assistance Policy (FAP), the Selebi Phikwe Regional Development Project (SPRDP) and the Special Incentive Programme (SIP) for investors whose products went for export outside the Southern African Customs Union (SACU), thus targeting access to the global market. However, neither the selection criteria for new investors under the SPRDP, which included a cost-benefit analysis of their proposals, nor the enforcement of a rigorous monitoring of their performance and training schemes were applied in practice.³ Of the seventeen companies which existed at the SPRDP in 1995, only four stayed longer than the life of their FAP or SIP loans. The director of the parastatal with developmental responsibilities said that 'we at Botswana's Development Corporation, technically speaking, do not have the experience in running any business other than loans' (Good and Hughes, 2002: 44).

Botswana's endeavours to take advantage of globalisation have been damaged by other external factors. The most notable of these was the Hyundai car assembly plant, which was built in Gaborone in 1993. Its maximum workforce was anticipated to reach over 1,200 by the year 2000 (*ibid*). However, it was shut down and sold to a South African company in 2000. This was made possible by the South African interpretation of the Southern African Customs Union Agreement (SACUA) rules, which have now been renegotiated (October 21st, 2002) to prevent such an event from occurring in the future, but highlighted the need for decision makers in Botswana to be aware that most parties involved in, or affected by, a development, consider their own benefits and requirements above anything else.

¹ Franz J. (1997) 'Report on Financing Vocational Education and Training in Botswana', for the National Policy on Vocational Education and Training Reference Group

² *ibid*

³ Chapter 3: 41

As with many other developing nations, Botswana belongs to several groups of countries and trade organisations, including the Southern African Development Community (SADC) and SACU, which impose agreed limitations, or quotas of goods or services produced for export, and on the setting up of new industries. These factors, coupled with protectionism in certain developed countries, militated against the fair development of trade within the weakest countries and promoted the agenda of the most powerful.

(2) Upgrading the Skills of the Workforce

One of the major pressure points confronting governments in both the developed and the developing economies is that of linking the supply of and demand for workers in a high skill direction. In terms of the supply of young, qualified and skilled VET workers, the study highlighted a number of major problems, many of which are interrelated, the most important of which are outlined as follows.

The first group of problems occurred as a result of the trainers and employers lack of understanding of the role of identity between the individual, arising from their home village upbringing with its traditional customs and culture, and the needs and expectations of western based education, training and industry. These included respect for age and a strong sense of identity between the individual and their village or tribe. The sense of identity, and respect between workers and employers, were often missing in Botswana.

Historically, great care had been taken to bind the individual to their tribe or village. Initiation ceremonies marked the transition from the child to adult status and ensured their loyalty and identity with the village. Today's nearest equivalent in western society might be the graduation ceremony from being an apprentice to becoming a journeyman in the German dual system of apprenticeship. However, the pride surrounding such an event does not have the same significance in the Tswana traditional village as it would in Germany. The process of adaptation has not been helped by the use of lecturers who have little or no industrial experience (58% of VET lecturers/instructors surveyed had only between 0 and 2 years industrial experience) and have not appreciated the role of loyalty and respect in the workplace.

There were other areas where a benign neglect, or unrecognised bias, has left sizable minorities without training and without jobs. These are more easily recognised when placed alongside their opposites, for example: male v female; urban v rural, and poverty and wealth in general.¹ In addition, many studies have indicated that poverty has a strong negative affect on academic achievement and motivation, often characteristically producing acquiescent workers in dead end jobs, or with no hope of employment.² Such processes start before and during the child's school years and are not the responsibility of the child. Time and money spent helping the children at that stage would be amply repaid over the rest of their lives.

Supply and Demand of Employment:

In the late 1990s the job market was dominated by high youth employment and included drastically reduced the demand for newly qualified VET graduates.³ Of those questioned, an average of only one in three of all potential VET graduates in the survey of 1999 had been promised jobs. This meant that the remainder, some 662 of the undergraduates surveyed would, if successful in their studies, be looking for jobs at the end of the academic year. However, when the survey was completed, only 5% of the mainly rural based brigade students had been promised jobs. Overall, almost twice as many of those students with jobs guaranteed came from rural as opposed to urban backgrounds, although almost all of them had trained in towns. Virtually all of the promised jobs were in the towns.

Many employers in industry and commerce, including government institutions, criticised both school and VET standards. Another criticism, however, voiced by the Batswana, extended to the employment of a significant number of expatriate staff in preference to local employees. For example, in the year 1998, for the construction sector of the economy, 3,487⁴ work permits were issued to expatriate, construction workers and yet, in 1997, a total of 4,209 construction workers graduated from: the brigades (2,526⁵), the

¹ Chapter 3: 36

² Monkge, 2001

³ Chapter 10: 233

⁴ Republic of Botswana (2000) Labour Statistics 1998

⁵ Ministry of Education (1997) Department of Vocational Education and Training Annual Report 1996-

VTC's (868¹) and the CITF² (815). This illustrated the employers' preference for expatriates, and their ability to justify their requirements to the immigration authority (on the grounds of quality) despite the availability of locally qualified candidates and pressure for a strong localisation programme. The employers claimed that local graduate apprentices generally had only the practical skills and initiative that would be expected of semi-skilled workers in the U.K.

Employers' comments would suggest that the locally trained employees had not received a good enough training to satisfy the requirements of industry, and that an improvement in training may have allowed some 3000 or more of the currently unemployed local graduates to obtain jobs in place of the expatriates. That training should include a more serious attitude to industrial placement to include a structured and monitored approach to a variety of appropriate experiences, if necessary using skill training techniques borrowed from neighbouring countries. This is particularly important, as the application of most of the knowledge and skills obtained in college can only be put into practice in the workplace. This would be greatly improved by the provision of effective, workplace training in practical skills, and thus help to make the locally trained employee more acceptable. Such evidence illustrates the scale of the mismatch between both the supply of and demand for the numbers of skilled workers, and between the employers' expectations of the quality of training and the actual quality on offer. It would be in the interest of both government and employers to make positive and concerted efforts to improve this situation.

Six examples of possible areas where, based on the survey's findings, adaptations could be made to improve the standards of training, and the relationship and control between the supply of and demand for VET skills:

- (i) a more innovative approach to basic education;
- (ii) upgrading the standards of trainers;
- (iii) improving the relevance and quality of the Botswana skills training;
- (iv) the introduction of a modified grant/loan scheme for successful CJSS pupils who cannot afford SSS level education;
- (v) making career advice more relevant;

¹ *ibid*

² Construction Industry Training Fund; Chapter 3: 61

(vi) improving the forecasting of future skills needs.

The successful training in entrepreneurial skills could also be a route to self-employment and a contribution to a better balancing the supply and demand of skills.

In a Botswana specific context there are several potential enterprises based on indigenous resources, including local skills and the unemployed, which could be further developed by promoting higher skills and more investment, plus a closely monitored, Financial Assistance Policy (FAP) type, start-up grant to provide more jobs. Examples of some of Botswana's indigenous resources are in:

- diamonds – there are already two polishing and cutting factories in Botswana, but virtually no jewellery production ;
- leather – over 120,000 pieces of hide were exported in 1995, but the small quantity of leather goods produced locally have had only limited success;
- tourism – the Okavango Delta which is already an established as a world famous tourist centre, but these facilities could be extended.

One method of responding to the pressures of globalisation, which is held by many human capital theorists, and which has influenced Botswana's development approach, is for employers to move their businesses 'up the value-added chain', providing opportunities for upgrading the skills of their existing workforce and recruiting lower skilled workers for upgrading to replace those who have been upgraded, thus linking supply and demand in a high skill direction. The training motivation, it was claimed, would be driven by the individual's own ambitions of obtaining greater financial return for their new skills. It was believed by human capital enthusiasts that, eventually, such a process could enable Botswana to develop a high skill economy with more flexible, multi-skilled workers, and the ability to meet the competition of global forces and new technologies. In addition, such a policy would link the supply of and demand for skills more effectively. However, there is little evidence to show that the employers have shown any inclination to implement such processes, thus suggesting the limitations of the human capital theory approach to upgrading the skills of the workforce as a whole (their main concern being to maximise profits, which could often be achieved more easily, for instance by downsizing).

Another assumption made by human capital theorists, that the skills content associated with a given qualification is constant, is questioned by the fact that skills are very difficult to define exactly.

Skill is a notoriously difficult concept to define let alone measure (US Department of Labor, 1999). It has been variously defined in terms of expertise, ability or competence required to undertake specific activities, often acquired through formal instruction or work experience (Brown et al, 2001: 34).

However, this passes the problem on to the measurement of skill levels required for each separate job. In addition, it has been shown that skill is involved with production, and its associated social relationships and interactions involved with production. Thus skill is both socially and historically constructed.¹ The rapid rate of change of technological innovations in modern knowledge-driven societies gives extra importance to the knowledge and understanding of the process of skill formation. Therefore, if social relationships are ignored, meaningful comparisons between the rates of return of one form of human capital investment and another may not be possible. Thus, the social context of the employer in their factory may well be different to that of the student or lecturer in their school or college, and, even though the technical content of the curriculum is intended to be the same, the employer and the lecturer will each see it with different emphases. Whilst the lecturer/instructor has had little or no relevant industrial or commercial experience this problem will probably become more deeply entrenched in ways that human capital theory does not consider.

Another factor, perhaps unique to Botswana, is that of the older members of the workforce may refuse to carry out legitimate instructions given by their younger, but better qualified, supervisors. The following comments were obtained during the empirical survey and illustrate the attitude of many of the older workers which have impeded efforts to improve productivity and which human capital theory does not take account:

- a young government officer reported that, after he had been given training in new techniques, the use of those techniques had been overruled by older members of staff who were afraid of losing their authority;
- a young parastatal electronics/telecommunications officer explained that he was at his wit's end because, since transferral to another group, following further training, the older personnel would not work for him;

¹ Faulkner and Lawson, 1991; Blackmore, 1997

- the Director of a major parastatal stated that:
attempts to raise productivity often run into cultural difficulties which lead to lack of input, creativity and individualism. Big changes to a more positive attitude are needed for success in all branches of VET; schools, VTCs Brigades and so on. See what the English medium schools can achieve with the same material.
- a VTC lecturer stated that ‘culturally we expect to be trained, not to train ourselves’ (i.e. spoon-feeding).

It is often those older members of staff that need understanding and re-educating but, unfortunately, most do not have the motivation or desire to be retrained. Skill acquisition and utilisation are social acts which are dependent upon workplace relationships and are themselves embedded in an historical context.¹

However, changes in the management style can also be responsible for changes in productivity, irrespective of the investment in training, as can the innovative use of old skills in new situations.² (In short, the successful use of the human capital calculations for estimating returns on investment in training or education appears to be unreliable, especially if investment in more efficient machinery and new work organisation is ignored.)

Finally, human capital theorists maintain that, in accordance with economic rationale, the individuals’ main reason for working is personal advancement for financial gain, yet all categories of the respondents surveyed classified ‘to earn a lot of money’ as relatively unimportant, whereas ‘to serve the family and community’ was given as the overriding motivation for working.

(3) Opportunity and Social Inclusion

The contribution of education is critical to the development of Botswana and to its children. It forms such a fundamental stepping stone within its relationship to each of the pressure points, but its consequences are probably the greatest within the context of this pressure point. All of the empirical data in relation to opportunity and social exclusion, from the parents and focus groups, to the pupils and employers, claimed that the

¹ Chapter 5: 97

² Fox, 1974

overwhelming purpose of school was to prepare children for the world of work, which included VET.

Education:

The biggest problems to achieving this claim were concerned with basic education:

(a) The failure of planners to respond to an important recommendation from the 1977 National Commission on Education, which advocated the use of remedial intervention for failing pupils in primary schools, had been detrimental to improving standards. Class sizes were frequently large, some with over fifty pupils per class. Smaller classes were sometimes taught under trees, or shift systems were implemented, with morning or afternoon sessions. Rote learning was the norm and many children failed, frequently dropping out of the education system. Though finance was stretched, money for supplementary learning at an early stage would have helped to counteract the problem of failure and would have ensured that more children were brought up to standard and be capable of benefiting from secondary education. Many pupils who were classified as 'below average' may well have been 'underachieving' and, with appropriate remediation, would have been capable of upgrading their performance to an acceptable level to equip them to compete adequately with their peers.¹

(b) English is the language of government, commerce, industry, science and engineering (which for legal and safety reasons includes VET). It is also the *lingua franca* of the Southern African Development Community. Consequently, from year five in the primary school, the language of instruction in schools and VET institutions was English. A survey completed in 1993, after the first two years of secondary education were no longer selective, found that in Form 1, the first year of secondary education, only 30% to 40% understood what was being taught.² The empirical survey completed for this thesis in 1999 found that over 60% of secondary teachers claimed that more than 40% of their pupils had difficulties in understanding English, clearly an unacceptably high proportion in each case, and one which could take away the opportunity for a pupil to enter a VET course or other forms of further education and training and will prejudice their chances of employment. It was very laudable that, in

¹ Kerton A. V. 1983

² Mautle *et al*, 1994

a country like Botswana, there was ten years free education available for all.¹ Pupils who attended primary school after those surveyed benefited from the introduction of 'Breakthrough in Setswana' as an individualised approach to learning to read, spell and write sentences, if taught correctly, was a tremendous contribution to innovative learning. The NCE (1993) recommended that, in order to compete successfully with the surrounding countries, the age at which teaching in the medium of English was introduced should be lowered. Appropriate reading and teaching material has been prepared, and radio broadcasts developed, and English is now the language of instruction from Standard 2. However, the level of English in primary schools, particularly in rural areas, is problematic. It would appear that intensive training for teachers is required. The most successful strategies for pupils involved supplementary, parallel material, which reinforced the standard set books, requiring willing teachers to be involved in this most exacting and rewarding aspect of the curriculum if there is to be successful outcomes which create opportunities not exclusion.

- (c) Teaching in the secondary schools was didactic and the use of corporal punishment widespread. Rote learning was common, with very little child centred learning. Many schools and homes were not conducive to reading; electricity was not available in the homes of much of rural Botswana. Consequently there was little motivation for private studies, which represented an unacceptable use of time in a culture where children were responsible for many of the everyday chores. The continuation of the primary school approach of mixed ability teaching was the norm in junior secondary schools, and adversely affected both gifted pupils and those with learning difficulties.
- (d) The National Commission on Education (NCE) 1993, whose terms of reference² were biased towards preparing children for the world of work, expressed concern about the lack of innovative teaching. The importance of reliability and perseverance, self-motivation and initiative, ability to work in a team, communication skills and computer usage, together with problem solving, creativity and coordination with employers' needs, are generally held to be desirable assets for the world of work. All of these were lacking in the teaching methods used in secondary education, with the exception of the newly introduced Design and Technology, if it was taught as curriculum planners intended.

¹ Fees reintroduced in 2005 because of financial burden of HIV/AIDS

² Appendix A3: National Commission on Education 1993: Terms of Reference ???

The importance of the adaptation of the curricula to accommodate improved teaching and learning practices, and the requirements of a wider ability range, for English and all other subjects, cannot be overemphasised.

As the survey of the opinions of those involved in education and training proceeded, it became clear that there were problems in the schools which, if addressed, would significantly improve the preparation of pupils for their role in the world of work. Entry to the community junior secondary school (CJSS) had previously been on merit, the curriculum taking this into account and teachers were trained to deal only with the most able pupils. When all children, including those of lower ability, were allowed access, many teachers found it hard to adapt to mixed ability classes, particularly as there was little change to the teaching material or teaching methods. Efforts have been made to help the teachers, with courses on mixed ability teaching, but subsequent changes to the recommended group teaching are rare. Some schools have 'streamed' their classes based on the results of the primary school leaving certificate, and this has meant that pupils are given work which is more appropriate to their ability. However, in the view of many educationalists, the ideal situation would be to 'subject set', so that each child is given the opportunity to work at the best of their ability at every subject. This would mean that the best pupils are not held back by the slower ones, and the less able are not completely lost.

It was found in a pilot study in a Gaborone CJSS that one third of most classes gained nothing from their lessons, as their English was inadequate.¹ However, when the slower pupils were selected for additional afternoon classes, which were pitched at a more appropriate level and where success and praise boosted their confidence, their attitude changed considerably and they were willing to attempt oral exercises without fear of ridicule from the more able members of the class. A similar study in Malawi, also identified one third of the class as unable to understand the English used to teach the lesson.²

The introduction of some form of remediation, involving the 'best' teachers in the CJSSs in Botswana, would mean that approximately a third of the pupils would benefit more positively from their secondary education, and would be more appropriately

¹ Sephuma and Kerton A.V. 1999

² Kerton A. V. 2000

equipped to benefit from further training.¹ It should be noted that pupils in rural schools were less likely to succeed at their school work, when compared with those from urban schools, due to poor facilities, inadequate teaching (the better teachers gravitated towards the towns) and less exposure to the English language. It would appear that compensatory measures are particularly required in rural areas, so that the children are not to be denied the opportunity to pursue their full potential.

The recommendation of the NCE (1993) to introduce Design and Technology to all pupils in secondary education, with a view to improving the soft skills required by the world of work, was innovative but expensive. The importance of developing these skills has not been appreciated by many in the Ministry of Education, nor the Government as a whole, and the subsequent reticence in providing this aspect of the curriculum, particularly for more able pupils, has consequently deprived both individuals and the country of opportunities to develop high skills which could enhance their ability to perform more successfully in the global economy.

Teachers' Opinions on External Influences on Pupils: Teachers were asked to give their opinions on the following external factors which may have had a detrimental effect on pupils' performance.¹ These were ranked in order of their negative influence:

- (1) Poor attitude of parents (94.8%);
- (2) Poor home environment (94.0%);
- (3) Parents' job (80.6%);
- (4) Large family (80.6%);
- (5) Parents' income (79.1%);
- (6) Rural environment (78.4%);
- (7) Single parent family (57.1%);
- (8) Urban environment (39.9%).

The following summary of the teachers' comments are both revealing and significant in understanding the teachers' difficulties and the overall root problems experienced by Botswana when attempting to develop a workforce which would be competitive with other players in the global economy. Many of the teachers' comments reinforced or

¹ Sephuma and Kerton A.V. 1999

¹ Chapter 9: Table 9.6: 205

overlapped with those of the village focus groups and the pupils' parents to the extent that, in general, the rural parents resented the schools because they had no obvious place in their lives; the parents were left with the household chores and received no help with their cattle; the children were not taught the customs and culture of the community and, to the parents, the curriculum was irrelevant. However, the parents overwhelmingly looked to the schools for the preparation of the children for work.¹

A poor home, or isolated village may not have electricity or a space available for a child to study in the evening, although secondary schools usually provided such a facility, with minimum supervision, in the afternoons. In a large family, the older children often had to spend most of their time looking after their younger siblings and had very little parental support to pursue their education. Those who lived in a rural environment, it was stated, lacked the exposure to the wider world, for instance, pupils rarely heard English spoken outside school; there was often a lack of teaching materials, libraries and sometimes electricity in schools; and few teachers were willing to work in rural areas. The urban environment however, was claimed to be the opposite. There, parents with good jobs or incomes could usually afford a good home environment, plus supplementary educational material and good conditions for studying, although, in my own experience, a significant number of the more highly qualified personnel were encouraged to pursue their own careers at the expense of their children's education, frequently returning them to family members in the village, where the facilities did not compare favourably with those in the urban environment. However, in the towns, it was suggested that there were many forms of entertainment, outside distractions must be controlled wisely by parents if they were not to impinge negatively on pupil performance. It was assumed that female headed households were the only ones to be discussed since male single parent households are rare in Botswana. Some teachers, however, commented that the absence of a father meant the loss of a 'balancing' factor, especially as a role model for a boy. It was also noted that female headed households were often poorer than male. Many fell through the net of social inclusion.

¹ Chapter 7: Table 7.2: 161

The connection of the above negative influences with poverty and poor education is supported by the results of the 1993/94 survey on poverty in Botswana (NDP 8:91).¹ The main points of which were:

- *38% of Botswana households were living in poverty in 1993/9 (as compared with 49% in 1985/86).*
- *Poverty was higher and more severe in rural areas and urban villages.*
- *Female headed households were poorer than male headed households....*
- *The basic education system was found to be insensitive to the special needs of the poor ... Many poor children do not obtain proper education.*

The negative effects of poverty on education and other facilities had discouraged the development of new employment in rural areas. However, the government had installed water, clinics and schools throughout the country, and has recently extended the electricity distribution network and the trunk road system, and these are very expensive in such a large and sparsely populated country as Botswana. The brigades have produced many graduates in rural areas, but most are unable to obtain employment despite their practical experience during their training. The lack of appropriate employment, particularly in rural areas, is problematic and should be addressed if the current lack of opportunity and wastage of trained manpower is to be overcome.

Practical Training:

Botswana has a well administered civil service, with staff recruited from good academic backgrounds. Unfortunately, when dealing with technical matters, this can present them with difficulties. An example of this appears to be their lack of understanding of the importance of the practical aspects of the training. The purpose of the industrial attachment is to provide relevant, practical, structured and monitored application in the workplace of the theory and skills previously covered in the colleges. Such training may include college based practical work or laboratory work, which is under the auspices Ministry of Education, or attachment to a private company or a government organisation where it is the responsibility of the Ministry of Labour and Home Affairs.

Each of the three different sources of VET students has a different approach to practical work, the main distinguishing features of which are indicated in Table 14.1.

¹ Republic of Botswana (1997) National Development Plan 8; 1997/98 – 2002/3: 91

Table 14.1: Conclusions: Comparison of Practical Training

Type of Practical	Brigades	Apprentices	Technicians
College based laboratory work		√	√
Work based practice		√	
Learning with production	√		

A major strength of the brigade practical training was the exposure of their students to the technical and commercial problems, and competition associated with production of goods and services for the open market. Both VET leavers and employers gave the brigades high praise for their practical training. The brigade courses were a much lower standard than for apprentices or technicians. Three years of the four year apprenticeship programme took place in industry. Most technician students were sponsored and returned to their employers during college vacations, where many were involved in practical work, but not necessarily varied enough to satisfy the requirements of their courses.

The satisfaction rate of both students and employers for the practical training are shown in Table 14.2, results may have been affected by the lack of practical, industrial experience of many of the lecturers and instructors (almost 60% of the 135 lecturers/instructors in the survey had only 0 to 2 years of industrial experience) and this may well have contributed to the apparent irrelevance of the curricula that was presented. These points were picked out for criticism by a group of construction industry employers, who hired their own trainers from South Africa to provide a better training, which they claimed resulted in an improvement in workers' attitudes and skill levels.

Table 14.2: Conclusions: Comparison of Satisfaction with Practical Training (%)

Satisfaction with Practical Training	Brigades	Apprentices	Technicians
VET Leavers	88.4	65.4	61.1
Employers	78.1	70.3	64.2

The lack of appreciation of the importance of practical work by non-technical planners was the subject of my M.Ed. (Cardiff), when I investigated 'The Role of Laboratory Work in Building Science in the HND and Related Courses in Building'.¹ In Botswana,

¹ Kerton G.A.J. (1985)

failure is to provide adequate and appropriate practical experience where precise, practical application is essential, results in workmanship that does not compare favourably with that of technicians from other countries, and indicates that performance should be raised to the standard required for competition within the global market.

Within Botswana, the South African modelled Construction Industry Trust Fund provides an excellent service for lower skilled workers by training them in competency based efficiency for a specific skill, such as hanging a door correctly within a given time. However, the need to address effectively the deficiencies in all the education and training systems is important if Botswana is to capitalise fully on the currently untapped human resources available within the country.

Male/Female Bias:

Data illustrating the progressive gender bias from school to employment has been obtained from the relevant chapters based on the empirical survey and is shown in Table 14.3. It was constructed by dividing the number of males by that of females for each chapter, thus giving an estimate of the ratio of males to females. This increases from 1 to 1 for school leavers (i.e. the number of males to females who *could* chose a career in VET is virtually equal), to between 2.5 to 1 and 4.3 to 1 for those connected with VET training, and 12.6 to 1 for the employers. These figures, representing different sections of the community, strongly suggest that there is a societal bias against the employment of women in the vocational and technical sectors of industry in Botswana. Such a conclusion would be strengthened by the traditional custom and practice in the villages, where the influential and important posts are normally filled by men.

Table 14.3: Conclusions: Gender Distribution

Chapter	Table	Gender		Ratio
		Male	Female	Male:Female
School Leavers	A43	475	487	1:1
VET Leavers	10.1	722	266	2.7:1
VET Lecturers/Instructors	11.1	99	13	2.5:1
VET Graduates	12.2	60	14	4.3:1
Employers	A106	88	7	12.6:1

The higher male to female ratio among VET leavers indicates the much greater difficulties experienced by female VET leavers in obtaining jobs as compared with their male counterparts. The relationship between gender bias and the financial worth of a job is often socially determined. It is a form of segmentation which is not consistent with human capital theory, which assumes free competition within a free labour market. The influence of the traditional bias against women represents a potential waste of expertise which, if realised, could be of positive benefit to the country.

