MAURITIUS RESEARCH COUNCIL
INNOVATION FOR TECHNOLOGY

UPGRADING THE CORE WORK SKILLS OF THE MAURITIAN LABOUR FORCE TO MEET THE CHALLENGES OF AN ECONOMY UNDERGOING RAPID TECHNOLOGICAL CHANGE

Final Report

October 2005

MAURITIUS RESEARCH COUNCIL

Address:

Level 6, Ebène Heights,
34, Cybercity,
Ebène 72201,
Mauritius.

Telephone: (230) 465 1235
Fax: (230) 465 1239
Email: mrc@intnet.mu
Website: www.mrc.org.mu

Regional Training Centre
Capacity development for sugar cane and other enterprises

Upgrading the core work skills of the
Mauritian labour force to meet the challenges
of an economy undergoing rapid
technological change

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L. D. Mamet and Y. Pillay Narrainen

Regional Training Centre, Robert Antoine Building, Reduit, Mauritius

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1.0   INTRODUCTION

1.1   *Knowledge- and skills-based economies and societies*

Throughout the world there is a gradual shift towards knowledge- and skills-based economies and societies. Mauritius too is undergoing this transition. The trend is to move away from traditional low-skilled sectors towards the service, financial and information industries. The aim is to position Mauritius as a knowledge hub for the region. Even the traditional sectors, such as agriculture and textiles, are undergoing rapid changes and are increasing in sophistication and technicality. These traditional sectors are compelled to change their strategic thinking from a narrowly focused emphasis on products and markets to a wider focus on human capital (Mamet and Maurel, 2002).

Education and training play central roles in a country's efforts to meet the challenges of globalization and technological development. Changes in the organization of work are resulting in the demand for higher and different skills (ILO, 1998). The knowledge society and today's world of work call for individuals who are able to acquire, adapt, apply and transfer their knowledge to different contexts and under varying technological conditions, and to respond independently and creatively (ILO, 2000a).

Core skills that are fundamental for living and working in today's society, for acquiring advanced skills ("trainability") and for making use of new technologies can be acquired by adults given appropriate opportunities. Foundation skills such as literacy, numeracy, citizenship, social skills, learning to learn skills, and the ability to solve problems together are seen to be the basis for employability.

These skills have become increasingly important in determining an individual's ability to secure a job, retain employment and move flexibly in the labour market.

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Maintaining workforce employability is one of the major challenges for individuals, enterprises, governments and society at large.

1.2 *Definitions/terminology*

1.2.1 Core work skills

The terminology used is extremely variable. Key competencies, or generic skills, variously labelled "key skills" (United Kingdom), "critical enabling skills" (Singapore), "basic skills" (EU), and "essential skills" (Egypt and New Zealand) and "transfer oriented training" (Germany), "employability skills" (Canada), and "workplace know-how" (USA), refer to the non-technical skills that everybody needs in order to perform satisfactorily at work and in society, irrespective of where they work and live (!LO, 2003). They build upon and strengthen, and often overlap with, the foundation skills developed in basic education. They are aimed at enabling workers to constantly acquire and apply new knowledge and skills.

These skills can be classified using a wide range of terminology but they essentially refer to the following:

- basic skills
- ability to understand how the firm/organisation works and the role of the individual employee within it
- co-operative, communicative and social skills
- work skills: ability to diagnose and solve problems, decision-making capacity, planning skills.
- individual skills: independence, assertiveness, self-control, capacity to present oneself well
- learning how to learn.

There is a multiplicity of approaches in different countries. In Singapore, for example, they include learning to learn skills, literacy and numeracy (reading, writing and computation skills), listening and oral communication skills, problem-

solving skills and creativity, personal effectiveness (self-esteem, goal-setting and motivation, skills for personal and career development), group effectiveness (interpersonal, teamwork and negotiation skills) and organizational effectiveness and leadership skills.

Core work skills can also be considered to include what are called labour market "navigation" skills. These include job-search skills, knowing how to present oneself to prospective employers, how to identify one's career options and opportunities, and how to identify and evaluate job and education and training opportunities; they also include familiarity with the Internet, as many jobs, career opportunities and guidance services are increasingly available on line.

It is the task of basic education to ensure to each individual the full development of the human personality and citizenship; and to lay the foundation for employability. Initial training develops further his or her employability by providing general core work skills, and the underpinning knowledge, and industry-based and professional competencies which are portable and facilitate the transition into the world of work. Lifelong learning ensures that the individual's skills and competencies are maintained and improved as work, technology and skill requirements change; ensures the personal and career development of workers; results in increases in aggregate productivity and income; and improves social equity.