(4) Changing Models of the Worker Citizen

The rapid pace of social and economic change, especially in the urban areas of Botswana, raised issues of worker identity and citizenship in the twenty-first century. Within human capital theory it is assumed that the individual will respond to new opportunities based on the model of rational economic action. However, the results of the empirical survey section of this thesis have implied the very strong sense of identity the Batswana have with the village in which they were brought up. This, together with the traditional African extended family, still provides a reassuring, economic safety net for use in the last resort, once again highlighting the complexity of the social and economic issues in contemporary Botswana. The potential consequences of the traditional requirements of obedience and unquestioning response to an elder can result in a lack of the individual's acceptance of responsibility and initiative, especially on the part of the lower, and some middle ranking workers, and leads to low levels of productivity.¹ These village customs and aspirations are often no longer appropriate for the high skills approach to the global economy, or even the more modest urban environment of the developing Botswana.

Major changes have taken place in the lifestyle and the type of work undertaken by many Batswana during the past twenty-five years since the revenue from the diamond mines came on stream and, more recently, to the impact of globalisation. Clean water, health clinics and schools have been installed throughout the country. However, the changes have not been without their difficulties. The workforce has drifted from rural to urban areas seeking employment. In the westernised, Fordist factories, which are the norm in Southern Africa, the workforce is organised on the basis of low skill, low trust relationships, which many of the older workers are unable to fully accept because of the

¹ Chapter 3: 44

apparent lack of respect from their younger supervisors, and lower productivity is almost inevitable.¹ It should be noted that:

Most factory workers in Botswana are first generation industrial/urban workers, in contrast to most of their compatriots e.g. in South Africa and Zimbabwe, who may be second or third generation industrial/urban workers ... This has an important impact on work attitudes, motivation and familiarity with industrial processes.(Jeffries, 1994: A7)

However, good productivity levels provided by the 930 Batswana employed at the three diamond cutting factories (NDP8: 269²) and the high productivity levels obtained at the Hyundai car assembly plant, prior to its dissolution, show that low productivity is not necessarily the norm. There are two factors which are associated with these two examples which may explain their success: Hyundai chose Botswana as the site for its factory because it believed that the standard of education obtained from the state was better than that obtained in other Southern African countries;³ in both cases the training was intensive and was delivered mainly by trainers from outside Botswana.

With their strong sense of identity the Batswana have retained many of the traditional expectations with which they have grown up. Schools have taught literacy, and other skills needed for the children's future jobs, but the older, rural generation remain largely illiterate and suspicious of schools. This situation will probably remain for many years. It should be noted that, when the job aspirations of the school leavers were compared with the jobs of their parents and placed in rank order, there is very little commonality between them. This suggests substantial intergenerational changes between the availability and choice of jobs.⁴

The knowledge of skills is often determined by the social group to which an individual belongs as well as society in general. For instance, a socially polarised society is more likely to be a low trust society. Increased productivity depends, not only upon technological advances, but also on how they are embedded in institutional relationships of high or low trust.⁵ Innovation and higher productivity levels are increasingly seen to depend upon technical, interpersonal and self-management skills, and the discretionary

¹ Chapter 3: Table 3.2: 44

² Republic of Botswana (1997) National Development Plan 8

³ Good and Hughes, 2002

⁴ Chapter 8: Table 8.7: School Leavers: Ranked Job Aspirations, Parents' Job Aspirations for their Child and Parents' Own Jobs: 187

⁵ Fox, 1974

commitment to acquire such skills. These conditions of work have not yet been tried out seriously on any workforce in Botswana. Changes in the lot of the worker citizen, however, would seem inevitable in practice if the challenges of globalisation are to be overcome.

The previous section has indicated the rapid rate of both economic and social changes and their effects in many spheres, more of which may be expected in the wake of globalisation. Botswana has expressed a desire to diversify its economy away from its overriding dependence on diamonds. Success in such further developments is dependant upon good basic education and improved vocational and technical training, together with their wise application in the fields of commerce and industry. It must also be realised that a good deal more flexibility will be required of VET and its applications than in the past. The development of such an approach should lead to an increase in productivity levels and improved prospects of survival in the globalised economy.

In order for Botswana to become a knowledge-driven economy it needs a different type of worker than those required for either the mass-production of standardised goods or services or for traditional agriculture. To date, the Botswana Civil Service has been the centre of Botswana's success, with the fastest growing economy in the world since 1965, with an average GNP growth rate of 13%.¹ However, this success has been limited mainly to one industrial sector: mining. Of necessity it is a rigidly controlled industry, especially in the areas of security and safety, and it is not the most conducive industry in which to allow the untrammelled initiatives of the individual. The Botswana Civil Service hierarchy has been likened, by several of the employers in this study, to that of the traditional village, where decisions are often taken by a small number at the top of the hierarchy.² This has helped to create a culture where the villagers and the lower echelons of the civil service are expected to follow, not lead.

Singapore, like Botswana, has realised its success, especially in the economic sphere, by having high quality personnel in the higher echelons of the civil service.

¹ Flemings Research Strategy Botswana, 1998

² Chapter 13: 295

This has created a culture in which Singaporeans are expected to follow rather than lead in these innovations. There is constant talk about changing the mindset of the ordinary Singaporeans to show greater initiative, but there is little recognition that this will only succeed if there is a fundamental power shift from the top (Brown and Lauder, 2000: 29).

If, as Brown and Lauder (2000: 29) suggest, ‘an attempt to transform the way that people are to be socialised and disciplined for a knowledge-driven economy collides with the view that economic development is the ultimate goal’, then this raises questions of political leadership, of institution building and, in addition, the question of the extent to which African cultural values will encourage or impede the development of the creative empowerment of the individual.

Botswana government policy statements in the fields of economics, industry and VET, praise and encourage the development of individual talents, such as self-management, creativity and pro-activity, as a means of taking full advantage of the skills and abilities of its citizens.¹ However, there is little recognition of the paradox that, to be successful in these ambitions, it may be necessary to change, not only the attitudes and mindset of the workers, but also those of the employers and other leaders. These changes will have to start in the schools, where the place of didactic teaching should be re-examined, and replaced in part, with more innovative and appropriate teaching methods, which should include the opportunity to develop creativity, problem solving and oral group work. The importance of developing a sense of responsibility should be introduced as preparation for the world of work. Within further education, students should be allocated an appropriate, financial allowance and take full responsibility for their own financial arrangements. The tendency to ‘spoon-feed’ should be discouraged. More emphasis should be placed on a positive expectation of an individual student’s behaviour, thus aiming to develop each student’s awareness of their individual responsibilities. The attitude of ‘they should decide/provide’ should be replaced by the acceptance and implementation of the importance of an individual’s responsibilities within VET and the workplace, if the intentions of government policy statements are to be realised.

In the workplace, more emphasis should be placed on the individual worker’s responsibility to adhere to good standards of attendance, punctuality and high quality

¹ Chapter 3: 41

workmanship. With the development of the individual's acceptance of responsibility for their own actions, and with the changes in skilling and the way in which the use of skills is harnessed for increased productivity, the roles and social relationships between workers, managers, and employers could well change for the better.

The importance of developing a sense of personal responsibility also needs to be introduced into school based preparation for the world of work, where the tendency of 'spoon-feeding' should be discouraged. These innovations need to continue into VET, where the importance of relevant, individual practical experience during training is essential to produce workers of an acceptable standard who accept responsibility for their own actions. In addition, many employers' styles of management are not conducive to the development of the modern methods required for success in the global economy. It is only when methods and attitudes change that Botswana can realistically compete on the global market.

2. Reflections on Methodology

The timing of the 1999 survey contributed to its successful implementation. It was important to benefit from the experience of known, established, high placed officials of that year before the elections in November, when officials were often expected to move on to new challenges. Also, after almost ten years working in the country, we had contacts to sell us a reliable, second hand car (essential for the task ahead) and provide free accommodation (we were self-funding). We had many friends and acquaintances representing a wide variety of nationalities often from the particular establishments surveyed and this contributed to the success of the survey.

Seven questionnaires and six structured interview schedules for the different categories were prepared in the UK.¹ Based on my experience in Botswana I was fully appreciative of the tremendous progress made since independence (1966), but there was a requirement to establish statistically where there were areas in need of attention. In the light of my experience in Africa, I was aware that many Africans disliked taking sides in an argument as they disliked offending anyone and that many are reticent about making decisions. As the survey was being administered over a wide geographical area, by a

¹ Appendix A 121: Numbers of Questionnaires and Interviews Administered

variety of people, it was necessary to ensure that the answers to questions would reflect a definite opinion and sometimes this was best served by a choice of four responses, restricting choice by eliminating 'don't know' or 'undecided' as possible answers. However, there were also open-ended questions including 'further comments?' The one-to-one interviews, administered under specific guidelines also provided the opportunity to explore key issues in more depth.

Both questionnaires and structured interviews were piloted on arrival in Botswana. Small but important changes were made to accommodate the responses of the piloting. The most unexpected reaction was that of the school leavers (particularly from the CJSS) who, on being subjected to a structured interview administered by an unknown, adult foreigner on a one-to-one basis, became so inhibited that such interviews were removed from the overall survey schedule. It was decided to arrange for translations of the parents' questionnaire into Setswana and Ikalanga to include non-English speaking parents.

It should be noted that when the amount of data collected in response to an item was small, particularly when divided into further sections, the resulting totals were too small for worthwhile statistical analysis (for instance, Table 11.9: VET Lecturers/Instructors: Why do you think these deficiencies exist?: 252) but might be indicative of a viable trend.

Although the survey covered the whole of the country, because of its size, and the sparsity of its population in some areas, it was not possible to involve the more remote settlements, only a few of which warranted a school. However, this group represented a sizable, often forgotten section of people whose views would probably have been similar to those expressed by the parents who answered the Setswana questionnaires and the focus group members.

It is difficult for people from the west to appreciate the vastness of Botswana, the harsh climate and the isolation that has been experienced by many communities where survival has been dependent upon mutual cooperation. In many rural areas barter of goods and time are still prevalent and the welfare of the family and community are of overriding concern. Many of our Batswana friends and acquaintances who are well educated still

consider serving the family and community to be more important than earning a lot of money. It is just possible that 'to be a teacher' could be interpreted as a personal consideration to the exclusion of service, but in my experience this would not have been common as most people still had roots in the village. It was interesting to find that the school leavers each selected just one response in the list of 'reasons for wanting a job', whereas the VET leavers and VET Lecturers/Instructors often chose a combination of reasons, necessitating an extra category in the recording table, thus rendering the percentages derived in the tables to be less accurate or predicative. However, the attitude 'to earn a lot of money' was not considered important to many of the participants, with the exception of the employers. This is a potential area for further research.

Whilst we were resident in Botswana we were increasingly aware of the devastating effect of HIV/AIDS, despite the complete openness of government on the subject. Since the development of retroviral drugs to counteract the symptoms, the government has decided to use a large portion of its revenue, mainly from the production of diamonds, to supply the drugs to many of its citizens. Unfortunately, this added burden on the Treasury has resulted in the withdrawal of free education for all, a retrograde step which will affect development for years to come. However, those who cannot afford the fees may be eligible for scholarships. When we were last in Botswana (2004), the vast areas of burial grounds illustrated the extent of the problem most emphatically – it was heartrending.

3. Responses to Research Questions

(a) How do the major stakeholders in Botswana's VET system perceive its contribution to the employability of its graduates and the creation of a high skill economy?

The background knowledge of the stakeholders concerned influenced their diverse responses. The village elders, whilst acknowledging the need for young people to be equipped with employable skills, were openly critical of the schools and VET institutes, both for the subject matter of the curricula and their apparent failure to achieve appropriate standards. They criticised the lack of support for traditional culture and village-based employment. The parents, who had their children's future employment and standard of living at heart, showed a substantial increase in support of school education and its potential for enabling the children to progress to further education and better employment prospects.

VET graduates, their lecturers and instructors had mostly chosen VET because of an interest in technical subjects and the prospect of technical employment. However, many trained graduates were unable to find appropriate jobs as employers considered their training to be inappropriate or inadequate. In general, in addition to theoretical coursework, productivity is also dependent upon workplace skills and relationships, for instance teamwork, perseverance, initiative and reliability; training in such topics appeared to be absent at all levels partly because of a lack of experience and understanding of their importance by school teachers and VET staff.

The government, with its greater awareness of national and international economy appeared to favour the achievements of a high skills economy, but had not had the necessary practical experience to put these aspirations into great effect. In future, it will be necessary for adjustments to the VET system if a high skills economy is to be satisfactorily realised.

(b) What is the influence of traditional norms and expectations on attitude to skill formation?

Before entering a VET course the Batswana children will have been exposed to many years of traditional norms and expectations in their homes, communities and schools. Although these influences are considered to be weakening, just under half live in the rural areas where cattle ownership still entitles their owners to more respect than a job in industry and respect for age is paramount, a tradition which often appeared to be the source of disputes in industry.

Both the school leavers' parents and the focus group elders strongly criticised the schools and the Ministry of Education, though not the teachers, who were said to be doing as they were told. They criticised the curriculum, claiming that it was inappropriate and not suited to the needs of the children who required a more practical and useful approach and was little use for life in the village. Some parents expected their children to be available to help with household chores and working the lands, and the elders complained that the children were not able to help with the cattle. Many parent respondents accepted that the schools should prepare their children for the world of work and further training, but some did not consider that the pupil's ability and interest were of importance when choosing a

job. The parents who answered in Setswana were less likely to consider that the child's opinion should influence decisions. They probably represented the more traditional view of many of the less literate parents throughout the country.

Many teachers used didactic teaching, such as they had experienced during their time at school, and when teachers delivered information, pupils were expected to learn and not to ask questions. Little emphasis was put on skills formation. Classroom discipline was good but with little pupil interaction, however, in the eyes of both elders and parents, the children's behaviour had deteriorated, especially since corporal punishment was no longer (officially) used in schools. It was generally agreed that communication between school and home was inadequate and had led to mutual misunderstandings. Some parents complained that they had little or no say in their children's further education or career.

The village elders lambasted the performance of the VET institutions, criticising the calibre of the lecturers and instructors and the quality and suitability of the curriculum. Many commented on the lack of pride and initiative shown by many VET graduates in their own work. Employers were concerned that respect for elders handicapped performance in the workplace where some older employees refused to take instruction from younger, better qualified young people. They were also unhappy about the lack of initiative and reliability, which they felt resulted from the effects of traditional norms and expectations, where few people were expected to make decisions.

(c) How may these norms be inappropriate for human capital theory?

Under human capital theory it is assumed that job applicants compete freely in the labour market on the basis of skills as measured by their education and training credentials. In addition, where labour markets are concerned the wages paid to the employees should reflect the marginal productivity of the labour force. It also assumed that an increase in earnings resulting from an increase in education and training (achieved through the motivation of the employee) will also more than off-set the cost of education and training. This increase in education and training may result in productivity (and hence earnings) or it may result from an improved management system. Each of these alternatives involves motivation on the part of the employee to earn a higher salary.

This attitude is generally not in the nature of many Batswana. Under their traditional culture, they depend upon the hierarchical, male dominated society. As a result, ambition for many is focussed, much more than in the west, upon support from the family and community than upon boosting the wealth of the individual. This background also encourages 'good' discipline but poor initiative and the demand from many for 'spoon feeding' (i.e. their need to be told what to do) thus propagating their apparent lack of initiative by some which has provoked some employers to criticise VET graduates as being unable to work without supervision. A further frustrating feature, however, arises from the attitude of some of the elders who are unwilling to accept legitimate instructions from their younger, better qualified supervisors on the grounds that the situation does not show the desired respect which is believed to be their due. The resulting altercations often reduce productivity levels.

(d) If there are flaws on the supply side of skill formation how best can they be identified and rectified?

One of the major problems experienced in Botswana (and other countries) is the lack of advance identification of training needs and satisfactory solutions to their implementation. The government, when it had realised the importance of diversification, had introduced several measures to encourage investors. These included the Selebi Phikwe Special Incentive Programme and the Financial Assistance Policy, both of which required the inclusion of a compulsory element of training, with consequent withdrawal of funding if unsatisfactory, but without inspectors to check that this had been effectively carried out. The requirements of new manufacturing industries will be harder to anticipate, but viable forecasts for basic services, such as transport, utilities, construction, education and health should be attainable. A major rise or fall in the employable population may be forecast from the information obtained in the demographic records available. This will include data on births, deaths and unemployment and can be used by the supply side to estimate changes in the number of jobs required, for example, the needs of education and training, where the numbers expected to enrol in school can be estimated well in advance. This would allow for a modern, appropriate curricula to be developed and teachers with the necessary innovative approach to teaching to be trained. In cooperation with industry, VET facilities, lecturers and instructors can be efficiently

prepared, with particular emphasis on effective work experience for both staff and students.

To obtain maximum productivity, new technology and technical skills training are not enough, the skilled employee must be embedded in a workplace of high trust which is affected by social interaction and social pressures of that workplace. The lesser training needs of the larger low skilled section of the working population are equally important. It is thought that there are only limited effects on generating employment from improvement in skill levels and that employment policies should not depend fully on policies in education (Crouch, Finegold and Sako, 1999). The effectiveness of an employee's training and that of their skills will depend upon the nature of the relationship between the individual and the social background of their workplace.

The biggest problem is the over production of basic skills in the brigades, where only 5% are expected to obtain employment in their specific training area. Whilst it is important to give rural students some form of training to improve their employability, it is necessary to be more circumspect in the numbers of trainees required in the areas of training undertaken in certain sectors of industry. There is a need for more small-scale finance to encourage viable self-employment, particularly in the villages. This requires further investigation, but must be effectively monitored.

Closer attention to the information contained in the Botswana Labour statistics could be helpful in identifying trends in the employers' skills requirements and would assist government planners in providing the required trained personnel; money saved from over production of graduates in one area could be utilised to improve quality and new programmes in another. These requirements, together with flexibility and the ability to meet the fresh challenges, which are inevitable with the ever changing advances in technology, should enable improvements in the estimation of numbers and quality of specific skills required. However, there is one other factor which can distort estimations and forecasts, that is the problem of HIV/AIDS. It has been stated that teachers are dieing faster than new ones can be trained, and it can be assumed that this is similar in other occupations. The mines in South Africa have been training 10% extra workers to help compensate for this problem, Botswana should consider adopting a similar strategy.

(e) To what extent does a lack of demand for skilled labour influence youth unemployment and what measures can be taken to improve the situation?

Botswana is the size of France but with a population of approximately one and a half million people. It is improving the basic infrastructure, including roads, transport and, most particularly, the education system, which results in increased awareness and higher expectations for more young people, but as there is only a small industrial base with a limited number of jobs for craftworkers and technicians, many of whom have migrated to urban areas in search of employment, unemployment is an ever increasing problem. However, in Botswana, unemployment does not carry the same stigma as in the west, in such a situation, tradition would require the extended family to accept an unemployed graduate in their home, where they were expected to participate in every-day tasks in return for their keep.

The effects of cultural influences were considered, which were evident in the relationship between schools and parents and in the didactic teaching methods used in most schools. The importance of equipping pupils with skills, such as the application of theory to everyday problems; initiative; the ability to work in a group situation; reasoning and creativity, was essential if their preparation for the world of work was to be realistically viable. It was necessary to continue this approach into further education, most particularly into VET institutions, where the importance of linking theoretical knowledge to practical situations for which the provision of appropriate, full-time structured and monitored industrial placement was paramount. Deficiencies in the quality and experience of qualified staff produced a calibre of student which was often unacceptable to many employers, who continued to use expatriate workers whose skills they considered to be essential to the success of their enterprise.

Youth unemployment could well have been due in part to an over production of skilled labour. The surplus of VET graduates could relate to one or several causes: the quality of their training, which may not have been appropriate for the needs of the employer; the courses may have been poor because of the lack of lecturing and practical experience of training staff; inadequate facilities and unsupervised and inappropriate student industrial placements. The over production of certain skilled personnel, particularly from the brigades, represented a misuse of government funding and

suggested an inadequate assessment of demand. Efforts to attract appropriate industry by offering grants had highlighted a lack of appreciation of the need to monitor the training element required and to withdraw funding if standards were not satisfactory. This in-house, or on-the-job, training would have upgraded the quality of trained VET workers available.

The government appreciates the need for diversification and its consequent effect on raising the employment rate and lowering unemployment, which is particularly prevalent amongst the younger age ranges and, as a developing country, has had to learn from its mistakes, these include the Hyundai experience, the Selebi Phikwe Special Incentive Programme and Financial Assistance Policy. Government statistics are far superior to many other such countries and should be used to the full as a major factor in analysing future training needs. Consultation with current and prospective employers is essential if progress and more realistic forecasting of the skill requirements allowing more flexibility and coordination of supply and demand of skilled labour, thus reducing the effect of trained youth on the unemployment figures.

(f) Has the importance of the industrial placement element in skills formation training been fully appreciated in Botswana?

Most training institutions provide background and theoretical knowledge in the classroom and basic practical experience in the workshop, but both craft and technician students should include an industrial placement period in their training course. This should be designed to give maximum benefit to students and employers and must be efficiently planned and effectively monitored.

As an introduction to the ethos of the workplace it is necessary for the student to obtain an overall view of the various relevant departments and their functions, and to understand the relationships and importance of all components of the enterprise, thus learning to appreciate that most elements of work are dependent upon the support of others.

In Botswana, several factors of this element of the course have been less than satisfactory and have led to detrimental comments from the employers concerning attitude,

proficiency and reliability of VET trained workers. Some of these comments may be attributed to:

- the limitations of a nascent industrial country with little history of industrial experience;
- the lack of a sufficient number of large industries able to provide a range of experiences for students;
- many small ‘in-it-for-profit’ industries;
- industries who have ignored the training aspect of their government contract and have not been challenged;
- lecturers and instructors with little or no relevant workplace experience, not equipped to monitor or check students’ progress or standard of work;
- insufficient finance to devise and monitor, in conjunction with employers, appropriate workplace schedules;
- the involvement of several different ministries, sometimes conflicting and not all appreciative of the importance of industrial placement:
 - Ministry of Labour and Home Affairs (MLHA) – Madirelo Training and Testing Centre (MTTC) - responsible for selection of students for VTCs and for organising and monitoring industrial placements;
 - Ministry of Education (MOE) – selects lecturers and instructors, produces curricula and orders equipment thought necessary through their overall budget;
 - Ministry of Commerce and Industry (MCI) – provides brigades with cooperative status thus enabling ‘education with production’ to function.

The overall aim of industrial placement is to provide the student with an understanding of the functioning of the workplace, the importance of working as a team and as a transition from the theoretical input from the classroom and the practice of the college workshop, to the full application of their training in the competitive market of the workplace.

4. Issues for Discussion and Policy Reform

Whilst Botswana must be congratulated on making tremendous progress since independence, inadequacies have been identified in several aspects affecting VET. Specific suggestions of measures to improve the situation are presented under the

following headings: Schools, Vocational Education and Training, Employment and Government.

Schools

The following measures are intended to raise the general standard of education and its suitability as a preparation for the world of work:

- (a) means must be found and implemented to remove misunderstandings and ill-feelings between the villagers and their schools;
- (b) more provision should be made for those primary school children in need of remedial assistance, particularly in the use of English;
- (c) it is suggested that, to improve teaching methods in the community junior schools (CJSS), teaching methods and materials are reviewed to incorporate new skills (including soft skills), and to accommodate all levels of learning ability. Widespread in-service training must be undertaken for both pupils and teachers to benefit fully from the substantial changes that are required;
- (d) pupils should be encouraged to become more independent, individually responsible and much less dependent on 'spoon-feeding' if they are to develop such skills as creativity and problem solving;
- (e) in analytical subjects, such as Maths and Science, and practical subjects including Design and Technology and Computing, their applications should be emphasised as an integral part of each subject, in preparation for the world of work;
- (f) in the CJSS, pupils should be 'subject set', at least in the key subjects, to allow pupils to progress to the best of their ability in each subject;
- (g) there should be better informed career guidance, where all levels of the ability range are given appropriate information to equip them for a realistic career choice. Careers in VET are possible for all levels of students with the appropriate qualifications.

Vocational Education and Training

The following proposals are intended to raise the quality and attitudes of VET students, graduates and staff:

- (a) improved selection processes should be introduced to ensure that students have the appropriate ability, aptitude and motivation to merit the financial investment in their training, for maximum benefit to the individual and the country;

- (b) realistic quotas of specific categories of trainees should be established to avoid wastage of trained manpower, and individual disillusionment and unemployment;
- (c) the development of multi-skilling and flexibility should be encouraged, as a partial solution to the problems of disparity between supply and demand of skills;
- (d) it is important that good communication skills (including computer usage) are developed, and that these include the experience of working in a team;
- (e) the quality of lecturers and instructors should be upgraded. The importance of appropriate practical experience, both in industry and the workshop, cannot be overemphasised;
- (f) students must be encouraged to be individually responsible for their actions, and develop the positive attitude and skills that equip them to take supervisory responsibility in the workplace;
- (g) monitored periods of relevant industrial placement for VET students should be provided;
- (h) allowances should be made for skills which are suitable for self-employment. Workshops in training institutions could provide a service whereby supervised graduates could pay to use tools and equipment to enable them to become established in their specific skills at a later date.

Employment

The outdated or inappropriate systems of management in many organisations have given cause for concern and mitigate against Botswana's aims of competing successfully in the global marketplace. Many employers have expressed various aspects of dissatisfaction with the quality of VET training, which they consider to be inadequate for which the following improvements to the current systems are suggested:

- (a) employers' should be required to provide input to the curriculum; this is important and they should cooperate fully with the training establishments if they are to secure the quality graduates that they require;
- (b) full cooperation of employers in practical placements for students is needed to produce competent, good quality workers, including proper monitoring from the Madirelo Training and Testing Centre;

- (c) initially, employers should provide induction programmes, or mentors, when staff join their employment, especially from rural backgrounds, in order to communicate their expectations and to maintain acceptable productivity levels;
- (d) employers should be encouraged to move their businesses up the value-added chain, and upskill employees in a high skill direction;
- (e) employers should encourage the use of multi-skilled working and take part in the relevant upskilling of their own staff and those VET staff who have had little or no relevant industrial experience.

Government

Many of the previous suggestions for improving the quality and effectiveness of VET are not possible without substantial agreement and appropriate action from the government. These actions would involve several different ministries, and considerable consensus must be developed if Botswana is to benefit from its financial revenue from diamonds, which, coupled with its stable government, provide a unique opportunity for it to compete economically in the global market, providing that the quality of its workforce is sufficiently effective. Government input should include:

- (a) building a strong consensus of opinions between the main stakeholders, including ministries, employers and trade unions, in order to pursue its industrial policy;
- (b) support, both financial and administrative, for the changes suggested for schools and vocational education, so that the quality of graduates is to compare favourably with competitors;
- (c) the early, mutual recognition of SADC and Botswana vocational qualifications should be of paramount importance;
- (d) a representative body should be established to counteract the gender imbalance in training, which currently deprives the country of prospective, capable employees;
- (e) the monitoring of in-service training to ensure that it is appropriate and effective:
 - for VET industrial placements as in integral part of VET courses;
 - by establishing that short induction courses are set up to integrate first generation industrial workers by explaining the culture of a western industrial workplace;
- (f) efforts should be made to reconcile and coordinate the balance between the demand for and supply of skills;
- (g) successful training in entrepreneurial skills as a route to self-employment;

- (h) decisions on the future adverse effects of HIV/AIDS on industry and training must be taken as soon as information becomes available.

Since the 1999 survey, progress has been made on certain aspects covered in this document, however, it is essential that attitudes at all levels of the economy should change if Botswana is to improve quality and productivity to a level that is acceptable to the global economy. The importance that each stakeholder should understand and appreciate the significance of the responsibilities held at every other level within the system cannot be overemphasised. An illustration of a misconception occurred when I was visiting a university in another African country. I was explaining how closely the Polytechnic worked with industry and gave the example that the mining industry in Botswana was solely responsible for the 'Explosives Certificate' element of the Mining Diploma curriculum. A professor within the group showed his disapproval and asked: "Are you sure that they can do it to the required standard?!"

Summary

In this chapter, the operation and efficacy of VET in Botswana and its repercussions with respect to its industry and economy have been considered, conclusions drawn and possible solutions suggested. These have been derived from an empirical survey of those affected by its operation. The results have been analysed in conjunction with relevant literature and, most specifically, Brown *et al*'s 'four pressure points'. In addition, there have been reflections on the methodology and responses to the research questions posed in chapter one.

The problems of high youth unemployment prompted the government to invest heavily in education and training with a view to promoting a high skills economy. In the early 1990s free, basic education was extended to nine years, but in the secondary schools the curriculum, teaching materials and methods were not adapted effectively to cope with a wider ability range of pupils particularly with regards to the English language. The National Commission on Education (1993) recommended that Design and Technology should be a core subject in secondary education because of its value in introducing a more innovative approach to teaching, and because of its potential in developing skills (if taught properly) such as problem solving, creativity and initiative, which are required by progressive industry in the global market place.

Practice in the application and use of skills is often the most important part of VET. In an apprenticeship it is the part of the course which is completed in the industrial workplace. In Botswana however, it appeared to warrant little consideration as an important learning opportunity. Furthermore, the college lecturers and instructors had little industrial experience, which was detrimental at a time when the development of greater flexibility and multi-skilling was being advocated as methods of enabling qualified personnel to cover a wider range of work, thereby enabling a more flexible approach to balancing the problem of supply and demand of trained labour.

The low productivity in Botswana is, in part, due to the current first generation/urban workers and the new skills required of them. However, productivity increase is determined by cultural influences, as well as by rapid technical advances. The government has invested heavily in education and training, but there is little evidence to infer that employers have been encouraged to invest in high skills modernisation. This illustrates the importance of creating a strong and enthusiastic consensus of all stakeholders to progress the government's overall plan of promoting a high skill economy and improving basic standards. It is also considered that there will have to be a change in the mindset and attitude of all participants if success is to be achieved.

It is hoped that this wide ranging document has fulfilled its objective of producing information which will be of positive benefit to researchers and policy makers, particularly in Botswana. Further investigation could be developed concerning schools, further education, vocational training, employers and training, cultural influences, social exclusion and policy development. Consideration of all aspects concerned with the implementation of effective VET policies is important if a developing country is to upgrade its competitive capacity in the marketplace and to improve the quality of life for its people.

APPENDIX

A1: Research Permit

SO 10:13 FAX 091100

OFFICE OF THE PRESIDENT

MAS. PULA

NO. 350800
ISS 80



REPUBLIC OF BOTSWANA

OFFICE OF THE PRESIDENT

PRIVATE BAG 1

GABORONE

REF: OP 46/1 LXIX (102)

6 August 1998

Mr. George A.J. Kerton
Nirvana, Railwayside
Clydach
Abergavenny
Mon
NP7 ORD, U.K.

Dear Sir

RE: GRANT OF A RESEARCH PERMIT:
MR. G.A.J. KERTON

Your application for a research permit dated May 1, 1998 refers.

We are pleased to inform you that you are granted permission to conduct research on the topic "Skills Training and Vocational Education and Training in Botswana and its Relevance to the Southern African Development Community (SADC) Region". The research will be carried out in Gaborone.

The permit is valid for a period not exceeding five (5) years effective August 7, 1998. The permit is granted subject to the following conditions:-

1. Copies of any papers written as a result of the study are directly deposited with the Office of the President, National Archives (2 copies each), Ministry of Education, Ministry of Finance & Development Planning, National Library Services, National Institute for Research and University of Botswana Library.
2. You liaise with the Ministry of Education.
3. You conduct the study according to the particulars furnished in the application.

4. The research will be conducted by Mr. G.A.J. Kerton and local assistants.
5. The permit does not give authority to enter any premises, private establishment or protected area. Permission for such entry should be negotiated with those concerned.

Yours faithfully


J. Mosweta

FOR PERMANENT SECRETARY TO THE PRESIDENT

cc: Permanent Secretary
- Ministry of Education
- Ministry of Finance & Development Planning
Government Archivist
Director, National Library Services
Director, National Institute for Research
Librarian, University of Botswana Library
District Commissioner, Gaborone
City Clerk, Gaborone

A2: Map of Botswana



A3: National Commission on Education 1993

Terms of Reference:

1. To review the current education system and its relevance; and identify problems and strategies for further development in the context of Botswana's changing and complex economy.
2. To re-examine the structure of the education system and recommend a system that will guarantee universal access to basic education, whilst consolidating and vocationalising the curriculum content at this level.
3. To advise on an education system that is sensitive and responsive to the aspirations of the people and the manpower requirements of the country.
4. To study the various possible methods of student streaming into vocational and academic groups at senior secondary level.
5. To study how the secondary structure at senior level may relate to the University of Botswana degree programmes and how the two programmes may be reconciled.
6. To advise on the organisation of the secondary school curricula that will prepare adequately and effectively those who are unable to proceed with higher education.
7. To make recommendations to the Government on the best and cost effective methods of implementation of the final recommendations.

The Aims of the Training Strategy:

1. To increase access and equity.
2. To improve general education so as to prepare students more effectively for life, citizenship and the world of work.
3. To develop training so that it is more responsive to the changing needs of economic development.
4. To improve and maintain quality at all levels.
5. To enhance the status and performance of the teaching profession.
6. To ensure effective management throughout the system and maximise parental and community involvement.
7. To increase cost-effectiveness and cost-sharing in the financing of education and training.

A4: The Grant/Loan Scheme

NDP 8 1997/98-2002/03

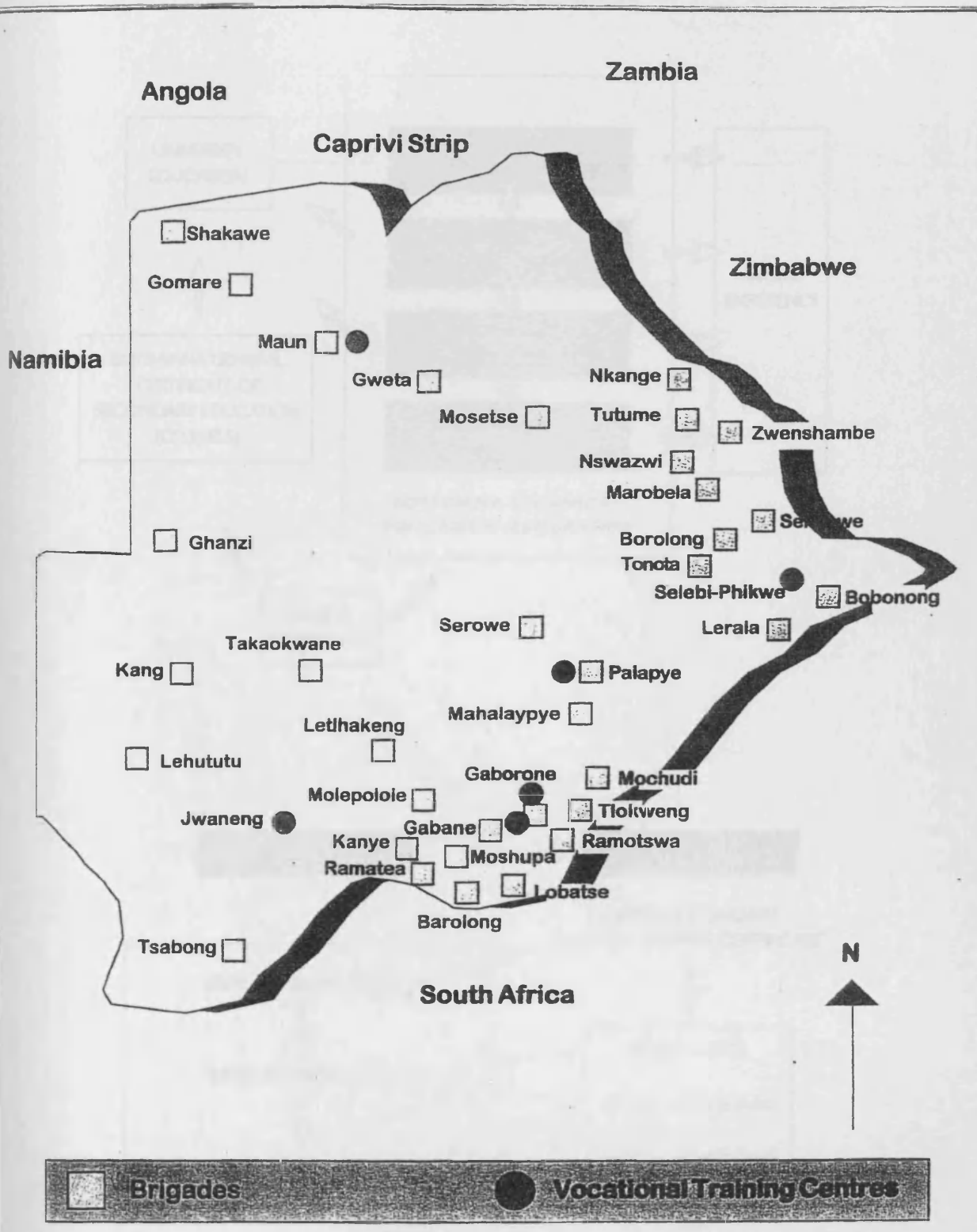
<p style="text-align: center;">Box 15.2 The Grant/Loan Scheme - Broad Categories</p>			
Category and Description	Examples	Amount of Loan/Grant	Degree of Cost Recovery
<p>CATEGORY 1 Areas with critical human resource shortage especially in the science and technical field</p>	<p>Medicine, Dentistry, Engineering, Computer Science, Architecture, Surveying, System Analysis, Metallurgy, Mathematics, Science and Setswana Teaching, Professional Accounting, Science Teaching, Radiology.</p>	<p>100% grant on both tuition and maintenance costs.</p>	<p>Direct allocation into employment in Botswana and service for a specified period.</p>
<p>CATEGORY 2 Areas with manpower shortage because programmes were unattractive to students in the past.</p>	<p>Accounting sub-professional, Professional Nursing, Paramedical studies, Quantity Surveying, Geology, Secondary School Teaching (in all subjects in category 1), Agricultural Science.</p>	<p>100% grant on tuition, 50% grant on maintenance, and 50% loan on maintenance costs.</p>	<p>Service in Botswana for a specified period and repayment of 50% loan on maintenance costs.</p>
<p>CATEGORY 3 Programmes to increase local capacity to supply qualified manpower to satisfy the market or balance demand and supply.</p>	<p>Law, Public Administration, Journalism, Graphic Arts, Hotel and Tourism Studies, Television Production, Fashion / Fabric Design, Social Work.</p>	<p>100% grant on tuition, and 100% loan on maintenance costs.</p>	<p>Service in Botswana for a specified period and repayment of the 100% loan on maintenance costs.</p>
<p>CATEGORY 4 Programmes that benefit the society and economy, but are of less priority.</p>	<p>Philosophy, Sociology, Museum Studies, Archaeology, Landboard Administration, Library Information Studies.</p>	<p>50% grant on tuition, 50% loan on tuition, and 100% loan on maintenance costs.</p>	<p>Service in Botswana for a specified period, repayment of 50% loan on tuition and 100% loan on maintenance costs.</p>
<p>CATEGORY 5 Programmes benefiting individuals or small sections of the economy</p>	<p>Hairdressing, Photography, Music, Performing Arts, Interior Design.</p>	<p>100% loan on both tuition and maintenance costs.</p>	<p>Service in Botswana for a specified period and repayment of the 100% loan on maintenance costs.</p>

Table A5: Brigades: Enrolment by Course, Sex and Year of Study

	Duration	Year 1		Year 2		Year 3		Year 4		Total		Total
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Building	3-4	541	107	491	71	277	22	16	-	1,325	200	1,525
Carpentry	4	306	78	249	51	156	25	-	-	711	154	865
Draughtsmanship	3	20	4	11	1	10	2	-	-	41	7	48
Forestry	3	9	20	10	14	7	9	-	-	26	43	69
Electrical	4	31	8	20	9	23	4	15	2	89	23	112
Plumbing	4	27	13	36	10	22	9	-	-	85	32	117
Welding	3	70	13	43	14	28	2	-	-	141	29	170
Office Skills	2	10	43	7	52	-	-	-	-	17	95	112
Textile	2	-	68	2	53	-	-	-	-	2	121	123
Business Skills	2	26	156	5	11	-	-	-	-	31	167	198
Auto Mechanics	4	172	35	101	26	84	15	-	-	357	76	433
Horticulture	2	9	11	4	15	6	4	-	-	19	30	49
Agriculture	2	21	20	19	19	13	18	-	-	52	57	110
Dress making	2	-	13	-	15	-	9	-	-	-	37	37
Fitting	2	15	3	15	2	-	-	-	-	30	5	35
Fabric Dye	2	5	8	2	7	3	4	-	-	10	19	29
Computing	2	34	85	-	-	-	-	-	-	34	85	119
Panel Beating	2	9	-	-	-	-	-	-	-	9	-	9
Cabinet Making	3	15	9	-	-	-	-	-	-	15	9	24
TOTAL		1,320	694	1,015	370	629	123	31	2	2,995	1,189	4,184

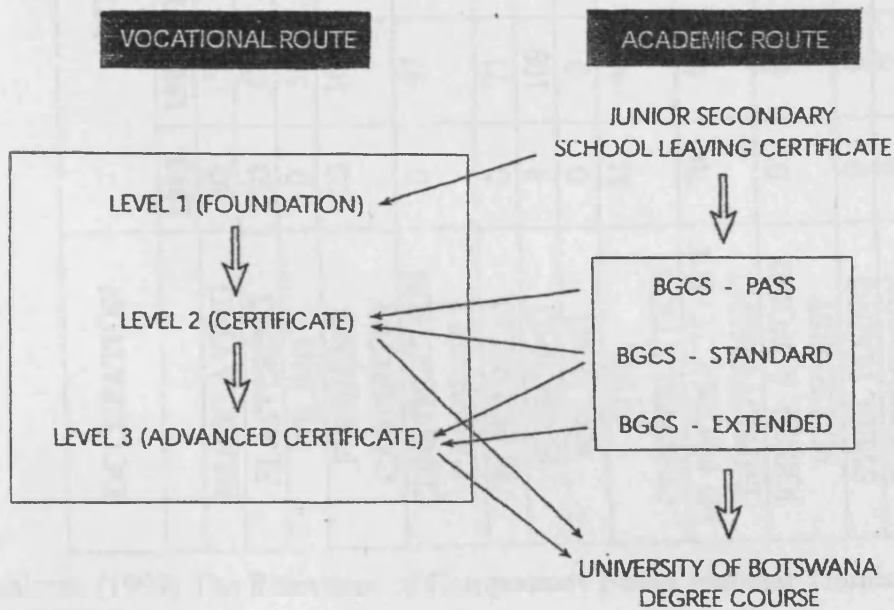
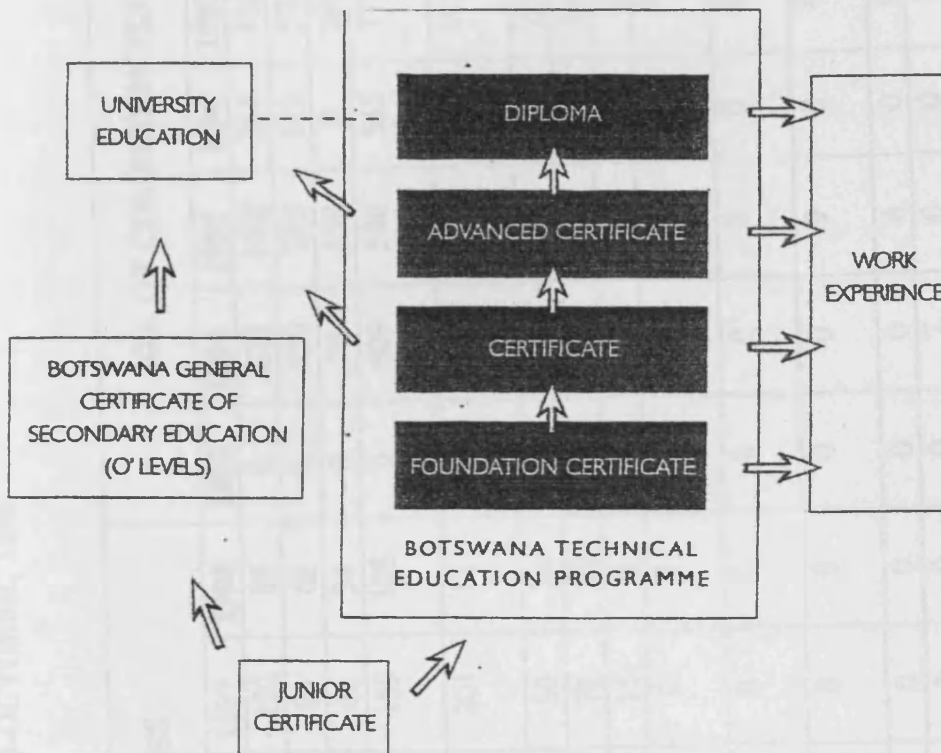
Source: Republic of Botswana, Central Statistics Office: Education Statistics, 1999: (2001: 137).

A.6: Location of Brigades and VTCs



Source: Ministry of Education: Department of Vocational Education and Training: DVET Annual Report 1996-97: 42.

A7: BTEP Qualification Framework



Source: Gaborone Technical College Prospectus

**CONSTRUCTION INDUSTRY TRUST FUND
SUMMARY OF TRAINING STATISTICS
1993-OCTOBER, 1998**

OCCUPATION	NO. OF TRAINEES						NO. OF COMPETENCIES					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
BRICKLAYING	95	157	90	110	102	88	0	828	1005	354	416	487
PLASTERING	95	67	15	31	85	65	0	530	210	319	570	436
TILING	0	18	23	47	62	31	0	78	158	0	290	190
FINISHING CARPENTRY	23	160	90	103	159	108	0	609	580	555	777	737
CONSTRUCTION CARPENTRY	0	97	66	42	201	81	0	397	415	210	605	398
ELECTRICAL	0	71	67	41	50	24	0	216	562	805	227	158
PLUMBING	8	109	72	53	78	52	0	552	742	279	489	507
WELDING	0	0	0	0	15	0	0	0	0	0	6	0
CIVIL CONSTRUCTION	81	45	0	0	0	0	0	187	0	0	0	0
M7 PRODUCTIVITY IMPROVEMENT	70	0	0	0	0	0	0	0	0	0	0	0
JOINER & WOOD MACHINIST	0	0	9	0	0	0	0	0	9	0	0	0
STEEL FIXING	0	0	6	0	0	0	0	0	6	0	0	0
SUPERVISORY	0	7	0	0	0	0	0	7	0	0	0	0
OPERATOR	0	18	0	0	0	0	0	9	0	0	0	0
UNIVERSITY FAC. OF ENGINEERING	0	117	106	67	63	0	0	255	91	0	0	0
TOTALS	372	866	544	494	815	449	0	3668	3778	2522	3380	2913

Source: Kuhlman (1999) The Relevance of Competency Based Modular Training in
CITF, Botswana

A8: Construction Industry Trust Fund: Summary of Training Statistics 1993-98

A9: Finegold's Low-Skills-Equilibrium Institutional Factors

- capital's lack of long-term human resources planning;
- an emphasis on the production of low-cost, low-skills products;
- the absence of a successful export-orientated, competitive manufacturing strategy;
- minimal state intervention in ET and labour markets;
- a financial system driven by the rules of the stock market (quarterly dividends and short-term gains), which fails to prioritise long-term investments in human resources and long-term growth in productive assets;
- uncoordinated state policies in the spheres of economic growth, industrial relations and ET;
- incoherent ET policies and a divisive, qualifications structure that limits mobility between ET institutions;
- a lack of cooperation between state, capital and labour; and
- low educational attainment levels for the majority of workers in the economy – particularly, low 'staying-on' rates in the critical 16-plus post-secondary age category (Finegold *et al* 1990: 14-23 in Kraak *et al*, 2006)

A10: Villages Visited for Survey (in chronological order)

Village	Chief
Manyana	Kgosi Mosielele
Ranaka	Kgosi Telekelo
Kopong	Kgosi Molefe
Oodi	Kgosi Semele
Mhatubudukwane	Kgosi Pilane

A11: Focus Group Discussion Points

General Aims:

To determine:

- the current social and cultural background in a village
- the relationship within the family and community
- the effects of the changing patterns of education and work.

Specific:

1. Status:

In your village, the Headman has the highest status, older people are respected for their age, but what about the other people?

Supplementary: Traditionally a man's status depended upon the number of cattle he owned.

- Now that there are other ways of earning a living, other jobs, other ways of working, does the ownership of cattle still give prestige?
- Do the new jobs add to the prestige of owning cattle?

2. Family Relationships:

The first-born boy in a family traditionally holds a special status. He has special responsibilities and privileges and his word must be taken seriously.

- Does this still apply?
- What other special relationships exist between members of the family?

Supplementary: Does the first-born have the authority to decide (forbid) the chosen career of a member of his family? What happens if a younger brother has a more important job?

3. Social Capital:

Traditionally, members of the family and their neighbours would join together to help with a large or urgent job, such as gathering the crops.

- To what extent does this still happen?
- How is such help repaid?

Supplementary: Is this method of work and repayment popular? Would people do this type of job in other villages?

4. Career:

- When a young person is old enough to get a paid job or further training, who makes the choice – the individual, the family or the school?
- What factors are considered? - service to the community
 - the special skill or interest of the individual
 - the status of the job or training
 - money
 - the availability and proximity of job or training

Supplementary:

When is a young person considered to be old, and sensible, enough to have a paid job? What would be your choice of an ideal job?

5. School:

What is the role of the school in the village?

- Does it strengthen or weaken traditional values?
- Does it help young people to get a job?

A12: Botswana Standard Industrial Classification

BOTSWANA STANDARD INDUSTRIAL CLASSIFICATION - NEW

A: Agriculture, Hunting and Forestry

- 0100** Traditional or Subsistence agriculture
- 0110** Commercial crop farming
- 0120** Commercial livestock farming
- 0130** Commercial mixed farming
- 0140** Agricultural & Husbandry Services e.g. Artificial Insemination, & Irrigation
- 0150** Hunting and trapping (Traditional)
- 0200** Forestry (All)

B: Fishing

- 0500** Fishing (All)

C: Mining and Quarrying

- 1010** Coal Mining
- 1320** Copper/Nickel mining
- 1423** Diamond mining
- 1424** Soda ash and salt mining
- 1425** Gold Mining
- 1426** Quarrying and other mining

D: Manufacturing (includes repair of machinery & equipment)

- 1510** Meat and meat products
- 1520** Dairy products
- 1530** Grain mill Products Includes maize, sorghum, millet etc. Human & animal feeds
- 1541** Bakery products
- 1545** Other food products n.e.c.(e.g. Chocolates, Sweets)
- 1550** Beverages(Beer incl. Trad, Beer Soft Drinks etc.)
- 1600** Tobacco Products - Cigarettes etc.
- 1700** Textiles(exc. Clothing) includes preparation of textile fibres, natural or synthetic material
- 1800** Clothing and other wearing apparel(inc. Leather)
- 1910** Tanning and leather products(exc. Clothing/Footwear) e.g. Handbags, Souvenirs
- 1920** Footwear
- 2000** Wood and Wood Products excluding furniture but incl. building materials, and Straw Products(mats baskets etc.)
- 2100** Paper and paper products e.g. Newsprint, tissues
- 2200** Printing and publishing (Incl. periodicals, journals etc.)
- 2400** Chemical and chemical products (incl. Soap, Paint) Fertilizers & Pesticides etc.
- 2500** Rubber and Plastic products (Incl. Tyres, Retreading)
- 2610** Cement Manufacturing
- 2620** Non-Metallic mineral products exc. cement but incl. Glass, Ceramic & Cement Products e.g. Bricks, Tiles, Pots
- 2700** Basic metals e.g. Iron Foundaries
- 2800** Fabricated metal products exc. machinery and equipment(incl Tanks & Steam Generators)
- 2900** Machinery and equipment incl. refrigerators and other domestic equip (e.g. Engines, Turbines, Pumps)
- 3000** Office, accounting and computing machinery e.g. Photocopying Machines, Typewriters etc.
- 3100** Electrical machinery and apparatus e.g. Lightning Arresters, Voltage Limiters etc.
- 3200** Radio television and communication equip and apparatus (e.g. TV, Cameras, Switchboards)
- 3300** Medical, precision, optical instruments, watches, clocks incl. Dental & Vet Instruments
- 3400** Motor vehicles, trailers and semi-trailers
- 3500** Other transport equipment e.g. Ships & Boats, Railway Locomotives, Air Craft etc.
- 3610** Furniture (all types incl. of wood, also mattresses)
- 3690** Manufacturing of other products n.e.c.. Pens, Pencils, Smoking Pipes etc.
- 3700** Recycling Processing of Metal & Non Metal Waste

E: Electricity, Gas and Water Supply

- 4010 Electricity generation and supply (Not household/building electricians)
- 4020 Gas manufacture and distribution
- 4030 Steam/hot water supply
- 4100 Collection, purification, distillation of water (incl. village supply for sale)
- 4200 Bore Hole Syndicates

F: Construction

- 4510 Site preparation e.g. Demolition and clearing of sites
- 4521 Construction of Buildings and Houses - Complete incl. repair/maintenance
- 4522 Construction/Civil Engineering - Roads, Dams, Water Projects
- 4530 Building installation work - Plumbing, Electrical, Air-Con incl. repair of these
- 4540 Building completion work - Paving, Tiles, Carpets incl. repair of these
- 4550 Renting of construction or demolition equipment incl. crane hire

G: Wholesale & Retail Trade

(Incl. Repair of M. Vehicles & Personal/Household Goods)

- 5010 Sale of motor vehicles
- 5020 Maintenance and repair of motor vehicles
- 5030 Sale of motor vehicle parts and accessories
- 5040 Sale, maintenance and repair of motorcycles
- 5050 Sale of automotive fuel/Petroleum products(filling stations)
- 5100 Wholesale and commission trade(exc. cattle dealers)
- 5151 Cattle Dealers
- 5210 Non-specialised retail trade e.g. General Dept. Stores
- 5221 Retail stores specialising in food, beverages and tobacco exc., bottle stores
- 5222 Bottle Stores
- 5230 Retail stores specialising in goods except food, beverages and tobacco
- 5252 Retail trade through informal outlets: stalls, markets, hawkers
- 5260 Repair of personal and household goods e.g. TVs, Videos, Watches

H: Hotels and Restaurants

- 5510 Hotels and other short stay accommodation e.g. hostels, camp sites
- 5521 Restaurants, cafes and canteens
- 5522 Bars/Bottle Stores (& shabeens) - mostly consumed on the premises

I: Transport, Storage & Communications

- 6010 Rail transport
- 6023 Freight transport by road
- 6024 Passengers road transport e.g. Buses and Taxi/Combi Companies
- 6025 Taxis/Combis - Sole or small operators only
- 6030 Transport by pipeline
- 6100 Water transport
- 6200 Air transport
- 6304 Travel agents, tour operators, safari operators include. hunting
- 6305 Cargo handling, storage, warehousing
- 6309 Other transport n.e.c. e.g. Hand carts, Donkeys
- 6411 Postal services
- 6412 Courier activities - e.g. DHL, TNT
- 6420 Telecommunications

J: Financial Intermediaries

- 6510 Banking
- 6590 Financial leasing and credit granting (ex banking/insurance)
- 6600 Insurance & pension funds
- 6700 Other financial activities (e.g. stockbroking)

K: Real Estate, Renting and Business Activities

7000	Real estate
7110	Transport Rental e.g. Hire Car Rental
7120	Other Rental exc. Person and H'hold Goods e.g., Machinery
7130	Rental of H'hold and Personal Goods e.g. Video Tapes
7200	Computing and related activs incl. data entry/processing & software
7300	Research and Development
7410	Legal, accounting, book-keeping, auditing; busn'ss/management cons
7421	Geological exploration and Prospecting
7422	Architectural, engineering and other technical activities e.g. surveying
7430	Advertising
7480	Security Organisations
7490	Business activities n.e.c.

L: Public Administration

7540	Central Government Administration
7550	Local Government Administration

M: Education

8010	Primary education(incl. pre-primary)
8021	Secondary education
8022	Technical & Vocational Education
8030	Higher education
8090	Adult and other education

N: Health and Social Work

8510	Human health activities (Hospitals etc.)
8520	Veterinary activities
8530	Social work activities (incl. Children's day care centres)

O: Other Community, social and Personal Service Activities

9000	Sewage and refuse disposal, sanitation etc. exc. pest control
9110	Business, employer and professional organisation
9120	Trade Unions
9191	Religious organisations
9192	Political Organisations
9198	Burial Societies
9199	Other membership organisations
9210	Motion picture, radio, tv, other entertainment
9220	News agency activities
9231	Libraries and Archives
9232	Museums and other cultural organisations
9240	Sporting and other recreational activities
9300	Other services activities (incl. dry cleaning, hairdressing, personal ser informal car washing, funerals)

P: Private Households with Employed Persons (for H'hold Surveys only)

9500	Private households with employed persons (Maids, Gardeners, Security - NOTE only private h'hold employees)
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Q: Foreign Missions, International Orgs

9900	Foreign missions: International organisations
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Source: Republic of Botswana (2001) Labour Statistics 1999:68

A13: Guidance Notes for Interview Techniques

1. Purpose of Questions

(a) to collect facts

- about the situation as it exists at the time of the interview
- about past events or situations

(b) to obtain information about opinions, attitudes or levels of knowledge.

There are two kinds of factual questions, those designed:

- to discover the informant's view or evaluation of a given topic
- to assess the extent of the informant's knowledge about a given topic

N.B. A few questions may not obviously fit neatly into these categories and may rest on the border (e.g. between fact and knowledge).

The distinction between the purposes for which questions are asked will determine the way in which you follow up an initial answer, if that is necessary. In general, questions of opinion, attitude or knowledge should be handled in a completely standardised way, whereas those dealing with facts can be handled more freely. Those questions which should be handled in a standardised way are marked with an asterisk (*). You should not vary the wording or order of the questions, since changes in either may have unpredictable effects, which may not always be obvious.

2. Probing

There are two questions which you must ask yourself every time you get an answer:

- (i) Has he/she understood the question? If not, you should repeat the question before proceeding
- (ii) Is the answer clear, explicit and free of ambiguities? If not, you should use a clarifying probe.

If the question format allows for more than one answer, you must ask yourself:

- (iii) Has he/she any different (but correct) answers? In this case you should use an exploratory probe.

Your probing technique should vary according to whether or not the question is asterisked. On both types of question however, a clarifying probe is designed to clear up ambiguities, whereas an exploratory probe is designed to draw out additional answers.

Often a pause or an expectant glance can be enough to make an informant go on to expand or explain an answer, usually however, you will have to put your probing into words.

Probing asterisked questions (opinions/attitudes/knowledge)

If an informant's answer is off the point of the question, or he/she says that they have not understood, you should repeat the question word for word. If no adequate reply is given, make a note of this and move on. This may seem unsatisfactory, but collecting opinions which are not genuinely held is valueless or even misleading.

Clarifying probes

If the answer is vague or ambiguous you will need to use one or more clarifying probes. Some examples:

Can you explain that a little more fully?

How do you mean?

In what way?

The first is more widely used since the other two are a bit more specific and are directed at part of the answer already given e.g.

How do you mean helpful?

In what way disappointing?

Exploratory probes

These are used to find out if the informant has any additional ideas or opinions.

Examples: Is there anything else?

Are there any other (reasons) (items)?

Sometimes you can use these phrases as they stand, but usually you will have to refer back to the original question to make sure that it has not been forgotten.

You should continue probing until the informant indicates by word or expression that he/she has nothing else to say or is clearly repeating him/herself. Note that under-probing is usually a more common fault than over-probing.

Probing non-asterisked questions

This is left mainly to your discretion, but it should be remembered:

- (i) 'Open' questions should be used whenever possible i.e. ones which do not suggest an answer to the informant.
- (ii) Avoid using leading or negative questions, otherwise you may find yourself suggesting e.g. instead of saying "You are still at school, aren't you?" you should say "Are you still at school or not?"
- (iii) If you think it would be helpful to suggest a possible answer, make sure that you mention two or three alternatives. By suggesting two or three, your informant has to try to remember rather than simply agree with you.
- (iv) Avoid implying that your informant may not know the answer or is inadequate.
- (v) Be careful not to use phrases that sound sharp.
- (vi) If your informant genuinely does not know or cannot remember this should be recorded.

Note: There are a few specialist types of questions, not explained here, for which instruction will be given if required.

3. Recording Answers

- (i) Answers must be recorded accurately and legibly.
- (ii) They must be recorded at the time of the interview.
- (iii) They must be recorded speedily, so as not to hinder the flow of the interview.

Method of recording

- (i) The words or numbers of the answers given.
- (ii) Tick the appropriate space (Yes No etc.)

Recording answers to open questions (e.g. opinions)

To ensure that the answer is shown exactly as it was given, then record:

- (i) in longhand – any words abbreviated at the time of the interview should be later written out in full (or provided with a clear key)
- (ii) use the first person – exactly as the informant replies, word for word at the time of the interview.
- (iii) Start writing the moment your informant starts talking – use abbreviations as much as possible, as a last resort ask you informant to slow down.
- (iv) If you have to record part of a long answer away from the space provided, make sure that the continuation is clearly marked.

Accepted abbreviations

It may be helpful to coders, who do not have the advantage of attending the interview, if you indicate where you have probed open question replies.

A diagonal mark is used to show that a probe has been used and initials indicate which probe: e.g.

/ae = Is there anything else?

/ao = Are there any other (reasons)? If appropriate.

/exp = Can you explain that a little more fully?

/way = In what way?

/how = How do you mean?

/R = You have had to repeat, because the question was not understood.

/ae - = probe produced nothing

/exp - = probe produced nothing

4. In Conclusion

The preceding notes are for your guidance and should be followed as much as possible. They should not, however, be allowed to spoil the natural rapport between the interviewer and his/her informant, if possible. The balance is sometimes difficult to attain, but should become easier with practice.

As in all such situations, you should be dressed tidily out of respect for your informant.

A14: Research Assistants' Job Description

Vocational Education and Training and Development in Botswana

(Research Permit No. OP 46/1 LXIX (102))

Preamble:

The project is concerned with the quality of Vocational Education and Training (VET) and its contribution to development in Botswana. It will particularly look at the influence of background on VET and will therefore look at the contribution of the general education system. It will also require the opinions and experiences of the employers, and a cost-benefit analysis of VET for both the individual and the country. This will involve the use of questionnaires and interviews with school leavers, their parents and teachers from CJS and SS schools, students at Brigades, VTCs, Private Training Institutions and UB (technician courses) and employers.

To reduce the work to manageable proportions only representative samples will be used; this will require the help of research assistants.

Job Description:

The work will include:

1. Translation from English to Setswana of 2 questionnaires.
2. Delivering, 'chasing' and collecting questionnaires.
3. Carrying out 'structured' interviews.
4. Helping with the initial collation of data.
5. Assist in meeting the exigencies of any situation which may arise with the project.

Research Assistants will receive appropriate training and will initially work alongside their supervisor until sufficiently competent.

Terms and conditions will be discussed with applicants.

Employer: Mr.G.A.J.Kerton

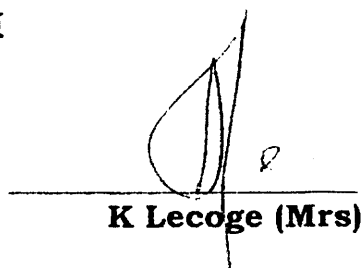
Address: c/o P. Millington, Camphill School. P.O. Box 2224, Gaborone

Tel/FAX: 337288

A15: Ministry of Education Letter of Introduction – Secondary Schools

SAVINGRAM

FROM: Director
Secondary Education



K Lecoge (Mrs)

TEL: 3656199/100

TO: Secondary School Heads

REF: SE 11/17 III (3)

11 May 1999

**STUDY ON VOCATIONAL EDUCATION AND
DEVELOPMENT IN BOTSWANA**

This serves to introduce to you Mr G A J Kerton. Mr Kerton is undertaking a study on Vocational Education and Training (VET) in Botswana.

The aims of the study are;

- To identify employers expectations of Vocational Education and Training
- To identify the influences and roles of the major factors involved in the realisation of these expectations, e.g., VET institutions, general education and home background.

The Ministry will obviously benefit from the results of this study. Secondary Schools fall within the sample to be used in the study. You are therefore requested to allow him access to your institutions and assist him in whatever way you can.

Thank you.

cc. Regional Education Officers
Secondary Education

A16: Schools to be Surveyed

District	School
Senior Secondary Schools	
Central	Selebi Phikwe
Gaborone	Ledumang
	Naledi
Kgalgadi	Ghanzi
North East	Francistown
Southern	Moshupa
Community Junior Secondary Schools	
Central	Bobonong
	Makhubu (Selebi Phikwe)
	Meepong (Selebi Phikwe)
	Mmannathoko (Serowe)
Gaborone	Bokamosa
	Gaborone West
	Matlala
	Maoka
	Nanogang
Katleng	Madikwe (Sikwane)
Kgalagadi	Itakeng (Ghanzi)
	Lehutshelo (Hukuntsi)
Kweneng	Boitshoko (Molepolole)
	Myputhe (Letlhakeng)
Ngamiland	Moeti (Maun)
	Okavango (Gumare)
	Shakawe
North East	Goldmine (Francistown)
	Montamaisa (Francistown)
	Tshetsebe
	Zswenshambe (Masunga)
South East	Chichi Hill (Lobatse)
Southern	Batsirile (Moshupa)
	Ngwaketse (Kanye)

A17: Self-Completion Questionnaire: School Leavers

1. (a) **Name:**
(b) **Date of Birth:**
(c) **Gender:** **Male:** **Female:**
(d) **Previous School/District:**

Please answer all questions. Tick where appropriate.

2. (a) Do you want to go on to further education or training? Yes No
(b) If yes, state where you expect to receive your education or training.
.....
3. What job do you want to do?
4. Why do you want to do this job? Number in order of importance.
(a) To serve the family and community
(b) To use a great interest or vocation
(c) To never be unemployed
(d) To earn a lot of money
(e) Other reason. Please state
5. Is this your own choice? (a) Yes No
(b) If no, who chooses for you?
6. Have others advised you? (a) Parents (b) Teachers
(c) Others (please state)
7. Parents' jobs? (a) Mother
(b) Father
8. (a) Who do you live with?
(b) What is his/her job?

9. If your brothers and sisters work, what are their jobs?

.....

.....

10. Which is most important thing you should gain from school:

knowledge of Botswana, its culture and traditions?

preparation for work?

other (please state)

11. Label the following list of jobs from 1 to 10, in order of greatest prestige (status):

Airline pilot
Bus driver
Carpenter
Computer operator
Electronics technician
Farmer
Land surveyor
Nurse
Police officer
Teacher

12. If you wanted to become a carpenter apprentice, where would you go to train?

(a) Brigade (b) Vocational Training College (VTC)

(c) University (d) Other

13. If you wanted to become an electronic technician, where would you go to train?

(a) Brigade (b) Vocational Training College (VTC)

(c) University (d) Other

.....

14. What do you think are the 3 most important jobs for Botswana?

(a)

(b)

(c)

15. Please state why you think these are important?

.....

.....

.....

16. If you know anyone who is an artisan (craftsman), please state what he/she does.

.....

.....

17. If you know anyone who is a technician, please state what he/she does

.....

.....

18. Please state what are the most important school subjects for doing vocational
educational and training

.....

19. Write down the subjects which you are taught in school in order of preference,
starting with your favourite.

.....

.....

.....

.....

A18: Self-Completion Questionnaire: School Teachers
(English, Maths, Science, Design and Technology, Careers CJSS and SS)

The information from this questionnaire will be treated with the utmost confidence.
Please complete and return, sealed, in the envelope provided.
Thank you for your co-operation.

1. Personal Details

- (a) **Name:**
- (b) **Date of Birth:**
- (c) **Gender:** **Male** **Female**
- (d) **Subject:**
- (e) **Qualifications:**
- (f) **Institution:**
- (g) **Experience:**
- (h) **Home Town/Village and District:**

Please answer all questions – tick where appropriate.

2. (a) Why did you become a teacher?
.....
- (b) Was it your own choice?
- (c) If not, whose was it?
3. What do you think is the more important purpose of teaching:
- (a) to prepare children for the world of work
- (b) to promote the traditions, culture and customs of Botswana?

4.

	Agree	Neutral	Disagree
(a) My subject is very interesting			
(b) I would prefer to teach a different subject			
(c) I would prefer to do a different job			

5. Label the following list of jobs from 1 to 10 in order of greatest prestige:

Airline pilot
Bus driver
Carpenter
Computer operator
Electronics technician
Farmer
Land surveyor
Nurse
Police officer
Teacher

6. What criteria did you use in deciding these rankings?

(a) earning power

(b) service to the community

(c) other

please state other

7. Are any of the following responsible for deficiencies in the pupil's performance?

(a) family size

.....

(b) parents job(s)

.....

(c) parents' income

.....

(d) single parents

- (e) parent's attitude
- (f) home environment
.....
- (g) urban
.....
- (h) rural
.....
- (i) other (please state)
.....

8. When advising pupils or their parents on the choice of a career, list (from 1 to 4 in order of importance) the main factors which influence your advice?

- (a) abilities of the pupil
- (b) service to the community
- (c) earning power of the job
- (d) other
- please state other

9. What type of pupil would you advise to pursue vocational education and training (give typical characteristics) and where would you suggest he/she trained:

- (a) as an artisan (craftsman)
.....
.....
- (b) as a technician
.....
.....

10. (a) What proportion of your final year pupils have problems with English?

(i) understanding

(ii) speaking

(iii) reading

(iv) writing

(b) Over the last three years, have these problems

(i) increased

(ii) decreased

(iii) stayed the same

11. What proportion of your final year pupils have numeracy problems?

A19: Structured Interview Schedule: School Teachers

(English, Maths. Science, Design and Technology, Careers – CJSS and SS)

INFORMATION FROM THIS QUESTIONNAIRE WILL BE TREATED WITH THE UTMOST CONFIDENCE.

1. Personal Details

(a) Name	
(b) Date of Birth	
(c) Gender	Male Female
(d) Subject	
(e) Qualifications	
(f) Institution	
(g) Experience	
(h) Home Town/Village and District	

2. (a) Why did you become a teacher?

(b) Was it your own choice? Yes No

(c) If No, who made the choice?

(d) Other (please specify).....

3. What do you think is the most important purpose of teaching? *

(a) To prepare children for the world of work

(b) To promote the traditions, culture and customs of Botswana

(c) Other (please state)

4.

	Agree	Neutral	Disagree
(a) My subject is very interesting			
(b) I would prefer to teach a different subject			
(c) I would prefer to do a different job			

5. **SHOW CARD** What are the three most prestigious of these jobs, in order of greatest prestige? *

A B C D E F G H I J

6. What criteria did you use in deciding your answer to the previous question?

(a) earning power

(b) service to the community

(c) other (please state)

7. Are any of the following responsible for deficiencies in the pupil's performance *

(a) family size

.....

(b) parents job(s)

- (c) parents' incomes
-
- (d) single parent
-
- (e) parent's attitude
-
- (f) home environment
-
- (g) urban
-
- (h) rural
-
- (i) other (please state)
-

8. (Show question) When advising pupils or their parents on the choice of a career, list (from 1 to 4 in order of importance), the main factors which influence your choice *

- (a) abilities of the pupil
- (b) service to the community
- (c) earning power of the job
- (d) other (please state)

9. What type of pupil would you advise to pursue vocational education and training, give typical characteristics and suggest where he/she might be trained. *

- (a) as an artisan (craftsman)
-
- (b) as a technician
-

10. (a) What proportion of your pupils have communication problems in English?

With: (i) understanding

(ii) speaking

(iii) reading

(vi) writing

(b) Have these problems increased or decreased during the last three years?

(i) Increased (ii) Decreased (iii) Stayed the same

11. What proportion of your final year pupils have numeracy problems?

12. Further relevant comments. *

.....

.....

CARD

What are the three most prestigious of the following jobs?

Airline pilot

Bus driver

Carpenter

Computer operator

Electronic engineer

Farmer

Land Surveyor

Nurse

Police officer

Teacher

A20: Self-Completion Questionnaire: Parents/Guardian (of CJSS and SSS pupils)

Please answer **either** the English **or** Setswana version - **not both**.

This questionnaire is an important part of a wide investigation (Research Permit No. OP 46/1 LXIX (102)) approved by the Ministry of Education and supported by the Headteacher of your child's school.

The researcher, Mr. Kerton, worked in Botswana for nearly ten years, mainly at the Polytechnic where he was Acting Principal for more than two years. He was a member of the secretariat (seconded for a year) of the 1993 National Commission on Education. Later he was the Head of Secretariat for the National Training Plan Reference Group.

Any information given will be confidential – it is important that all questions are answered honestly. The information given could help to improve the opportunities for your children. It should affect positively the future development of Botswana in its efforts to produce a skilled and effective workforce.

Your help will be much appreciated. If you wish to make further comments, please write on the bottom of the questionnaire. The completed form should be sealed in the envelope provided and returned to your child's school.

Thank you for your valuable contribution.

Name:

Home Town/Village and District:

Child's School/District:

Please answer all questions – tick where appropriate.

1. Occupation: (a) Self:

(b) Spouse:

2. Reason for choosing occupation:

(a) Self:

(b) Spouse:

3. Was this your own choice? (a) Self:

(b) Spouse:

4. Number of children (living):

5. Children(s) jobs (if appropriate):
-
6. What job would you like your children to have?
7. What factors are important when choosing a job? List from 1 to 5 in order of importance:
- (a) the ability and interests of the child.
 - (b) the earning power of the job.
 - (c) the reliability of the job (no unemployment)
 - (d) service to the community
 - (e) other
- please state other
8. Label the following list of jobs from 1 to 10 in order of prestige:
- Airline pilot
 - Bus driver
 - Carpenter
 - Computer operator
 - Electronic technician
 - Farmer
 - Land surveyor
 - Nurse
 - Police officer
 - Teacher
9. What type of child would you suggest for vocational education and training:
- (a) as an artisan
 - (b) as a technician?

10. Where would the training programme take place?

(a) for artisans

(b) for technicians

11. Give 2 examples of jobs done by:

(a) artisans

(b) technicians

12. Who normally makes the choice of job for a child?

(a) the child

(b) the parent

(c) other

please state who this is

13. Who else may advise you on the choice of career for your child?

(a) relatives

(b) friends

(c) teachers

(d) other

please state who this is

14. Which do you think is the most important purpose for school:

(a) to promote the traditions, culture and customs of Botswana

(b) to prepare children for the world of work

A21: Self- Completion Questionnaire: Batsadi/Motlhokomedi (of CJSS and SS pupils)

Tswee tswee araba ka Setswana kgotsa Sekgoa.

Potsolotso e ke karola ee botlhokwa ya tlhotlhomiso ka bophara (Research Permit No. OP 46/1 LXIX (102)) e e letleletsweng ke ba lephata la thuto mme e rotloetswa ke mogokgo wa sekole sa ngwana wa gago.

Motlhotlhomisi, Rre Kerton, o berekile mo Botswana sebaka sa dingwaga tse di ka nnang lesome, bogolo jang kwa sekoleng se segolwane sa maranyane (Botswana Polytechnic) kwa a ntseng motshwarelela mogokgo sebaka sa dingwaga dile pedi. E ne e le leloko la bokwaledi jwa lekgotla la tshekatsheko ya tsa thuto ya lefatshe la Botswana (National Commission on Education) kwa a diretseng teng lebaka la ngwaga wa 1993. Morago one a nna mookamedi wa lekgotla la bokwaledi jwa lekoko la setshaba lele faphegileng la Thulaganyetso ya Ithutuntsho (National Training Plan Reference Group).

Dikarabo tsa gago ditla tsewa e le sephiri – go botlhokwa gore o arabe dipotso ka boammaruri. Ditsetla tse otladi di ntsang di ka thusa go tokafatsa tshono ya go atlega ga bana ba rona. E ka thusa go rotloetsa ditlhabololo tsa isago ya Botswana mo maitekong a go ntsha badiri ba ba tlhaga ba ba rutetsweng tiro.

Thuso ya gago e a amogelesega. Fa o eletsa go tsweledisa dikakgelo tsa gago, tswee tswee kwalla ko tlase ga potsolotso. Foma e e tlhaditsweng e ka tswelwa mo enfolopong e o e neetsweng, mme ya bosediswa kwa sekolong sa ngwana wa gago.

Kelebogela rako ya gago e e botlhokwa.

- 1. (a) Leina
- (b) Toropo/Motse/Legae Keagolo
- (c) Leina la Sekole /Sa ngwana

Ke kopa o arabe dipotso tsotlhe – tshwaa ee tlhokegang.

- 2. Tiro: (a) Nna
- (b) Mosadi/Monna wa gago
- 3. Lebala lele direleng gore otlhophe tiro e:
 - (a) Nna
 - (b) Mosadi/Monna wa gago
- 4. A keka thato ya gago? (a) Nna
- (b) Mosadi/Monna wa gago

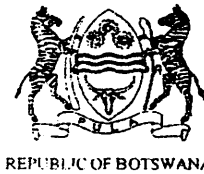
5. Bana ba ba tshelang
6. Ngwana/Bana ditiro tsa bone (fa go tlhokega)
.....
7. O ka eletsa gore ngwana wa gago a dire tiro e e ntseng jang
.....
8. Ke mabaka afe a botlhokwa fa o tlhopa tiro. A tlhomaganye ka go latelana ka boleng jwa o ne bakgoni:
 - (a) Kgatlhego e e mo ngwaneng
 - (b) Gore tiro e duela gole kae
 - (c) Gore tiro e ikanyega gole kae (ga gona letlhoko la mebereko)
 - (d) Tirelo ya setshaba
 - (e) Tse dingwe (tswee tswee kwala tse dingwe)
9. Kwala ditiro tse di latelang, ka go latelana ka botlholwa:

Mokgweetsi wa sefofane
Mokgweetsi wa bese
Mmetli
Modirisi wa komputare
Ramaranyane wa motlakase
Molemi morui
Mapoti/mosekasiki wa lefafsle
Mooki
Lepodisi
Morutabana

10. O ka tlhopa ngwana yoo ntseng jang go tsenelela dithuto tsa diatla:
- (a) Tiro ya diatia
- (b) Ramaranyane
11. Dithuto tse di tlaa tshwarelwa kae?
- (a) tsa tiro ya diatla
- (b) Tsa boramaranyane
12. Fa dikani tsa ditiro dile pedi tse di dirilweng ke:
- (a) Badiri ba tiro diatla
- (b) Boramaranyane
13. Ke mang ka tlhwaele sego yoo tlhophang gore ngwana a dire tiro ete?
- (a) Ngwana
- (b) motsadi
- (c) morgwe
- Tswee Tswee kwala gore ke mang
14. Ke mang gape yoo ka go thusang go tlhopha tiro ya ngwanawa gago?
- (a) Balosika
- (b) Ditsala
- (c) Barutabana
- (d) Mongwe
- Tswee tswee kwala gore ke mang
15. Ke eng seo se bonang ele konkoro ya sekole:
- (a) go rotloetswa tlwaelo le ngwao ya Botswana
- (b) go baakanyetsa bana seemo sa pereko?

A22: Ministry of Education Letter of Introduction - Brigades

MINISTRY OF EDUCATION
DEPARTMENT OF VOCATIONAL EDUCATION AND TRAINING
PRIVATE BAG 0062
GABORONE
TEL: 00 (267) 3655000
FAX: 00 (267) 302080
REFERENCE NO.



VE 13/8

9th July 1999

All Brigade Co-ordinators

Dear Sir / Madam

RE: STUDY ON VOCATIONAL EDUCATION AND TRAINING IN BOTSWANA

This serves to introduce to you Mr G A J Kerton. Mr Kerton is undertaking a study on Vocational Education and Training (VET) in Botswana.

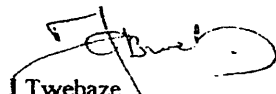
The aims of the study are;

- To identify employers expectations of Vocational Education and Training
- To identify the influences and roles of the major factors involved in the realisation of these expectations, e.g., VET institutions, general education and home background.

The Brigades and the Ministry will obviously benefit from the results of this study. Brigades fall within the sample to be used in the study. You are therefore requested to allow him access to your institution and assist him in whatever way you can.

Thank you for your co-operation.

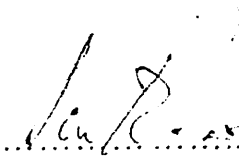
Yours faithfully



J Twebaze
For / Director

SAVINGRAM

FROM: Director
Department of Vocational Education
and Training



V.M Mogwe
for / Director

TEL: 3655000

TO: All VTC Principals

REF: VE 13/9 2nd July 1999

**STUDY ON VOCATIONAL EDUCATION AND TRAINING IN
BOTSWANA**

This serves to introduce to you Mr G A J Kerton. Mr Kerton is undertaking a study on Vocational Education and Training (VET) in Botswana.

The aims of the study are;

- To identify employers expectations of Vocational Education and Training
- To identify the influences and roles of the major factors involved in the realisation of these expectations, e.g. VET institutions, general education and home background.

The Ministry will obviously benefit from the results of this study. VET institutions fall within the sample to be used in the study. You are therefore requested to allow him access to your institutions and assist him in whatever way you can.

Thank you.

A24: VET Institutes Surveyed

District	Institute
Vocational Training Centres	
Central	Orapa
	Palapye
	Selebi Phikwe
Gaborone	Gaborone VTC
	Automotive Trades Testing School
Ngamiland	Maun
Southern	Jwaneng
Brigades	
Central	Bobonong
	Boeti (Letlhkane)
	Madiba (Mahalapye)
	Palapye
	Serowe
	Shashe
Gaborone	Tlokweng
	Naledi
Kgalagadi	Ghanzi
	Kang
Kgatleng	Matsheng (Lehututu)
	Kgatleng (Mochudi)
Kweneng	Molepolole (KRD)
	Tshwaragano (Gabane)
Ngamiland	Gumare
	Maun
	Okovango
North East	Tutume
South East	Lobatse
	Tswelelopole (Ramptswa)
Southern	Kanye

A25: VET Institutes: Self-Completion Questionnaire: VET Leavers

1. (a) **Name:**
- (b) **Date of Birth**
- (c) **Gender: Male** **Female**
- (d) **Home Town/Village and District:**
- (e) **Previous School/District:**
- (f) **Qualifications:**
- (g) **Present Institution:**

Please answer all questions – tick where appropriate.

2. (a) Programme of study
- (b) Type of certificate/diploma expected
3. (a) Was this your own choice? Yes No
- (b) If no, who chose for you?
4. If yes, answer this question. Why did you choose this course? (Please tick.)
- (a) To serve the family and community
- (b) To further a strong interest or vocation
- (c) To be never unemployed
- (d) To earn a lot of money
- (e) Other (please state)
5. Who gave you advice on the choice of career?
- (a) Parents (b) Teachers (c) Others (please state)
6. Who had the most influence on your choice?
7. Parents jobs? (a) Mother:
- (b) Father:
- (c) Guardian

8. If your brothers and sisters work, what are their jobs?
9. (a) Which were your favourite subjects in school?
- (b) Did you do Design and Technology? Yes No
10. Did your school education prepare you well for Vocational Education and Training (VET)? Yes No
- If 'No' please explain
-
11. Which is the best job? Label the following list from 1 to 10, in order of greatest prestige (glamour):

Airline pilot
Bus driver
Carpenter
Computer operator
Electronics technician
Farmer
Land surveyor
Nurse
Police officer
Teacher

12A. If you already have a job to go to after completing your course:

- (a) name the job
- (b) who is the employer

12B. If you do not yet have a job to go to after completing your course, please state the type of job you hope to get.

.....

13. Do you hope to become self-employed eventually?

(a) Alone: Yes No

(b) In partnership: Yes No

14. (a) Do you enjoy working as part of a team? Yes No

(b) Are you happy to work alone? Yes No

15. What are your opinions of the training provided on your course? (Please tick.)

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
(a) Theory				
(b) Practical skills				
(c) Instruction on employer expectations				
(d) Using instruction manuals				
(e) Writing technical reports				
(f) Supervisory skills				

16. Do you expect on-the-job training when you start work? Yes No

17. Which of these applies to you? (Please tick)

	Agree	Neutral	Disagree
(a) I am pleased that I will become a craftsman / technician			
(b) My trade / subject is very interesting			

18. (a) If you are not confident about starting work, where do you think the blame lies?

VET School Own efforts

(b) Further comment.....

19. If you are required to undertake re-training in the future in order to cope with new developments in your trade/subject, would you do this:

(a) willingly (b) look for another job

A26: VET Institutes: Structured Interview Schedule: VET Leavers

1. Personal Details:

(a) Name of leaver	
(b) Date of birth	
(c) Gender	Male Female
(d) Home town/village & district	
(e) Previous school & district	
(f) Qualifications	
(g) Current Institution	

2. (a) Programme of study
 (b) Expected qualification

3. Was this your own choice? Yes No

4A. If 'yes', why did you choose your subject/trade?

(a) To serve your family or community	
(b) To further a strong interest or vocation	
(c) To get a permanent job	
(d) To earn a lot of money	
(e) Other (state)	

- 4B. If 'no', who chose for you?

5. Who advised you on your choice?
 (a) Parents (b) Teachers (c) Other (state)

6. Who had the most influence on your choice?

7. Parents' jobs: (a) Mother
 (b) Father

8. If your brothers and sisters work, what are their jobs?

9. (a) Which were your favourite subjects in school?
 (b) Did you do Design and Technology? Yes No
 (c) Did your school education prepare you adequately for your VET programme?
 Yes No
 (d) If 'no', what were the deficiencies?

- 10(A). Which are the 3 most prestigious of these jobs? **SHOW CARD**

A B C D E F G H I J

- 10(B). Why have you chosen these 3? *

- 11.(A) If you have a job to go to after completing your course, give:

- (a) name of the job
 (b) name of the employer
 (B) If you do not yet have a job to go to after completing your course, please state the type of job you hope to get

12. Do you hope to become self-employed eventually? *

- (a) Alone Yes No
 (b) In partnership Yes No

13. (a) Do you enjoy working as a member of a team? Yes No
 (b) Are you happy to work alone? Yes No

14(A). What is your opinion of the training provided on your course: *

(VTC) (B) Brigade (C) UB (D) Other (state)

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
(a) Theory				
(b) Practical skills				
(c) Instruction on employers expectations				
(d) Supervisory skills				

Supplement: If dissatisfied, please explain

14(B) Will you be able to complete the following tasks with confidence in the workplace? *

	Yes	No
(e) Read and understand instruction manuals		
(f) Write technical reports		
(g) Use a word processor		
(h) Did you receive instruction on technical English during training?		

Supplement: If no, please explain

15. Do you expect to receive on-the-job when you start work? Yes No

16. Which of the following applies to you?

	Agree	Neutral	Disagree
I am glad that I will become a craftsman / Technician			
(b) My subject / trade is very interesting			

17. (a) If you are not confident about starting work, where do you think the blame lies? *

- (i) VET (ii) School (iii) Own efforts (iv) Other (state) ...
 (b) Further comment

18. If you are required to undertake re-training in the future in order to cope with a new development in your trade/subject, would you do this willingly or look for another job? *

A27: VET Institutes: Self-Completion Questionnaire: Lecturers/Instructors

1. Personal Details:

- (a) **Name:**
- (b) **Date of Birth:**
- (c) **Gender:** **Male** **Female**
- (d) **Home Town/Village and District:**
- (e) **Institution of Training:**
- (f) **Qualification:**
- (g) **Subject/Trade Specialism:**
- (h) **Course(s) Taught:**

Please answer all questions – tick where appropriate.

2. Why did you choose your trade/profession?

- (a) To serve the family or community
- (b) To further a strong interest or vocation
- (c) To get a permanent job
- (d) To earn a lot of money
- (e) Other (please state)

3. (a) Was it your own choice? Yes No

- (b) If not, who decided for you?

4. Who advised you on your choice?

- (a) Parents (b) Teachers (c) Others (state)

5. Parents' jobs? (a) Mother

- (b) Father

6. If your brothers and sisters work what are their jobs?

.....

7. How long did you work in industry before becoming a lecturer?

8. What aspects of working in industry:

(a) satisfied you

(b) disappointed you?

9. How long have you been a lecturer?

10. Why did you become a lecturer?

.....

11. Label the following list of jobs from 1 to 10, in order of greatest prestige:

Airline pilot

Bus driver

Carpenter

Computer operator

Electronic technician

Farmer

Land surveyor

Nurse

Police officer

Teacher

12. How satisfied have you been with students during their training (please tick):

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
Theory				
Practical skills				
Attitude to work				

13. What deficiencies (if any) have you noticed in the students communication skills?

13. What deficiencies (if any) have you noticed in the students communication skills?

(a) Reading

(b) Writing

(c) Understanding and acting upon:

(i) written instructions

(ii) oral instructions

(d) Do students receive instruction on technical English during training?

Yes No

14. Why do you think that these deficiencies (if any) exist?

(a) poor general education

(b) problems with language

(c) cultural background

(d) other (please specify)

15. Should VET train:

(a) only for current job requirements Yes No

(b) for future job requirements Yes No

(c) to give good attitudes to work and workplace conventions?

Yes No

(d) in supervisory skills Yes No

16. Should any of these be left solely to the employer? 15(a) (b) (c)

17. (a) Could the relevance of the course be improved? Yes No

(b) If 'Yes' please explain how

.....

Please turn over

18. Which of these applies to you? (Please tick)

	Agree	Neutral	Disagree
(a) I am glad that I am a craftsman / professional			
(b) My trade / profession is very interesting			
(c) I am glad that I am a lecturer			

A28: VET Institutes: Structured Interview Schedule: Lecturers/Instructors

1. Personal Details:

(a) Name of Lecturer	
(b) Date of birth	
(c) Gender	Male Female
(d) Home town/village & district	
(e) Institute of training	
(f) Qualification	
(g) Subject/trade specialism	
(h) Course(s) taught	

2. Why did you choose your subject/trade/profession?

(a) To serve your family or community	
(b) To further a strong interest or vocation	
(c) To get a permanent job	
(d) To earn a lot of money	
(e) Other (state)	

(f) Do you now think it was a good choice? Yes No

(g) If not, explain

3. (a) Was this your own choice? Yes No

If not, who decided for you?

4. Who advised you on your choice?

(a) Parents (b) Teachers (c) Others (state)

5. Parent's/Guardian's jobs? (a) Mother

(b) Father

(c) Guardian

6. If your brothers and sisters work, what are their jobs?

.....

7. How long did you work in industry before becoming a lecturer?

8. What aspects of working in industry: *

satisfied you

disappointed you?

9. How long have you been a lecturer?

10. Why did you become a lecturer? *

11. Which of the following are the 3 most prestigious jobs? * (SHOW CARD)

A B C D E F G H I J

12. In general, how satisfied have you been with students during their training? *

	Very satisfied	Satisfied	Dissatisfied	V.dissatisfied
Theory				
Practical skills				
Attitude to work				

13. What deficiencies (if any) have you noticed in the students communication skills?*

	Yes	No	If yes, explain
Understanding & acting upon			+
(a) written instructions			
(b) oral instructions			
Reporting back to you on Technical/business activities			+
(c) orally			
(d) in writing			

(e) Do they receive instruction in technical English? Yes No

14. Why do you think their deficiencies (if any) exist? *

- (a) poor general education
- (b) problems with English
- (c) cultural background
- (d) other (specify)

15. Should VET train: *

- (a) only for current job requirements.....
- (b) for future job requirements
- (c) to give a good attitude to work and workplace conventions?.....
- (d) for supervisory skills

16. Should any of these be left solely to the employer? * 15(a)

15(b) 15(c)

17. In general, how could the defects in VET (if any) be overcome? *

- (a) Lengthening the course
- (b) Improving the skills of the lecturers
- (c) Improving the skills of the practical instructors
- (d) Better selection of students
- (e) Better general education for students
- (f) Better knowledge of employers requirements
- (g) Better contact with employers for lecturers/instructors
- (h) Better conditions of service for lecturers and instructors
- (i) Other (specify)

Supplementary: Please state which of those ticked are the most important and explain why they would help to improve the student performance.....

.....

18. (a) Are you glad that you trained as a craftsman/professional?

Yes No

(b) If not, explain

(c) Do you find your trade/profession very interesting? Yes No

(d) If not, explain

A29: Recent VET Graduates: Self-Completion Questionnaire

1. Personal Details

- (a) **Name:**
- (b) **Date of Birth:**
- (c) **Gender:** **Male:** **Female:**
- (d) **Home Town/Village and District:**
- (e) **Previous School and District:**
- (f) **VET Institution:**
- (g) **Subject/Trade:**
- (h) **Qualification:**
- (i) **Company:**
- (j) **Sector:**
- (k) **Number of Employees:**
- (l) **Your Position:**

Please answer all questions – tick where appropriate.

2. Why did you choose your subject/trade?

- (a) To serve the family or community
- (b) To further a strong interest or vocation
- (c) To get a permanent job
- (d) To earn a lot of money
- (e) Other

Please explain other

3. (a) Was this your own choice? Yes No

- (b) If not, who decided for you?

4. Who advised you on your choice? (a) teachers
(b) family
(c) others Please specify
5. Who had most influence upon your choice?
6. Parents jobs? (a) Mother
(b) Father
7. Brothers' and sisters' jobs (if appropriate)
.....
8. (a) Which were your favourite subjects in school?
(b) Did you do D&T? Yes No
9. Give details of work since qualifying?
10. What aspects of your work have:
(a) satisfied you
(b) disappointed you?
11. Label this list of jobs from 1 to 10, in order of greatest prestige (glamour):
- | | |
|-----------------------|-------|
| Airline pilot | |
| Bus driver | |
| Carpenter | |
| Computer operator | |
| Electronic technician | |
| Farmer | |
| Land surveyor | |
| Nurse | |
| Police officer | |
| Teacher | |

12. (a) Were you satisfied with your training (please tick)?

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
(a) Theory				
(b) Practical skills				
(c) Instruction on employer's expectations				
(d) Relevance				
(e) Supervisory skills				

(b) Did you have any instruction in Technical English during training?

Yes No

(c) If dissatisfied with any of the above, please explain

.....

13. Have you experienced deficiencies at work which you have had to correct in:

(a) literacy e.g. misunderstanding written or oral instructions

Yes No Sometimes

(b) numeracy e.g. mental calculations, order of magnitude (decimal point)

Yes No Sometimes

(c) work place conventions Yes No

(d) computer literacy Yes No

(e) other (please state)

(f) working with colleagues as a team Yes No

(g) Please comment on any deficiencies

14. In your work, how often have you had to:

(a) use instruction manuals

(b) write technical reports

15. State the most likely sources of deficiencies, if any, in preparing you for your job?

- (d) Other (specify)

16. Should VET train:

- Yes No

17. (a) What do you think your status is in the company?

- (b) Do you 'fit in' with: (i) your colleagues Yes No

- (ii) your bosses? Yes No

(c) Explain, if necessary

.....

18. (a) In hindsight, do you wish that you had trained for a different job?

Yes No

(b) If yes, explain

.....

19. Tick where applicable.

	Agree	Neutral	Disagree
(a) I enjoy my work			
(b) I find my work very interesting			

A30: Recent VET Graduates: Structured Interview Schedule

1. Personal Details:

(a) Name of Graduate	
(b) Date of Birth	
(c) Gender	Male Female
(d) Home Town/Village & District	
(e) Previous School & District	
(f) Institute of Training	
(g) Subject/Trade	
(h) Qualification	
(i) Company	
(j) Sector	
(k) Number of employees	
(l) Your position	

2. Why did you choose your subject/trade?

(a) To serve your family or community	
(b) To further a strong interest or vocation	
(c) To get a permanent job	
(d) To earn a lot of money	
(e) Other (state)	

(f) Do you stand by that choice? Yes No

(g) If not, explain

(h) Would you have chosen differently if you had been given more information about other jobs?.....

3. (a) Was this your own choice? Yes No

(b) If not, who decided for you?

4. Who advised you on your choice?

(a) Parents (b) Teachers (c) Others (state)

5. Parents jobs? (a) Mother

(b) Father

6. If your brothers and sisters work, what are their jobs?

7. Who had most influence upon your choice?

8. (a) Which were your favourite subjects in school?

(b) Did you do Design and Technology? Yes No

9. (a) How long did you have to wait between finishing at college/brigade and starting work? years months

(b) Was it easy to get a job? Yes No

10. (a) How long have you been in this job? years months

(b) (If relevant) give details of other jobs

.....

11. What are the 3 most prestigious of these jobs? * (SHOW CARD)

A B C D E F G H I J

12. How would you describe the training which you received? * (Tick establishment)

VTC (B) Brigade (C) UB (D) Other (state)

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
(a) Theory				
(b) Practical skills				
(c) Instruction on employer's expectations				
(d) Relevance				
(e) Supervisory skills				

(f) (If required) Comment on deficiencies

.....

.....

13. Have you experienced problems at work which you have had to correct in:

(a) working with other members of a team Yes No

(b) knowledge of workplace conventions and practices? Yes No

(c) (If appropriate) Please comment on deficiencies

.....

.....

14. Have you any difficulties with the following:

	Yes	No	Explain (if yes)
(a) understanding and carrying out oral instructions			
(b) giving instructions			
(c) numeracy			
(d) computer literacy			
(e) supervisory skills			

Other (state)

15. Where do you think such deficiencies come from? *
- (a) General education Yes No
 - (b) VET Yes No
 - (c) Cultural differences Yes No
 - (d) Other (specify)
16. In your work, have you had to:
- (a) use instruction manuals? Yes No
 - (b) How often?
 - (c) Write technical reports? Yes No
 - (d) How often?
 - (e) Did you have any instruction in Technical English in VET? Yes No
17. Do you think that VET should train: *
- (a) only for the current job Yes No
 - (b) for future job requirements Yes No
 - (c) to give a good understanding of workplace conventions, practices and demands?
Yes No
18. Which of the following management styles most closely represents that of your company?
- (a) Hierarchical
 - (b) Full discussion but management decision
 - (c) Consensus decisions
 - (d) Other (explain)
19. Which of the following organisational structures most closely resembles that of your company?
- (a) Flat hierarchy
 - (b) Pyramid hierarchy
20. What do you think your status is in the company? *
21. What are your promotion/career prospects? *
22. Are qualifications important for promotion? *
- (a) Essential
 - (b) Important
 - (c) Desirable
 - (d) Not important

23. If you were required to undertake further training (paid for by your employer) in order to keep your job, would you: *

- (a) retrain
- (b) look for another job
- (c) Explain why

24. (a) Do you 'fit in' with your colleagues and bosses? Yes No
(b) Have you made good working relationships? Yes No
(c) If No, please explain.
.....

A31: Employer: Self-Completion Questionnaire

(To be completed by a member of senior management)

Vocational Education and Training (VET)

This questionnaire is an important part of a wide investigation into Vocational Education and Training (Research Permit OP 46/1 LXIX (102) approved by the Ministry of Education, with support from the Ministry of Commerce and Industry and the Botswana National Productivity Centre.

The researcher, Mr. Kerton, worked in Botswana for nearly ten years, mainly at the Polytechnic where he was Head of Civil Engineering and Building and then Acting Principal for more than two years. He was a member of the Secretariat (seconded for a year) of the National Commission on Education. Later he was Head of Secretariat for the National Training Plan Reference Group.

Any information given will be confidential – it is important that all questions are answered honestly. The results of this survey should positively affect the future development of Botswana in its efforts to produce a skilled and effective workforce.

Your help will be much appreciated. If you wish to make further comments, please write on the back of the questionnaire.

Thank you for your valuable contribution.

1. Personal Details:

(a) Name:

(b) Gender: Male Female

(c) Citizen: Yes No

(d) If no, state nationality:

(e) Position in company:

(f) Background (training/qualifications/experience):

.....

.....

2. Company Details:

(a) Company name

(b) Number of employees

(c) Company business

(d) Sector (Please tick):

(i) Agriculture	(ii) Mining	(iii) Manufac.	(iv) Construc.	(v) Consults.
(vi) Auto services	(vii) Hotels and Tourism	(viii) Printing / Computers	(ix) Brigades	(x) Other

Please ensure that you read each question carefully – answer all questions, tick where appropriate.

3. State the number of craftsmen and technicians that have worked for you in the past five years (continue on additional table, on back page, if necessary).

(a) Craftmen:

- (i) Number
- (ii) Trade name
- (iii) Qualifications (inc. country where issued)
.....
- (iv) College/Brigade attended (in Botswana)
.....
- (v) College attended (elsewhere)
.....

(b) Technicians:

- (i) Number
- (ii) Discipline (subject)
- (iii) Qualifications (inc. country where issued).....
.....
- (iv) College attended (inc. country)
.....

4. What is the importance to your company of:

	Essential	Important	Low importance
(a) a well-trained craftsman			
(b) a well trained technician			

5. What are their promotion/career prospects?

	Excellent	Good	Poor
(a) craftsmen			
(b) technicians			

6. Can you manage without them?

(a) craftsmen Yes No

(b) technician Yes No

(c) Please explain

.....

7. What is the relevance of qualifications to the job?

	Essential	Important	Desirable
(a) When initially recruited			
(b) When promoted			

8. If you embarked on a new process requiring new skills and knowledge would you:

(a) train members of your existing staff Yes No

(b) recruit ready trained staff? Yes No

9. What is your opinion of the training provided in general craftsmen and technicians by the following:

9A. Brigades

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

9B. VTCs

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

9C. UB Technicians (former Polytechnic)

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

9D. Private Training Institutions etc. please identify

.....

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

10. Do craftsmen have problems with:

	Yes	No	Explain if yes
(a) reading instruction manuals			
(b) writing technical reports			
(c) understanding and carrying out oral instructions			
(d) giving instructions			
(e) number work			
(f) computer literacy			

(g) other (please state)

11. Do technicians have problems with:

	Yes	No	Explain if yes
(a) reading instruction manuals			
(b) writing technical reports			
(c) understanding and carrying out oral instructions			
(d) giving instructions			
(e) mental calculations			
(f) computer literacy			

(g) other (please state)

12. Do they work well with other staff members in a team?

	Yes	No	Explain if no
(a) craftsmen			
(b) technicians			

13. What is the craftsman's attitude to training them selves in order to upgrade their skills so that they can undertake new technical tasks? Are they:

	Comment
(a) willing	
(b) unwilling	
(c) unable	

14. What is the technicians' attitude to training themselves in order to upgrade their skills/knowledge so that they can undertake new tasks? Are they:

	Comment
(a) willing	
(b) unwilling	
(c) unable	

15. What do you think are the reasons for their deficiencies (if any)?

	Craftsmen	Technicians
(a) Faults in their VET training		
(b) Faults in their general education		
(c) Their cultural background		
(d) Poor career choice		

(e) Other (please state).....

16. For any deficiencies identified in question 15, please elaborate briefly and state what should be done to eliminate them.

.....

.....

.....

17. Should Vocational Education and Training (VET) include instruction on:

	Craftsmen	Technicians
(a) the nature of business and industry		
(b) positive attitude to work		
(c) employer's expectations		
(d) supervisory skills		

(e) Additional comments

.....

18. What is the status of VET graduates with respect to other members of staff?

.....

A32: Employer: Structured Interview Schedule

(To be completed by senior management)

1. Personal Details

(a) Name		
(b) Gender	Male	Female
(c) Citizen	Yes	No
(d) If no, state nationality		
(e) Position in company		
(f) Background (training, qualifications, experience)		

.....

.....

2. Company Details

(a) Company name				
(b) Number of employees				
(c) Company business				
(d) Sector (tick)				
(i) Agriculture	(ii) Mining	(iii) Manufac.	(iv) Contruc.	(v) Consults.
(vi) Auto etc	(vii) Hotels etc	(viii) Comp/Pri	(ix) Brigades	(x) Other

3. Management style: which of the following most closely represents your company?

- (a) Hierarchical
- (b) Full discussion but management decision
- (c) Consensus decision

4. Company's organisational structure: which of the following most closely resembles that of your company?

- (a) 'Flat' hierarchy
- (b) Pyramid hierarchy

5. Post-general education initial training completed by your employees (state nos.):

	Craftsmen	Technician	Qualification
(a) VTCs			
(b) Brigades			
(c) Private Colleges			
(d) CITF			
(e) On-the-job			
(f) Other (state)			

6. What is the importance to your company of a well-trained: *

	Essential	Important	Low importance
(a) craftsman			
(b) technician			

7. What are their promotion/career prospects? *

	Excellent	Good	Poor
(a) craftsmen			
(b) technicians			

8. Can you manage without them?

- (a) craftsmen Yes No
 (b) technician Yes No

(c) Please explain

.....

9. What is the relevance of qualifications to the job?

	Essential	Important	Desirable
(a) When initially recruited			
(b) When promoted			

10. If you embarked on a new process requiring new skills and knowledge would you:

- (a) train members of your existing staff Yes No
 (b) recruit ready trained staff Yes No

11. What is your opinion of the training provided in general to craftsmen and technicians by the following:

11A. Brigades

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

11B. VTCs

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

11C. UB Technicians (former Polytechnic)

	Very Satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

11D. Private Training Institutions etc. please identify

.....

	Very Satisfied	Satisfied	Dissatisfied	Very dissatisfied
(a) knowledge of theory				
(b) practical skills				
(c) attitude to work				
(d) relevance to job				

12. Do craftsmen have any problems with:

	Yes	No	Explain if yes
(a) reading instruction manuals			
(b) writing technical reports			
(c) understanding and carrying out oral instructions			
(d) giving instructions			
(e) numeracy			
(f) computer literacy			

(g) other (please state)

13. Do technicians have problems with:

	Yes	No	Explain if yes
(a) reading instruction manuals			
(b) writing technical reports			
(c) understanding and carrying out oral instructions			
(d) giving instructions			
(e) mental calculations			
(f) computer literacy			

(g) other (please state)

14. Do they work well with other staff members as a team? *

	Yes	No	Explain if no
(a) craftsmen			
(b) technicians			

15. What are the craftsmen's attitude to training themselves in order to upgrade their skills to undertake new technical tasks? Are they: *

	Comment
(a) willing	
(b) unwilling	
(c) unable	

16. What is the technicians attitude to training themselves in order to upgrade their skills/knowledge so that they can undertake new tasks? Are they: *

	Comment
(a) willing	
(b) unwilling	
(c) unable	

17. What do you think is the reason for most of their deficiencies (if any)? *

	Craftsmen	Technicians
(a) Faults in their VET training		
(b) Faults in their general education		
(c) Their cultural background		
(d) Poor career choice		

(e) Other (please state)

.....

18. For any deficiencies identified in question 17, please elaborate briefly and state what should be done to eliminate them *

.....

.....

.....

.....

19. Should Vocational Education and Training (VET) include instruction on:

	Craftsmen	Technicians
(a) the nature of business & industry		
(b) positive attitude to work		
(c) employer's expectations		
(d) supervisory skills		

(e) Additional comments:

.....

20. What is the status of VET graduates with respect to other members of staff?

.....

.....

SUMMARY OF PEOPLE'S COMMENTS ON THE POINTS OF DISCUSSION

1. STATUS

The general agreement is that chief does have the highest status in the village because he comes from the royal family, and older people are respected for their age and wisdom, but both of these people have to carry themselves in a manner that will earn them respect. Those other people holding no special positions or without special attributes are respected for their roles within the community, irrespective of their family background.

SUPPLEMENTARY

The view is :-

Ownership of cattle still gives a man higher status within society but this depends on the purpose of owning so many cattle. If the purpose is for sheer display of wealth, so much that they die when there's a severe drought or they die due to some cattle disease, then the owner is foolish and does not deserve respect at all. The other view is that cattle are better than money. They can be used to assist in various ways.

Since there are other ways of earning a living people have resorted to them still they must have cattle because they add to the prestige and they are readily available for weddings and funerals.

2. FAMILY RELATIONSHIPS

The first-born boy still holds special status because in the absence of the father through death he assumes the responsibilities and roles of the father. He has to be consulted on matters pertaining to the family and he must take a decision in conjunction with his other siblings and uncles.

Other members of the family are treated according to their positions, with older ones given more respect and younger ones as still immature to make meaningful decisions in certain areas.

SUPPLEMENTARY

The first-born no longer has the authority to decide the chosen career of a member of his family because of the modern education system. Students do many subjects which influence them in choosing a specific career and often first borns do not understand these subjects.

3. SOCIAL CAPITAL

The system of joining together to help with a larger or urgent job is still practised, especially in funerals and weddings because people need to collect firewood, borrow pots and dishes, food and cook it, slaughter a beast, dig a grave and serve food, wash up the next day and return all that have been borrowed. Repayment is by reciprocation.

SUPPLEMENTARY

This method is common in all villages.

4 CAREER

The choice for a paid job is by the individual. The choice for further training is by both individual and/or the institutions. If the individual feels the need for this he/she can enrol with a private institution and either pay him/herself or ask the family or employer to pay. Sometimes it is the employer who decided to send the individual for further training.

FACTORS

Many people no longer look at “Service to the community)” as the most important factor. They consider the skills and interest, and the status of the job as more important and money as the most important.

5 SCHOOL

The role of the school is to help children understand modern things and to mould them into responsible citizens, by strengthening their traditional value. Children, especially of the secondary schools have lost respect for authority/parents. If a child does anything wrong or misbehaves in front of elders, no-body can punish them because they say it is their right to do what they like. Beating them for gross violation of traditional norms used to put them in line.

-It appears going to school is a practice that has to be followed because other children go to school, or it is a way of escaping performing any chores at home. It does not help young people get jobs because it teaches academic stuff, except D&T, carpentry and other stuff at VTCs/Brigades. Even if it provides them with these skills, it does not teach them how to move away from relying on others (e.g. Government) for jobs and sustenance.

A34: Additional Experts

Ministries - 1998

<u>Office of the President</u> Minister for Presidential Affairs and Administration Research Authority Department of Public Service Management (DPSM)
<u>Ministry of Commerce and Industry</u> Permanent Secretary Director, Trade and Investment National Industries Licensing
<u>Ministry of Education</u> Deputy Permanent Secretary Consultant Deputy Permanent Secretary Department of Vocational Education and Training (DVET): Director Deputy Director Principal Development Officer x2 Senior Development Officer, Human Resource Development Consultant (SCOTVEC) Consultant (Jutta Franz (Pty.) Ltd)
<u>Ministry of Finance and Development Planning</u> Employment Policy Unit: Principal Technical Officer Central Statistics Office (CSO): Principal Statistician Statistician (Labour Statistics)
<u>Ministry of Labour and Home Affairs</u> Director of Apprenticeship & Industrial Training, Madirelo Testing and Training Centre (MTTC): Senior Technical Officer Consultant

Parastatal Corporations – 1998

Organisation	Position
Botswana Confederation of Commerce and Industry (BOCCIM)	Training Manager
Botswana Power Corporation	Head of Human Resources Development
University of Botswana (UB)	Chief Administration Officer, Faculty of Engineering and Technology (FET); HOD, Civil Engineering and Building,(FET); Senior Lecturer, Mechanical Engineering (FET); HOD, Adult Education

Private Enterprise – 1998

Organisation	Position
Botswana Motor Company	Head of Human Resources Development
Construction Industries Training Fund	Director
Damelin Private College	Principal
MAST Training Consultants	Principal Manager
Phaleng Consultancies (Pty.) Ltd.	Director

Ministries – 1999

<u>Office of the President</u>	
Botswana Institute of Commerce and Industry (BIAC): Principal	
Government Printer: Printing Works Manager,	
<u>Ministry of Agriculture</u>	
Senior Lecturer	
<u>Ministry of Commerce and Industry</u>	
Minister	
Permanent Secretary	
Deputy Director of Tourism	
Training Consultant	
Principal Industrial Officer	
Integrated Field Services: Principal Industrial Officer	
Wildlife Training Centre: Principal	
<u>Ministry of Education</u>	
Deputy Permanent Secretary	
Department of Examinations and Curriculum Development: Director	
Department of Teacher Education: Director	
Department of Vocational Education and Training (DVET):	
Director	
Deputy Director	
Principal Technical Officers x 2	
Brigades Secretary	
Gaborone VTC: Principal	
Jwaneng VTC: Principal	
Palapye VTC: Principal	
Maun VTC: Principal	
Auto-Trade Training School (ATTS): Principal	
Senior Development Officer	
Senior Lecturer	
Marang Community Junior Secondary School: Headteacher	
<u>Ministry of Finance and Development Planning</u>	
Consultant Educational Planner	
<u>Ministry of Labour and Home Affairs</u>	
Commissioner for Labour	
Madirelo Testing and Training Centre: Director of Apprenticeship & Industrial Training,	
<u>Ministry of Works, Transport and Communications</u>	
Central Transport Organisation: Chief Technical Officer,	
Department of Architecture and Building (DABS):	
Principal Engineer	
Superintendent of Works	
Engineer	
Department of Electrical and Mechanical Services (DEMS):	
Gaborone Depot: Works Superintendent	

Local Authorities – 1999

Authority	Position
Gaborone City Council	City Engineer Principal Personnel Training Officer Principal Water Engineer

Parastatal Organisations – 1999

Organisation	Position
Botswana Power Corporation	Training Officer
Botswana National Productivity Centre	Director Consultant (for Norwegian Agency)
Botswana Technology Centre (BOTEC)	Director of Technical Information Senior Consultant (Research)
Botswana Telecommunications Corporation	Training Coordinator
Construction Industry Trust Fund (CITF)	Chief Executive
Department of Water Affairs	Chief Technical Officer, Head of Training
University of Botswana (UB)	Vice Chancellor Dean of Faculty of Engineering and Technology (FET) Chief Administration Officer, FET HOD: Civil Engineering and Building HOD: Electrical Engineering HOD: Mechanical Engineering Senior Lecturer, Electrical Engineering
Water Utilities Corporation	Human Resource Manager

Private Enterprise – 1999

Organisation	Position
Algo	Engineer
Botswana Motor Company (Hyundai)	Human Resource Manager
Botswana Orientation Centre	Director
Cresta Hotels	Training Officer
Damelin Private College	Principal
Dawson and Fraser (Air Conditioning)	Contracts Director
Debswana: Orapa VTC	Principal
Murray Roberts Construction	Human Resource Manager
Sharps Electrical (Pty.) Ltd.	Senior Project Manager
Suncon (Construction)	Director

Ministries - Post 1999

Ministry of Education

Deputy Permanent Secretary

Department of Examinations and Curriculum Development: Director

Department of Teacher Education: Director

Department of Vocational Education and Training:

Director

Gaborone VTC: Principal

Jwaneng VTC: Principal

Gaborone Technical College: Principal

VTI Training Institution: Senior Lecturer

Department of Secondary Education:

HOD: English

HOD: Design and Technology

Tertiary Education Council: Director

Ministry of Labour and Home Affairs

Botswana Training Authority (BOTA):

Senior Technical Officer

Research Officer

Consultant

Local Authority – Post 1999

Authority	Position
Lobatse Local Authority	Council Secretary

Parastatal Organisations – Post 1999

Organisation	Position
Botswana National Productivity Centre	Director
Botswana Technology Centre (BOTEC)	Director of Technical Information
Construction Industry Trust Fund (CITF)	Chief Executive
University of Botswana (UB)	Dean of Faculty of Engineering (FET) Senior Lecturer: Mechanical Engineering

Private Enterprise – Post 1999

Organisation	Position
ABCON	Advisor
Botswana Council of Commerce and Industry	Secretary
Dawson and Fraser (Air Conditioning)	Contracts Director
Italtwana (Construction)	Managing Director
Suncon (Construction)	Director

A35: Botswana Standard Occupational Coding System (BOSCO)

1 LEGISLATORS, ADMINISTRATORS & MANAGERS

11 Legislators and Senior Government Officials

- 111 Members of Parliament & Other Legislators
- 112 Senior Government Executive Officials
- 113 Traditional Chiefs & Village or Community Leaders
- 114 Politicians & Senior Administrators of Special-Interest Organisations
- 119 Legislators & Senior Government Officials Not Elsewhere Classified

12 Company Directors and Corporate Managers

- 121 Company Directors, General Managers & Non-Government Chief Executives
- 122 Production & Operation Managers
- 123 Other Department Managers
- 129 Company Directors & Corporate Managers Not Elsewhere Classified

13 Small Business Managers and Managing Supervisors

- 130 Small Business Managers & Managing Supervisors

2 PROFESSIONALS

21 Physical Scientists

- 211 Geologists & Geophysicists
- 212 Chemists
- 219 Physical Scientists Not Elsewhere Classified

22 Life Scientists

- 221 Biologists, Botanists, Zoologists & Related Professionals
- 222 Pharmacologists, Pathologist & Related Professionals
- 223 Agronomists & Related Professionals
- 229 Life Scientists Not Elsewhere Classified

23 Health Diagnosis and Treatment Professionals

- 231 Medical Doctors
- 232 Dentists
- 233 Veterinarians
- 234 Pharmacists
- 239 Health Diagnosis & Treatment Professionals Not Elsewhere Classified

24 Architects, Engineers and Related Professionals

- 241 Architects, Town & Traffic Planners
- 242 Civil Engineers
- 243 Electrical Engineers
- 244 Electronics & Telecommunications Engineers
- 245 Mechanical Engineers
- 246 Chemical Engineers
- 247 Mining Engineers, Metallurgists & Related Professionals
- 248 Cartographers & Surveyors
- 249 Architects, Engineers & Related Professionals Not Elsewhere Classified

25 Teaching Professionals

- 251 College, University & Higher Education Teaching Professionals
- 252 Secondary Education Teaching Professionals
- 253 Vocational & Technical Education Teaching Professionals
- 259 Teaching Professionals Not Elsewhere Classified

26 Mathematicians, Statisticians and Computing Professionals

- 261 Mathematicians, Statisticians & Related Professionals
- 262 Computer Systems Designers & Analysts & Computer Programmers
- 269 Mathematicians, Statisticians & Computing Professionals Not Elsewhere Classified

27 Business Professionals

- 271 Accountants
- 272 Personnel & Occupational Specialists
- 273 Public Relations Officers
- 279 Business Professionals Not Elsewhere Classified

28 Social Science and Related Professionals

- 281 Economists
- 282 Psychologists
- 289 Social Science & Related Professionals Not Elsewhere Classified

29 Miscellaneous Professionals

- 291 Lawyers, Judges & Other Legal Professionals
- 292 Librarians, Archivists & Related Information Specialists
- 293 Authors, Journalists & Other Writers
- 294 Religious Professionals
- 299 Professionals Not Elsewhere Classified

3 TECHNICIANS & ASSOCIATE PROFESSIONALS

31 Physical and Engineering Science Technicians

- 311 Physical Science Technicians
- 312 Civil Engineering Technicians, Quantity Surveyors & Clerks of Works
- 313 Electrical Engineering Technicians
- 314 Electronics & Telecommunications Engineering Technicians
- 315 Mechanical Engineering Technicians
- 316 Chemical Engineering Technicians
- 317 Mining & Metallurgical Technicians
- 318 Draughtspersons
- 319 Physical & Engineering Science Technicians Not Elsewhere Classified

32 Computer Associate Professionals

- 321 Computer Assistants
- 322 Computer Equipment Operators
- 329 Computer Associate Professionals Not Elsewhere Classified

33 Optical and Electronic Equipment Operators and Controllers

- 331 Photographers & Image & Sound Recording Equipment Operators
- 332 Broadcasting & Telecommunications Equipment Operators
- 333 Medical Equipment Operators
- 334 Aircraft Pilots

- 335 Air Traffic Controllers
- 339 Optical & Electronic Equipment Operators Not Elsewhere Classified

34 Life Science and Health Associate Professionals

- 341 Life Science Technicians
- 342 Agronomy & Forestry Technicians
- 343 Farming & Forestry Advisors
- 344 Veterinary Technicians
- 345 Nurses And Midwives
- 346 Modern Health Associate Professionals, Except Nurses, Midwives & Veterinary Technicians
- 347 Traditional Medical Practitioners & Faith Healers
- 349 Life Science Health Associate Professionals Not Elsewhere Classified

35 Primary and Pre-Primary Education Teachers

- 351 Primary Education Teachers
- 352 Pre-Primary Education Teachers
- 359 Primary & Pre-Primary Education Teachers Not Elsewhere Classified

36 Finance and Sales Associate Professionals

- 361 Insurance Brokers & Agents
- 362 Estate Agents
- 363 Travel Consultants & Organisers
- 364 Buyers
- 365 Technical & Commercial Sales Representatives
- 366 Appraisers, Valuers & Auctioneers
- 367 Securities & Finance Dealers & Brokers
- 369 Finance & Sales Associate Professionals Not Elsewhere Classified

37 Administrative Associate Professionals

- 371 Administrative. Secretaries & Assistants
- 372 Legal & Related Business Associate Professionals
- 373 Bookkeepers & Accounting Professionals
- 374 Statistical, Mathematical & Related Associate Professionals
- 379 Administrative Associate Professionals Not Elsewhere Classified

38 Creative and Performing Artists and Sportspersons

- 381 Artists, Painters & Sculptors
- 382 Decorators & Commercial Designers
- 383 Radio Television & Other Announcers
- 384 Musicians
- 385 Athletes & Related Sportspersons
- 389 Creative & Performing Artists Sportspersons Not Elsewhere Classified

39 Miscellaneous Technicians and Associate Professionals

- 391 Building, Fire, Safety, Health & Quality Inspectors
- 392 Clearing & Forwarding Agents
- 393 Social Workers, Welfare Workers & Community Development Workers
- 394 Customs, Tax & Related Government Associate Professional
- 395 Police Inspectors & Detectives
- 399 Technicians & Associate Professionals Not Elsewhere Classified

4 CLERKS

41 Office Clerks

- 411 Secretaries, Typists, Word-Processing & Related Keyboard Operators
- 412 Calculating Machine & Data Entry Operators
- 413 Accounting, Bookkeeping, Statistical & Finance Clerks
- 414 Stock & Production Clerks
- 415 Transportation Controllers & Dispatchers
- 416 Library & Filing Clerks
- 417 Mail Carriers & Sorting Clerks
- 418 Coding & Proof-Reading Clerks
- 419 Office Clerks Not Elsewhere Classified

42 Customer Services Clerks

- 421 Cashiers & Ticket Clerks
- 422 Tellers & Counter Clerks
- 423 Travel Agency & Related Clerks
- 424 Receptionists & Information Clerks
- 425 Telephone Switchboard Operators
- 429 Customer Services Clerks Not Elsewhere Classified

5 SERVICE WORKERS and SHOP & MARKET SALES WORKERS

51 Personal Service Workers

- 511 Flight Attendants & Transport Conductors
- 512 Game Guides & Other Travel Guides
- 513 Housekeepers & Related Workers
- 514 Cooks
- 515 Waiters, Waitresses & Bartenders
- 516 Child-Care Workers & Teachers' Aids
- 517 Family Welfare Educators & Related Health Assistants
- 518 Hairdressers, Barbers Beauticians & Related Workers
- 519 Personal Services Workers Not Elsewhere Classified

52 Protective Services Workers

- 521 Police Officers
- 523 Prison Guards
- 524 Security Guards
- 529 Protective Services Workers Not Elsewhere Classified

53 Salespersons, Demonstrators and Models

- 531 Shop Salesperson & Demonstrators
- 532 Kiosk, Street Stall & Market Salespersons
- 539 Salespersons, Demonstrators & Models Not Elsewhere Classified

6 SKILLED AGRICULTURAL AND RELATED WORKERS

61 Market-Oriented Skilled Agricultural and Related Workers

- 611 Field Crop & Vegetable Growers
- 612 Dairy & Livestock Producers
- 613 Poultry Producers

- 614 Forestry Workers, loggers, Charcoal Burners & Related Workers
- 615 Fishery Workers, Hunters & Trappers
- 619 Market-Oriented Skilled Agricultural & Related Workers Not Elsewhere Classified
- 620 Subsistence Agricultural & Related Workers

7 CRAFT AND RELATED TRADE WORKERS

71 Extraction Trades Workers

- 711 Miners & Quarry Workers
- 712 Shot firers & Blasters
- 713 Stone Splitters, Cutters & Carvers
- 719 Extraction Trades Workers Not Elsewhere Classified

72 Building and Construction Trades Workers

- 721 Builders, Traditional Materials
- 722 Bricklayers & Stonemasons
- 723 Concrete Placers, Concrete Finishers & Related Workers
- 724 Construction Carpenters & Joiners
- 725 Roofers
- 726 Plumbers & Pipe Fitters
- 727 Floor Layers, Tile Setters, Plasterers, Insulation Workers & Glaziers
- 728 Painters, Building Structure Cleaners & Related Trade Workers
- 729 Building & Construction Trade Workers Not Elsewhere Classified

73 Machinery Mechanics and Fitters

- 731 Motor Vehicle Mechanics & Fitters
- 732 Refrigeration & Conditioning Equipment Mechanics
- 733 Agricultural or Industrial Machinery Mechanics & Fitters
- 739 Machinery Mechanics & Fitters Not Elsewhere Classified

74 Metal Moulders, Welders, Sheet Metal Workers, Structural Metal Preparers, Blacksmiths, Tool Makers and Related Workers

- 741 Blacksmiths & Tool Makers
- 742 Machine Tool Setters & Setter-Operators
- 743 Metal Moulders & Core makers
- 744 Welders & Flame-Cutters
- 745 Boiler smiths
- 746 Panel Beaters
- 747 Structural Metal Prepares & Erectors
- 748 Riggers & Cable Splicers
- 749 Metal, Machinery & Related Trades Workers Not Elsewhere Classified

75 Electrical and Electronic Equipment Mechanics and Fitters

- 751 Building Electricians
- 752 Motor Vehicle Electricians
- 753 Electrical Line Installers, Repairers & Cable Jointer
- 754 Telegraph & Telephone Installers & Servicers
- 755 Electronic Fitters, Mechanics & Servicers
- 759 Electrical & Electronic Equipment Mechanics & Fitters Not Elsewhere Classified

76 Handicraft and Related Trades Workers

- 761 Diamond Cutters & Polishers, & Jewellery & Precious Metal Workers
- 762 Potters, Brick & tile Makers, & Related Workers
- 763 Glass Makers, Cutters, Grinders, Finishers, Engravers, Etchers, & Related Trades Workers
- 764 Basket makers, Brush & Broom Makers, & Wicker Furniture Makers
- 765 Weavers, Spinners, & Knitters & Crocheters
- 766 Tanners, Shoe Makers & Repairers, & Related Leather Goods Markers
- 767 Tailors & Dressmakers
- 769 Handicraft Workers Not Elsewhere Classified

77 Food Processing and Related Trades Workers

- 771 Traditional Beer & Beverage Makers
- 772 Butchers
- 773 Bakers, Pastry Cooks & Confectionery Makers
- 779 Food Processing & Related Trades Workers Not Elsewhere Classified

78 Wood Treaters, Wood Furniture Makers and Related Trades Workers

- 781 Wood Treaters
- 782 Village Carpenters & Wooden Furniture Makers
- 783 Woodworking Machine Setters & Setter-Operators
- 789 Wood Treaters, Wood Furniture Makers & Related Trades Workers Not Elsewhere Classified

79 Miscellaneous Craft and Related Workers

- 791 Printing & Related Trades Workers
- 792 Watch Repairers & other Precision Instrument Makers & Repairers
- 799 Craft & Trades Workers Not Elsewhere Classified

8 PLANT AND MACHINE OPERATORS & ASSEMBLERS**81 Industrial Plant Operators**

- 811 Mining & Mineral-Processing Plant Operators
- 812 Well Drillers & Borers
- 813 Metal Processing Plant Operators
- 814 Glass & Ceramics Plant Operators
- 815 Wood Processing & Papermaking Plant Operators
- 816 Chemical Processing Plant Operators
- 817 Power Production, Steam Engine, Boiler Incinerator & Water Treatment Plant Operators
- 818 Automated Assembly Line Operators
- 819 Industrial Plant Operators Not Elsewhere Classified

82 Stationary Machine Operators and Assemblers

- 821 Metal & Mineral Products Machine Operators
- 822 Chemical Products Machine Operators
- 823 Rubber & Plastic Products Machine Operators
- 824 Wood Products Machine Operators
- 825 Printing, Binding & Paper Products Machine Operators
- 826 Textile, Fur & Leather Products Machine Operators
- 827 Food & Related Products Machine Operators
- 828 Assemblers
- 829 Stationary Machine Operators & Assemblers Not Elsewhere Classified

83 Drivers and Mobile Machinery Operators

- 831 Locomotive Engine Drivers & Related Workers
- 832 Car, Taxi Van, Motorcycle & Bus-Drivers
- 833 Heavy Truck & Lorry Drivers
- 834 Motorised Farm & Forestry Machinery Operators
- 835 Earthmoving & Related Machinery Operators
- 836 Crane & Hoist Operators
- 837 Lifting-Truck Operators
- 839 Drivers & Mobile Machinery Operators Not Elsewhere Classified

9 ELEMENTARY OCCUPATIONS

91 Labourers in Mining, Construction, Manufacturing and Transport

- 911 Mining & Quarry Labourers
- 912 Construction & Maintenance Labourers
- 913 Mealie Stampers
- 914 Hand Packers, Assembling Labourers & Other Manufacturing Labourers
- 915 Freight Handlers
- 919 Labourers in Mining, Construction, Manufacturing & Transport Not Elsewhere Classified

92 Agricultural and Related Labourers

- 921 Cattle Herders
- 922 Farm Labourers
- 923 Domestic Gardeners
- 924 Forestry Labourers
- 925 Fishery, Hunting & Trapping Labourers
- 929 Agriculture & Related Labourers Not Elsewhere Classified

93 Sales and Services Elementary Occupations

- 931 Street Vendors, Hawkers & Related Workers
- 932 Shoe Cleaners, Vehicles Washers & Other Street Services Elementary Workers
- 933 Domestic Maids & Related Helpers, Cleaners & Launderers
- 934 Building Caretakers & Window Cleaners
- 935 Massagers, Porters, Package Carriers & Deliverers
- 936 Garbage Collectors
- 937 Street Sweepers, Wood Choppers, Water Carriers & Related Labourers
- 938 Doorkeepers & Watchperson
- 939 Elementary Occupations Not Elsewhere Classified

ADDITIONAL CATEGORIES

- xxx Botswana Defence Force Personal
- 000 Occupation Not Stated or Not Classifiable

Source: Republic of Botswana (2001) Labour Statistics 1999: 72

A36: Parents: Job Prestige, Urban/Rural
(Friedman Test – low scores indicates higher ranking)

	All	Urban	Rural
Airline Pilot	5.02	4.75	5.31
Bus Driver	8.75	8.85	8.65
Carpenter	7.66	7.66	7.66
Computer operator	4.76	4.87	4.69
Electronics technician	4.30	4.15	4.46
Farmer	6.66	6.50	6.82
Land surveyor	5.20	3.74	3.78
Nurse	3.75	5.10	44.79
Police officer	4.95	5.43	4.90
Teacher	3.93	3.95	3.93

A37(a): Parents: Job Choice Criteria for Child –‘earning power of job’

	CJSS (English)		CJSS (Setswana)		SSS		All	
Rank	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
1	28	15.6	26	16.5	8	10.0	62	14.3
2	42	23.5	39	24.7	17	21.1	102	23.4
3	64	35.8	49	31.0	31	38.8	140	32.2
4	43	24.0	44	27.8	20	25.0	125	28.7
5	2	1.1	0	0	4	5.0	6	1.4
Total	179	100	158	100	80	100	435	100

A37(b): Parents: Job Choice Criteria for Child –‘reliability of job’

	CJSS (English)		CJSS (Setswana)		SSS		All	
Rank	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
1	17	9.7	25	16.4	8	10.1	50	12.4
2	52	29.7	53	34.9	26	32.9	128	31.8
3	43	24.6	43	28.3	18	22.8	104	25.8
4	61	34.9	31	20.4	25	31.6	117	29.0
5	2	1.1	0	0	2	2.5	4	1.0
Total	175	100	152	100	79	100	403	100

A37(c): Parents: Job Choice Criteria for Child –‘service to community’

	CJSS (English)		CJSS (Setswana)		SSS		All	
Rank	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
1	34	19.0	40	24.4	16	19.0	90	21.1
2	45	25.1	30	18.3	21	25.0	96	22.5
3	43	24.0	40	24.4	19	22.6	102	23.9
4	53	29.6	53	32.3	25	29.8	131	30.7
5	4	2.2	1	0.1	3	3.6	8	1.8
Total	179	100	164	100	84	100	427	100

A38: Parents: Who provides job advice? Urban/Rural

	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Relatives	51	23.4	54	24.9	105	23.7
Friends	18	8.3	3	1.4	21	4.8
Teacher	125	57.3	108	49.8	234	53.4
Combination	23	10.6	52	24.0	75	17.1
Other	1	0.5	0	0	1	0.2
Total	218	100	217	100	438	100

A39: Parents: Type of Child Suitable for Craftworker, Urban/Rural

	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Likes D&T etc.	21	13.9	19	11.9	40	12.9
Incorrect	130	86.1	140	88.1	270	87.1
Total	151	100	159	100	310	100

A40: Parents: Type of Child Suitable for Technician, Urban/Rural

	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Likes D&T, Science, Ma.	27	15.7	23	15.0	50	15.4
Cambridge, shows interest	38	22.1	35	22.9	73	22.5
Incorrect	107	62.2	95	62.1	202	62.2
Total	172	100	153	100	325	100

A41: Parents: Knowledge of VET Training Institutes

	Craftsmen		Technician	
	Frequency	Valid %	Frequency	Valid %
Correct	209	62.6	206	58.0
Incorrect	125	37.4	149	42.0
Total	334	100	355	100

A42: Parents: Examples of Craft and Technician Work, Urban/Rural

	Craftsmen*				Technicians**			
	Urban		Rural		Urban		Rural	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Correct	111	65.7	109	65.3	97	58.1	80	51.0
Incorrect	58	34.3	58	34.7	70	41.9	77	49.0
Total	169	100	167	100	167	100	157	100

* Craftsmen – correct examples included sewing, fitting and turning, auto mechanics

** Technicians included laboratory technician, electronic technician and land surveyor

A43: School Leavers: Male/Female v Urban/Rural

	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Urban	216	45.5	228	46.8	444	46.2
Rural	259	54.5	259	53.2	518	53.8
Total	475	100	487	100	962	100

A44: School Leavers: Gender v District

District	Male	Female	Total
Central	80	99	179
Ghanzi	32	35	67
Kgatleng	46	38	84
Kgalahadi	21	19	40
Kweneng	15	21	36
Ngamiland	34	37	71
North East	96	97	193
South East	12	11	23
Southern	64	65	129
Gaborone	75	65	140
Total	475	487	962

A45(a): School Leavers: What is the most important thing that you should gain from school?

All

	Frequency	Valid %
Knowledge of Botswana, its cultures and traditions	217	27.1
Preparation for work	410	51.1
Other	176	21.8
Total	803	100

A45(b): School Leavers: What is the most important thing that you should gain from school?

CJSS/SSS

	CJSS		SSS	
	Frequency	Valid %	Frequency	Valid %
Knowledge of Botswana, its cultures and traditions	189	30.1	33	18.0
Preparation for work	295	47.0	119	65.0
Other	144	22.9	31	16.9
Total	628	100	183	100

A46: School Leavers: Reasons for Wanting Job, Gender

Reasons	Boys		Girls	
	Frequency	Valid %	Frequency	Valid %
To serve the family and community	339	73.9	263	61.3
To use a great interest or vocation	73	15.9	103	24.0
To never be unemployed	26	5.7	38	8.9
To earn a lot of money	15	3.3	25	5.8
Total	459	100	429	100

A47(a): School Leavers: Type of FET Wanted

Type of FET Wanted	Frequency	Valid %
Craft	72	12.3
Technician	49	8.4
UB/TTC	307	52.5
Abroad	99	16.9
Other	58	9.9
Total	587	100

A47(b): School Leavers: Type of FET Wanted, : CJSS – Urban/Rural and SSS- Urban/Rural

Type of FET	CJSS				SSS			
	Urban		Rural		Urban		Rural	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Craft	17	10.2	41	18.4	11	8.1	3	4.9
Technic.	7	4.2	10	4.5	14	10.3	18	29.5
UB/TTC	81	48.8	119	53.4	74	54.8	33	54.1
Abroad	45	27.1	27	12.1	24	17.8	3	4.9
Other	16	9.6	26	11.7	12	8.9	4	6.6
Total	166	100	223	100	135	100	61	100

A48(a): School Leavers: Three most important jobs for Botswana?
Urban/Rural

No.	Urban			Rural		
	Rank Order	Frequency	Valid %	Rank Order	Frequency	Valid %
1	Teacher	125	34.5	Teacher	174	39.0
2	Nurse	52	14.4	Nurse	82	18.4
3	Doctor	47	13.0	Farmer	44	9.8
4	Scientist/ Engineer	43	11.9	Doctor	39	8.7
5	Farmer	35	9.7	Scientist/Engineer	29	6.5
6	Craft/ Technician	24	6.6	Soldier	28	6.3
7	Police	19	5.2	Police	27	6.0
8	Computer Operator	17	4.7	Craft/Technician	24	5.4
	Total	362	100		447	100

A48(b): School Leavers: Three most important jobs for Botswana?
Male/Female

No.	Male			Female		
	Rank Order	Frequency	Valid %	Rank Order	Frequency	Valid %
1	Teacher	117	31.1	Teacher	175	41.2
2	Scientist/Engineer	50	13.3	Nurse	102	24.0
3	Farmer	49	13.0	Doctor	46	10.8
4	Doctor	40	10.6	Farmer	29	6.8
5	Soldier	34	9.0	Police	22	5.2
6	Nurse	31	8.2	Scientist/Engineer	22	5.2
7	Craft/Technician	31	8.2	Craft/Technician	16	3.8
8	Police	24	6.4	Computer operator	13	2.9
	Total	376	100		425	100

A48(c): School Leavers: Three most important jobs for Botswana? CJSS/SSS

No.	CJSS			SSS		
	Rank Order	Frequency	Valid %	Rank Order	Frequency	Valid %
1	Teacher Nurse	235	37.3	Teacher	64	34.4
2	Farmer	106	16.8	Doctor	31	16.7
3	Doctor	62	9.8	Nurse	28	15.1
4	Scientist/Engineer	55	8.7	Farmer	17	9.1
5	Police	55	8.7	Scientist/Engineer	17	9.1
6	Craft/Technician	44	7.0	Soldier	10	5.4
7	Soldier	39	6.2	White Collar	10	5.4
8	Housewife	34	5.4	Craft/ Technician	9	4.8
	Total	630	100		186	100

A49(a): School Leavers: Ranked Fathers' Job v Urban/Rural

Urban			Rural		
	Frequency	Valid %		Frequency	Valid %
1. Blue Collar	81	24.0	1. Farmer	125	28.6
2. Craft/Technician	56	16.6	2. Blue Collar	84	19.2
3. White Collar	50	14.8	3. Craft/Technician	46	10.5
4. Farmer	37	11.0	4. Scientist/Engineer	44	10.0
5. Self-Employed	25	7.4	5. Unemployed	38	8.7
6. Scientist/Engineer	17	5.0	6. White Collar	23	5.3
Soldier	17	5.0	7. Teacher	14	3.2
8. Unemployed	14	4.2	8. Self-Employed	12	2.7
9. Other	40	12.0	9. Other	57	9.8
Total	337	100		398	100

A49(b): School Leavers: Ranked Mothers' Job v Urban/Rural

Urban			Rural		
	Frequency	Valid %		Frequency	Valid %
1. Housewife	83	21.7	1. Housewife	202	43.2
2. White Collar	63	16.4	2. Service	56	12.0
3. Service	54	14.1	3. Unemployed	53	11.3
4. Self-Employed	52	13.6	4. Farmer	48	10.3
5. Teacher	31	8.1	5. Teacher	30	6.4
6. Unemployed	27	7.0	6. Self-Employed	21	4.5
7. Nurse	21	5.5	7. White Collar	19	4.1
8. Craft/Technician	19	5.0	8. Nurse	14	3.1
9. Other	30	8.6	9. Other	24	5.1
Total	383	100		468	100

A50(a): School Leavers: Ranked Parents' Jobs: CJSS

Fathers' Jobs			Mothers' Jobs		
	Frequency	Valid %		Frequency	Valid %
1. Blue Collar	132	23.8	1. Housewife	226	35.6
2. Farmer	122	22.0	2. Service	80	12.6
3. Craft/Technician	74	13.4	3. Unemployed	60	9.5
4. White Collar	52	9.4	4. White Collar	59	9.3
5. Unemployed	38	7.6	5. Farmer	48	7.6
6. Teacher	21	3.8	6. Self-Employed	45	7.1
7. Police	19	3.4	7. Teacher	43	6.8
Self-Employed	19	3.4	8. Nurse	31	4.9
8. Others	77	13.9	9. Others	42	6.3
	554	100		634	100

A50(b): School Leavers: Ranked Parents' Jobs: SSS

Fathers' Jobs			Mothers' Jobs		
	Frequency	Valid %		Frequency	Valid %
1. Farmer	35	24.3	1. Housewife	45	22.3
2. Blue Collar	27	14.6	2. Self-Employed	27	17.2
3. Craft/Technician	23	14.1	3. Service	26	14.6
4. White Collar	20	11.9	4. White Collar	22	12.7
5. Self-Employed	17	8.6	5. Teacher	16	10.8
6. Unemployed	10	7.0	6. Craft/Technician	13	6.4
7. Soldier	8	5.9	7. Unemployed	11	5.1
8. Scientist/Engineer	5	4.3	8. Blue Collar	8	3.2
9. Others	12	10.2	9. Others	19	7.7
	157	100		185	100

A51: School Leavers: Ranked Source of Job Advice

	Frequency	Valid %
Parents/Guardian	246	31.5
Teacher	109	13.9
Other Relatives	55	7.0
Friends	28	3.6
Combination	344	44.0
Total	782	100

A52: School Teachers: Subjects Taught by Interviewees

Subject	Number	Comments
Science	46	Predominately expatriates
Maths	39	Many expatriates
English	35	Most Batswana – some Indian
Design and Technology	19	New subject
Careers	16	Neglected subject
Total	155	

A53(a): School Teachers: Qualifications v Subject

Subject	B.Ed	Deg+PGDC	Degree	Diploma	Other	Total
English	2	14	1	19		36
Maths	9	3	1	25	2	40
Science	14	7	2	22	1	46
D & T	7			13		20
Careers	1	4		12		17
Total	33	28	4	91	3	159

A53(b): School Teachers: Experience v Qualifications

Years	B.Ed	Deg+PGDC	Degree	Diploma	Other	Total
0 – 2	5	6	1	16	3	31
3 – 7	6	10	2	53		71
8 – 12	11	5		16		32
13 – 17	6	4	1	1		12
18 +	5	2		4		11
Total	33	27	4	90	3	157

A54(a): School Teachers: Pupils' Difficulties with English

% with problems	Understanding		Speaking		Reading		Writing	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
0 – 10	16	12.0	11	8.1	27	20.1	18	13.3
11 – 20	9	6.8	10	7.2	16	11.9	8	5.9
21 – 30	13	9.8	10	7.2	12	9.0	7	5.2
31 – 40	13	9.8	8	5.9	14	10.4	15	11.1
41 – 50	29	21.8	19	14.0	26	19.4	21	15.5
51 – 60	16	12.0	18	13.2	10	7.5	16	11.9
61 – 70	9	6.8	19	14.0	11	8.2	19	14.1
71 – 80	17	12.8	22	16.2	11	8.2	16	11.9
81 – 90	7	5.3	10	7.2	4	3.0	8	5.9
90 – 100	4	3.0	9	6.6	3	2.2	5	3.7
Total	133	100	136	100	134	100	133	100

A54(b): School Teachers: Pupils' Difficulties with English, CJSS

% with Problems	Understanding		Speaking		Reading		Writing	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
0 – 10	15	12.6	8	6.6	24	20.7	16	13.3
11 – 20	8	6.7	9	7.4	13	11.2	8	6.7
21 – 30	12	10.1	8	6.6	10	8.6	7	5.8
31 – 40	11	9.2	7	5.8	13	11.2	11	9.2
41 – 50	26	21.8	18	14.9	25	21.6	21	17.5
51 – 60	16	13.4	16	13.2	9	7.8	14	11.7
61 – 70	8	6.7	17	14.0	10	8.6	17	14.2
71 – 80	13	10.9	20	16.5	6	5.2	14	11.7
81 – 90	7	5.9	10	8.3	4	3.4	8	6.7
90 – 100	3	2.5	8	6.6	2	1.7	4	3.3
Total	119	100	121	100	116	100	120	100

A55(a): School Teachers: Pupils' Difficulties with English, CJSS Subject Teachers

% with problems	English Teachers				Maths. Teachers			
	Understand	Speaking	Reading	Writing	Understand	Speaking	Reading	Writing
0 – 10	3	2	5	1	3	3	4	3
11 – 20	0	1	2	2	2	0	4	2
21 – 30	2	3	4	1	4	2	3	1
31 – 40	0	3	4	6	2	0	2	2
41 – 50	10	4	3	2	2	6	7	5
51 – 60	6	2	2	5	2	4	0	1
61 – 70	0	1	0	0	2	3	3	4
71 – 80	1	5	2	2	5	4	2	5
81 – 90	0	2	0	2	4	3	1	1
91 – 100	1	2	1	2	0	2	0	1
Total	14	25	23	25	27	27	26	25

A55(b): School Teachers: Pupils' Difficulties with English, CJSS Subject Teachers

% with problems	Science Teachers				Design & Technology Teachers			
	Understand	Speaking	Reading	Writing	Understand	Speaking	Reading	Writing
0 – 10	4	1	9	5	2	1	1	2
11 – 20	2	4	2	4	1	0	2	1
21 – 30	2	2	3	2	1	2	0	0
31 – 40	5	3	4	4	2	1	2	0
41 – 50	6	2	5	7	6	2	6	4
51 – 60	3	4	3	2	1	1	1	4
61 – 70	3	5	3	2	3	7	3	3
71 – 80	1	3	2	4	1	2	1	1
81 – 90	1	2	1	1	1	1	2	2
91 – 100	2	3	1	1	0	1	0	1
Total	29	29	33	32	18	18	18	18

A55(c): School Teachers: Pupils' Difficulties with English, CJSS Subject Teachers

% with problems	Careers Teachers			
	Understand	Speaking	Reading	Writing
0 – 10	1	1	3	1
11 – 20	2	2	0	0
21 – 30	2	1	1	2
31 – 40	0	0	2	1
41 – 50	1	1	3	0
51 – 60	2	1	2	3
61 – 70	0	2	1	1
71 – 80	4	4	1	3
81 – 90	1	0	0	1
91 – 100	0	1	0	0

A56: School Teachers: Change in state of English?

	Frequency	Valid %
Increased Difficulties	51	37.5
Decreased Difficulties	46	33.8
Unchanged	39	28.7
Total	136	100

A57: School Teachers: Characteristics Needed for VET? Urban/Rural

Home	Craftworkers				Technician			
	Correct		Incorrect		Correct		Incorrect	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Urban	16	20.5	11	15.9	17	19.3	9	17.6
Rural	45	57.7	42	60.9	50	56.8	33	64.7
Expats.	17	21.8	16	23.2	21	23.9	9	17.6
Total	78	100	69	100	88	100	51	100

N.B. For 'correct' definition see pages 213

A58: School Teachers: Institute of training for VET?

Teacher's Answers	Craftworkers		Technicians	
	Frequency	Valid %	Frequency	Valid %
Correct	76	87.4	72	85.7
Incorrect	11	12.6	12	14.3
Total	87	100	84	100

N.B. For 'correct' institute see page 213

A59: VET Leavers: Age

Age	Brigades		VTCs		Technicians		All	
in years	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
15 – 19	57	16.0	2	0.9	5	1.2	64	6.5
20 – 24	249	69.7	104	47.5	218	52.9	571	57.8
25 – 29	47	13.2	87	39.7	98	23.8	232	23.5
30 – 34	4	1.1	16	7.3	47	11.4	67	6.8
35 – 39	-	-	7	3.2	32	7.8	39	3.9
40 +	-	-	3	1.4	12	2.9	15	1.5
Total	357	100	219	100	412	100	988	100

A60: VET Leavers: Reason for Choice, Urban/Rural

	Urban		Rural	
Reasons	Frequency	Valid %	Frequency	Valid %
To serve the family and community	98	32.8	222	34.3
To use a great interest or vocation	57	17.4	119	18.4
To never be unemployed	11	3.6	23	1.5
To earn a lot of money	13	4.3	26	4.0
Combination	118	39.5	251	38.7
Other	2	0.7	7	1.1
Total	299	100	648	100

A61: VET Leavers: Fathers' Job

	Frequency	Valid %
1. Farmer	272	40.5
2. Craft/Technician	73	10.9
3. Deceased	68	10.1
4. Blue Collar	65	9.7
5. Unemployed	50	7.4
6. Self-employed	42	6.3
7. White Collar	40	6.0
8. Scientist/Engineer	15	2.2
Teacher	15	2.2
10. Retired	13	1.9
11. Others	18	2.6
Total	672	100

A62: VET Leavers: Mothers' Job

	Frequency	Valid %
1. Housewife	315	40.2
2. Farmer	97	12.4
3. Self-employed	71	9.1
4. Unemployed	63	8.0
5. Teacher	60	7.7
6. White Collar	55	7.0
7. Service	45	5.7
8. Nurse	21	2.7
Blue Collar	21	2.7
10. Deceased	16	2.0
11. Craft/Technician	9	1.1
12. Others	11	1.3
Total	784	100

A63: VET Leavers: D&T in School

D&T	Frequency	Valid %
Yes	351	34.9
No	656	65.1
Total	1007	100

N.B. D&T could mean Metalwork and Woodwork in the eyes of many

A64: VET Leavers: Did your school education prepare you well for VET?

School for VET?	Frequency	Valid %
Yes	711	71.4
No	285	28.6
Total	996	100

A65: VET Leavers: Course Studied

Subject	Brigades		VTCs		Technicians		All	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Construction	180	50.7	40	18.2	44	9.8	264	25.7
Electrical	18	5.1	39	17.7	61	13.5	118	11.5
Mechanical	25	7.0	57	25.9	53	11.8	135	13.1
Auto	67	18.9	45	20.5	-	-	112	10.9
Agric/Forestry	17	4.8	-	-	14	3.1	31	3.0
Computers	7	2.0	-	-	36	8.0	43	4.2
Bus/Accounts	19	5.4	17	7.7	128	28.4	146	14.5
Textiles	8	2.3	17	7.7	-	-	25	2.4
Clerical	14	3.9	5	2.2	-	-	19	1.8
Telecoms.	-	-	-	-	12	2.7	12	1.2
Highway	-	-	-	-	39	8.6	39	3.8
VET Trainers	-	-	-	-	43	9.5	43	4.2
Mining	-	-	-	-	23	4.7	23	2.2
Total	355	100	220	100	453	100	1007	100

A66: VET Leavers: Expected Qualifications, All

	TT B or C	NCC	Other	Certificate	Diploma	HND
Construction	168	49	-	23	15	6
Electrical	26	29	1	22	31	8
Mechanical	25	57	-	14	39	-
Auto	63	47	-	-	-	-
Agric/Forestry	17	-	-	-	14	-
Computers	3	4	-	20	16	-
Bus/Accounts	5	28	-	24	79	25
Textiles	25	-	-	-	-	-
Clerical	7	-	4	-	-	-
Telecoms.	-	-	-	-	12	-
Highway	-	-	-	19	20	-
For VET Trainers	-	-	-	-	43	-
Mining	-	-	-	-	2	-
Total	339	214	5	122	271	39

A67(a): VET Leavers: What are your opinions of the training provided on your course?

Theory

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Very satisfied	216	60.2	60	27.0	133	30.3
Satisfied	115	32.0	131	59.0	266	60.6
Dissatisfied	26	7.2	22	9.9	34	7.7
Very dissatisfied	2	0.6	9	4.1	5	1.1
Total	359	100	222	100	439	100

A67(b): VET Leavers: What are your opinions of the training provided on your course?
Practical Skills

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Very satisfied	155	43.9	54	24.5	57	13.2
Satisfied	157	44.5	90	40.9	207	47.8
Dissatisfied	26	7.4	53	24.1	123	28.4
Very dissatisfied	15	4.2	23	10.5	46	10.6
Total	353	100	220	100	433	100

A67(c): VET Leavers: What are your opinions of the training provided on your course?
Instruction on Employers Expectations

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Very satisfied	74	23.3	26	13.8	46	11.8
Satisfied	177	55.7	115	61.2	219	56.3
Dissatisfied	54	17.0	39	20.7	103	26.5
Very dissatisfied	13	4.1	8	4.3	21	5.4
Total	318	100	188	100	389	100

A67(d): VET Leavers: What are your opinions of the training provided on your course?
Using Instruction Manuals

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Very satisfied	98	30.1	37	18.0	58	14.6
Satisfied	164	50.3	131	63.6	206	51.9
Dissatisfied	52	16.0	28	13.6	112	28.2
Very dissatisfied	11	3.4	10	4.9	21	5.3
Total	326	100	206	100	397	100

A67(e): VET Leavers: What are your opinions of the training provided on your course?
Writing Technical Reports

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Very satisfied	61	18.9	35	17.2	65	16.6
Satisfied	176	54.5	111	54.6	240	61.44
Dissatisfied	61	18.9	43	21.2	68	17.4
Very dissatisfied	25	7.7	14	6.9	18	4.6
Total	323	100	203	100	391	100

A67(f): VET Leavers: What are your opinions of the training provided on your course?
Supervisory Skills

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Very satisfied	88	26.5	43	20.1	63	15.9
Satisfied	171	51.5	113	52.8	217	54.7
Dissatisfied	54	16.3	47	22.0	96	24.2
Very dissatisfied	19	5.7	11	5.1	21	5.3
Total	332	100	214	100	397	100

A68: VET Leavers: Pleased to be a craftperson/technician?

	Brigades		VTCs		Technicians	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Agree	248	74.7	168	82.0	234	60.3
Neutral	64	19.3	30	14.6	92	23.7
Disagree	20	6.0	7	3.4	62	16.0
Total	332	100	205	100	388	100

A69: VET Lecturers/Instructors: Age v Gender

Age	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid%
20 - 24	7	6.9	1	2.7	8	5.8
25 - 29	28	27.7	19	51.4	47	34.1
30 - 34	27	26.7	7	18.9	34	24.6
35 - 39	16	15.8	8	21.6	24	17.4
40 - 44	9	8.9	0	0	9	6.5
45 - 50	7	6.9	2	5.4	9	6.5
50+	7	6.9	0	0	7	5.1
Total	101	100	37	100	138	100

A70: VET Lecturers/Instructors: Industrial Experience, Urban/Rural/Expatriate

Years of Experience	Urban		Rural		Expatriate	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid%
0 - 2	18	66.7	43	54.4	16	64.0
3 - 7	6	22.2	30	38.0	7	28.0
8 - 12	1	3.7	6	7.6	1	4.0
13 - 17	2	7.4	0	0	1	4.0
Total	27	100	79	100	25	100

A71: VET Lecturers/Instructors: Lecturing Experience

Years of Experience	Frequency	Valid %
0 - 2	37	26.1
3 - 7	58	40.9
8 - 12	31	21.7
13 - 17	7	4.9
18 +	9	6.3
Total	142	100

A72: VET Lecturers/Instructors: Fathers' Job

	Frequency	Valid %
Farmer	42	36.5
Retired	26	22.6
Blue Collar	10	8.7
White Collar	9	7.8
Craft/Technician	8	7.0
Deceased	6	5.2
Self-employed	4	3.5
Others	10	7.0
Total	115	100

A73: VET Lecturers/Instructors: Mothers' Job

	Frequency	Valid %
Housewife	33.1	38.5
Farmer	25	20.5
Self-employed	11	9.0
Unemployed	10	8.2
Deceased	6	4.9
Service	5	4.1
Others	10	7.0
Total	122	100

A74: VET Lecturers/Instructors: Brothers' Job

	Frequency	Valid %
Craft/Technician	37	35.9
White Collar	20	19.4
Teacher	12	11.7
Police	9	8.7
Blue Collar	8	7.8
Soldier	4	3.9
Others	13	12.6
Total	103	100

A75: VET Lecturers/Instructors: Sisters' Job

	Frequency	Valid %
White Collar	22	27.8
Teacher	16	20.3
Nurse	13	16.5
Service	8	10.1
Craft/Technician	7	8.9
Self-employed	4	5.1
Others	9	4.9
Total	79	100

A76: VET Lecturers/Instructors: What should VET train for?

	Future Job		Work Attitude		Supervisory Skills	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Yes	119	96.7	111	98.2	82	98.8
No	4	3.3	2	1.8	1	1.2
Total	123	100	113	100	83	100

A77: VET Lecturers/Instructors: Do you find your trade/profession very interesting?

	Urban		Rural		Expatriate		All	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
Yes	27	100	79	95.2	21	95.5	127	96.2
No	-	-	4	44.5	1	4.5	5	3.8
Total	27	100	83	100	22	100	132	100

A78: Recent VET Graduates: Gender v Home Base

Home Base	Male		Female		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Urban	17	30.4	8	61.5	25	36.2
Rural	39	69.6	5	38.5	44	63.8
	56	100	13	100	69	100

A79: Recent VET Graduates: Trade/Subject v Employment Type

Trade/Subject	Govt.	Parasta.	Private	Brigade	Frequency	Valid %
<u>Trade</u>						
Construction	11	0	3	1	15	22.1
Mechanical	2	2	4	1	9	13.2
Electrical Installation	9	1	2	0	12	17.6
Automotive	17	2	0	0	19	27.9
Agriculture and Forestry	1	0	0	0	1	1.5
<u>Technician</u>						
Highways	1	0	0	0	1	1.5
Electrical/Electronic	3	2	0	0	6	8.8
Refrigeration/Air Con.	1	0	0	0	2	2.9
Telecommunications	0	2	0	0	3	4.4
Total – Frequency	45	9	12	2	68	
Valid %	66.2	13.2	17.6	2.9		100

A80: Recent VET Graduates: Home Base v Qualifications

Qualifications	Urban		Rural		Total	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
<u>Trade</u>						
Continued Training	1	3.4	2	4.8	7	4.2
Trade Test B/C	4	13.8	11	25.6	15	21.1
NCC/Trade Test A	16	55.2	20	46.5	36	50.7
<u>Technician</u>						
Certificate/FTC	2	6.9	6	14.0	8	11.2
Diploma	6	20.7	3	2.3	9	12.7
Total	29	100	42	100	71	100

A81: Recent VET Graduates: Sources of Advice on Career Choice v Home Base

Advisers	Urban		Rural		All	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Parents	7	35.0	10	30.3	17	32.1
Teachers	5	25.0	6	18.2	11	20.8
Other Family Members	3	15.0	8	24.2	11	20.8
Friends	3	15.0	9	27.3	12	22.6
School Career Guidance	2	10.0	0	0	2	3.8
Total	20	100	33	100	53	100

A82: Recent VET Graduates: Satisfaction with Theory Training

Satisfaction Level	Frequency	Valid %
Very Satisfied	20	29.0
Satisfied	37	53.6
Dissatisfied	10	14.5
Very Dissatisfied	2	2.9
Total	69	100

A83: Recent VET Graduates: Satisfaction with Employers' Expectations Training

Satisfaction Level	Frequency	Valid %
Very Satisfied	9	13.6
Satisfied	51	77.3
Dissatisfied	5	7.6
Very Dissatisfied	1	1.5
Total	61	100

A84: Recent VET Graduates: Use of instruction manuals?

	Frequency	Valid %
Yes	64	92.8
No	5	7.2
Total	69	100

A85: Recent VET Graduates: Write reports?

	Frequency	Valid %
Yes	47	74.6
No	16	25.4
Total	63	100

A86: Recent VET Graduates: Sources of Deficiencies

	Yes	No	Total	$\frac{\text{Yes} \times 100}{\text{No}}$
General school education	37	15	52	71.2
VET	27	16	43	62.8
Cultural differences	16	24	40	40.0

A87: Recent VET Graduates: Should VET also train for future job requirements and workplace conventions and practices?

	Yes	No	Total	$\frac{\text{Yes} \times 100}{\text{No}}$
Future job requirements	52	3	55	94.5
Workplace conventions and practices	66	2	68	97.1

A88: Recent VET Graduates: Management Styles

Styles	Frequency	Valid %
Hierarchical	24	61.5
Full discussion but management decision	13	33.3
Consensus decision	2	5.1
Total	39	100

A89: Recent VET Graduates: Organisational Structure

Organisational Structure	Frequency	Valid %
Flat hierarchy	4	10.5
Pyramid hierarchy	34	89.5
Total	38	100

A90: Recent VET Graduates: Perceived Status within their Company

	Frequency	Valid %
Well treated	2	3.7
Respected	14	25.9
OK	31	57.4
Not good	7	13.0
Total	54	100

A91: Recent VET Graduates: Problems with workplace conventions?

	Frequency	Valid %
Yes	31	50
No	31	50
Total	62	100

A92: Recent VET Graduates: Problems working in a team?

	Frequency	Valid %
Yes	35	53.0
No	31	47.0
Total	66	100

A93: Recent VET Graduates: Problems with cultural differences?

	Frequency	Valid %
Yes	18	41.9
No	25	58.1
Total	43	100

A94: Recent VET Graduates: Made good working relationships?

	Frequency	Valid %
Yes	61	89.7
No	7	10.3
Total	68	100

A95: Recent VET Graduates: Promotion and Career Prospects
(Interviewees only)

Promotion/Career Prospects	Frequency	Valid %
Very good	2	5.0
OK	13	32.5
Not applicable	2	5.0
Very bad/nil	8	20.0
Further training	8	20.0
Don't know	7	17.5
Total	40	100

A96: Recent VET Graduates: Importance of Qualifications for Promotion
(Interviewees only)

Importance of Qualifications for Promotion	Frequency	Valid %
Essential	14	34.1
Important	21	51.2
Desirable	2	4.9
Not important	3	7.3
Don't know	1	2.4
Total	41	100

**A97: Recent VET Graduates: The Greatest Disappointment on Starting Work:
lack of training opportunities**

Lack of Training Opportunities = Greatest Disappointment in Work	Frequency	Valid %
Agree	18	43.9
Disagree	23	56.1
Total	41	100

A98: Recent VET Graduates: Willingness to undertake further training?

Undertake Further Training	Frequency	Valid %
Yes	38	95
No	2	5
Total	40	100

A99: Recent VET Graduates: Do you enjoy your job? (Questionnaire only)

Enjoy job?	Frequency	Valid %
Yes	25	96.2
No	1	3.8
Total	26	100

A100: Recent VET Graduates: Interesting job?

Interesting Job?	Frequency	Valid %
Agree	23	88.5
Disagree	2	7.7
Neutral	1	3.8
Total	26	100

A101: Recent VET Graduates: With hindsight, do you wish for a different job?

Wish for a different job?	Frequency	Valid %
Yes	3	11.1
No	24	88.9
Total	27	100

A102: Employer: Rank of Employers / Employer's Representatives

Rank	Frequency	%
Director / Managing Director	20	21.1
Manager / Superintendent	34	35.8
Technical Officer / Engineer / Supervisor	23	24.2
Administration Officer / Personnel Officer	3	3.2
Technician / Senior Technical Assistant / Technical Ass.	7	6.3
Training Officer	7	7.4
Total	93	100

A103: Employer: Number of Employees in Companies Surveyed

Number Employed	Frequency	%
1 – 25	10	12.5
26 – 50	15	18.75
51 – 75	10	12.5
76 – 100	12	15.0
101 – 200	8	10.0
201 – 1000	14	17.5
1001 - 5000	11	13.75
Total	80	100

A104: Employer: Public or Private Enterprise

Type of Industry	Frequency	%
Public	46	48.4
Private	49	51.6
Total	95	100

A105: Employer: Years of Experience v Nationality

Years of Experience	Nationality (Frequency)*						Total
	1	2	3	4	5	6	
1 to 10	17		1	1	2	1	22
11 to 20	6	2	5	3	2	2	20
21 to 30	8	3		1	1	1	14
31 to 42	2	5	1	1			9
Total	33	10	7	6	5	4	65

* **Key:** 1. Batswana 2. UK 3. South African
4. Zimbabwean 5. Indian / Sri Lankan 6. Others

A106: Employer: Gender v Citizenship

	Male		Female		Total	
	Frequency	Valid %	Frequency	Valid%	Frequency	Valid %
Citizen	48	92.3	4	7.7	52	100
Non-citizen	40	93.0	3	7.0	43	100
Total males/females	88		7		95	

A107: Employer: Qualifications v Gender

Qualifications	Male	Female	Total
Degree	25	2	27
Higher National Diploma / Certificate	9	1	10
Diploma	16	2	18
Certificate / Full Technician Certificate	8		8
National Craft Certificate / Trade Test A	6		6
Trade Test B or C	3		3
In House	1		1
Total	68	5	73

A108 Employer: Importance of Well-Trained Technical Personnel

	Craft		Technician	
	Frequency	Valid %	Frequency	Valid %
Essential	55	72.4	60	78.9
Important	16	20.0	11	14.5
Low Importance	5	6.6	5	6.6
Total	76	100	76	100

A109: Employer: Relevance of Qualifications to Job (Initially)

	Frequency	Valid %
Essential	44	51.8
Important	35	41.2
Desirable	6	7.1
Total	85	100

A110: Employer: Can manage without trained personnel?

	Craft		Technician	
	Frequency	Valid %	Frequency	Valid %
Yes	11	13.4	16	20.0
No	71	86.6	64	80.0
Total	82	100	80	100

A111: Employer: Initial Qualifications of Employees

Qualifications	Frequency	Valid %
Higher National Certificate	2	0.7
Ordinary Technician Diploma / Telecommunications Part III Certificate	56	16.0
Full Technician Certificate	12	3.4
National Craft Certificate / Trade Test A	2	0.7
Trade Tests B and C	112	31.9
	167	47.6
Total	351	100

A112: Employer: If new skills training was required what would you do?

	Frequency	Valid %
Train existing staff	77	87.5
Recruit ready trained new staff	11	12.5
Total	88	100

A113: Employer: Relevance of Qualifications for Promotion

	Frequency	Valid %
Essential	33	42.3
Important	36	46.2
Desirable	9	11.5
Total	78	100

A114: Employer: Satisfaction with VET Graduates: Brigades

	Theory		Practical Skills		Attitude to Work		Relevance of training	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
V. Satisfied	13	21.0	18	28.1	12	19.1	14	22.2
Satisfied	35	56.5	32	50.0	28	43.4	36	57.1
Dissatisfied	13	21.0	11	17.2	20	31.7	11	17.5
V. Dissatisfied	1	1.6	3	4.7	3	4.8	2	3.2
Total	62	100	64	100	63	100	63	100

A115: Employer: Satisfaction with VET Graduates: VTCs

	Theory		Practical Skills		Attitude to Work		Relevance of training	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
V. Satisfied	17	23.0	12	16.2	9	12.2	10	13.5
Satisfied	48	64.9	40	54.1	29	39.2	48	64.9
Dissatisfied	8	10.8	18	24.3	30	40.5	13	17.6
V. Dissatisfied	1	1.4	4	5.4	6	8.1	3	4.1
Total	74	100	74	100	74	100	74	100

A116: Employer: Satisfaction with VET Graduates: Technician Training

	Theory		Practical Skills		Attitude to Work		Relevance of training	
	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %	Freque.	Valid %
V. Satisfied	28	48.3	12	21.4	12	21.1	10	19.6
Satisfied	25	43.1	244	42.9	31	54.4	34	66.7
Dissatisfied	5	8.6	17	30.4	12	21.1	6	11.8
V. Dissatisfied	0	0	3	5.4	2	3.5	1	2.0
Total	58	100	56	100	57	100	51	100

A117: Employer: Should VET include instruction on good attitude to work?

	Craftworkers		Technicians	
	Frequency	Valid %	Frequency	Valid %
Yes	71	84.5	64	76.2
No	15.5	15.5	20	23.8
Total	84	100	84	100

A118: Employer: Do VET graduates well in a team?

	Craftworkers		Technicians	
	Frequency	Valid %	Frequency	Valid %
Yes	63	84.0	60	89.6
No	12	16.0	7	10.4
Total	75	100	67	100

A119(a): Employer: Do recent VET graduate craftworkers have problems?

	With Reading Instructions		With Writing Technical Reports		With Executing Oral Instructions	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Yes	27	39.1	49	71.0	14	18.9
No	42	60.9	20	29.0	60	81.1
Total	69	100	69	100	74	100

A119(b): Employer: Do recent VET graduate craftworkers also have problems?

	With Giving Instructions		With Numeracy		With Computer Literacy	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Yes	33	47.1	21	33.9	54	84.4
No	37	52.9	41	66.1	10	15.6
Total	70	100	62	100	64	100

A120(a): Employer: Do recent VET graduate technicians have problems?

	With Reading Instructions		With Writing Technical Reports		With Executing Oral Instructions	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Yes	10	15.2	19	29.7	7	10.6
No	56	84.8	45	70.3	59	89.4
Total	66	100	64	100	66	100

A120(b): Employer: Do recent VET graduate technicians also have problems?

	With Giving Instructions		With Numeracy		With Computer Literacy	
	Frequency	Valid %	Frequency	Valid %	Frequency	Valid %
Yes	15	30.0	11	18.3	29	46.8
No	50	70.0	49	81.7	33	53.2
Total	65	100	60	60	62	100

A121: Numbers of Questionnaires and Interviews Administered

A. Schools	Questionnaires	Interviews	Totals
Pupils (leavers)	969	12	981
Teachers	70	87	157
Parents: English	283		
Setswana	175		462
Ikalanga	4		
B. Further Education			
Students	1038	7	1045
Lecturers/Instructors	78	69	147
C. Employment			
VET Graduates	37	42	73
Employers/Supervisors	71	34	105
TOTALS	2666	251	2946

N.B. 1. Not all participants answered every question.

2. Input from 5 traditional village focus groups was obtained.

3. Over 140 influential officers in government, commerce and industry were also consulted.

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Abbreviations and Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ALDEP	Arable Lands Development Package
ANC	African Nationalists Congress
ATTS	Automotive Trades Testing School
BCA	Botswana College of Agriculture
BCCI	Botswana Chamber of Commerce and Industry
BDC	Botswana Development Corporation
BDF	Botswana Defence Force
BEDU	Botswana Enterprises Development Unit
BIAC	Botswana Institute of Administration and Commerce
BLS	Botswana, Lesotho and Swaziland
BLNS	Botswana, Lesotho, Namibia and Swaziland
BNDP	Botswana National Productivity Centre
BOC	Botswana Orientation Centre
BOCCIM	Botswana Confederation of Commerce, Industry and Manpower
BPC	Botswana Power Corporation
BRIDEC	Brigades Development Centre
BOTA	Botswana Training Authority
BTC	Botswana Telecommunications Corporation
BTC	Botswana Technology Centre
CAD	Computer Aided Design
CBMT	Competency-Based Modular Training
C&G	City and Guilds of London
CITF	Construction Industry Trust Fund
CJSS	Community Junior Secondary School
CKD	Completely Knocked Down
CNNA	Council for National Academic Awards
COSC	Cambridge Overseas School Certificate
CSO	Central Statistics office
CTO	Central Transport Organisation
DABS	Department of Architecture and Building Services
DAIT	Directorate of Apprenticeship and Industrial Training
DEMS	Department of Electrical and Mechanical Services
DfEE	Department of Education and Employment
DPSM	Directorate of Public Service Management
D&T	Design and Technology
DVET	Department of Vocational Education and Training
DWA	Department of Water Affairs
DWNP	Department of Wildlife and National Parks
EEC	European Economic Community
ET	Education and Training
EU	European Union

FAP	Financial Assistance Policy
FET	Faculty of Engineering and Technology
FEU	Further Education Unit
GDP	Gross Domestic Product
GEC	General Electric Company
G M	General Motors
GNP	Gross National Product
GPS	Global Positioning System
HATAB	Hotel and Tourist Association of Botswana
HIES	Household Income and Expenditure Survey
HMD	Hyundai Motor Distributors
ICI	International Chemical Industries
IDS	Income Data Services
IFS	Integrated Field Services
ILO	International Labour Office
IMF	International Monetary Fund
IT	Information Technology
JC	Junior Certificate
LMS	London Missionary Society
MCB	Motor Company of Botswana
MCI	Ministry of Commerce and Industry
MFDP	Ministry of Finance and Development Planning
MLHA	Ministry of Labour and Home Affairs
MNC	Multi-National Company
MOE	Ministry of Education
MTTC	Maderelo Training and Testing Centre
NABAIT	National Advisory Board for Apprenticeship and Industrial Training
NCC	National Craft Certificate
NCE	National Commission on Education
NDB	National Development Bank
NDP	National Development Plan
NITTEC	National Industrial Training and Technical Education Council
NUMMI	New United Motor Manufacturing Incorporated
‘O’	Ordinary
OECD	Organisation of Economic Cooperation and Development
PAQ	Position Analysis Questionnaire
PCRIP	Presidential Commission on the Review of Incomes Policy
PSLE	Primary School Leaving Examination
PTTC	Primary Teacher Training College
RAD	Remote Area Dweller

R&D	Research and Development
RD	Roads Department
RIIC	Rural Industries Innovation Centre
RNPE	Revised National Education Policy
RTC	Roads Training Centre
SACU	Southern African Customs Union
SACUA	Southern African Customs Union Agreement
SADC	Southern African Development Community
SIP	Special Incentive Programme
SKD	Semi Knocked Down
SME	Small and Medium Enterprise
SPRDP	Selebi Phikwe Regional Development Programme
SPSIP	Selebi Phikwe Special Incentive Programme
SPSS	Statistics Package for Social Sciences
SSS	Senior Secondary School
TGLP	Tribal Grazing Land Policy
TTC	Trade Test Certificate
TTC	Teacher Training College
UB	University of Botswana
UK	United Kingdom
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNDP	United Nations Development Programme
USA	United States of America
VET	Vocational Education and Training
VTC	Vocational Training Centre
VTI	Vocational Training Instructors
WTO	World Trading Organisation
WUC	Water Utilities Corporation