1.2.2 **Employability**

Employability encompasses the skills, knowledge and competencies that enhance a person's ability to secure and retain a job, progress at work and cope with change, secure another job if she/he so wishes or has been laid off, and enter more easily into the labour market at different periods of the life cycle. Individuals are most employable when they have broad-based education and training, basic and portable high-level skills, including teamwork, problem solving, information and communications technology (ICT) and communication and language skills,

learning-to-learn skills, and competencies to protect themselves and their colleagues against occupational hazards and diseases. This combination of skills enables them to adapt to changes in the world of work (ILO, 2000b).

Employability covers multiple skills that are essential to secure and retain decent work. Entrepreneurship can contribute to creating opportunities for employment and hence to employability. Employability can only be sustained in an economic environment that promotes job growth and rewards individual and collective investments in human resources training and development.

The skills needed to succeed in the workplace have changed significantly over the past three decades. In the 1960s jobs were classified in the United States at 20% professional, 20% skilled and 60% unskilled. By the mid 1990s, however, the percentage for skilled and unskilled workers had reversed, with 60% skilled and 20% unskilled. When employers are asked what competencies job applicants are missing they mention, most frequently, the following skills: learning how to learn; competence in reading, writing and computing; effective listening and oral communication skills; adaptability through creative thinking and problem-solving; personal management with strong self-esteem and initiative; interpersonal skills; the ability to work in teams or groups; basic technology skills; and leadership effectiveness (US Dept. of Commerce, 1999).

1.3   *Overview of work undertaken by the International Labour Office on core work skills*

According to the International Labour Office (ILO), the overall goal of the global economy should be to provide opportunities for all people to obtain decent and productive work in conditions of freedom, equity, security and human dignity. It has been increasingly recognized that people's endowment of skills and capabilities, and investment in education and training, constitute the key to economic and social development.

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Since the beginning of the 1990s, the ILO has promoted and pilot-tested the introduction of core work skills as part of other technical assistance programmes to developing and transition countries. These skills have been integrated at different levels of skills development programmes, including train the- trainer activities, curricula development and training delivery (Riordan and Rosas, 2003).

At the International Labour Conference of 2000 in the "Conclusions concerning human resources training and development" it was clearly stated that the training in the modern world of work in both developing and developed countries, must provide general core work skills, and the underpinning knowledge, and industry based and professional competencies which are portable (ILO, 2000).

Developing core work skills and lifelong learning for all is an enormous challenge for any country and it requires pursuing and advancing the education and training reforms that many countries have already started. The current momentum builds upon a number of developments.

These include:
- the Cologne Charter adopted by the Group of Eight major industrialized nations (G8) in 1999 that highlights universal access to learning and training, encourages lifelong learning and promotes support to developing countries in the establishment of efficient education systems;
- the changing perception among ILO's constituents, expressed in June 2000 by governments, employers' and workers' organizations at the International Labour Conference, of the need for increased investment in human resources development and training;
- the paradigm shift towards empowering the individual to be the builder of his or her own learning and self-development;
- the potential for new technologies for learning, education and training; and

- the increasing recognition of social dialogue as a potential catalyst to involve all parties concerned in policies and programmes for human resources development and training.

The International Labour Office's Programme on Skills, Knowledge and Employability undertakes research on core work skills with the objective of raising awareness and understanding in non-industrialized countries on the integration of these skills with vocational skills and promote employability and lifelong learning. This research concentrates on the development of skills for the world of work, especially in developing countries.

The aim is to identify good practices, methodologies and enabling mechanisms that can be shared amongst countries in the introduction of policies and programmes on core work skills. Alliances and knowledge sharing between industrialized and developing countries, as well as among international development agencies, need to be further explored and exploited in order to promote individuals' employability through sustained economic growth and within more equitable societies.

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2.0   PROJECT DESCRIPTION

In this project it is proposed that core skills programmes existing elsewhere in the world be adapted and developed to suit the Mauritian context and realities. Trainers will need to be trained in the content and methodologies and pilot groups will be needed to test the materials. Once the tools and techniques are finalized the programme can be widely disseminated and its impact will then be assessed.

2.1   *Objectives*
- develop training tools for Mauritius based on successful models already developed elsewhere which aim to promote basic skills such as logical reasoning, interpretation of data, problem solving, communications, teamwork, etc.
- train part-time trainers in the use of these materials
- train target groups from various industries/companies (especially those moving towards knowledge-based activities), and train vulnerable groups who are at risk of being marginalized from the world of work.
- undertake a first assessment of the impact of these programmes

2.2   *Summary of the proposed methodology*

2.2.1   Preliminary survey (PHASE 1)
- Survey of existing work on core skills/basic skills/foundation skills/critical enabling skills.
- Preliminary Report

2.2.2   Acquisition of expertise and development of local programmes (PHASE 2)
- Purchase appropriate expertise and instruments available from abroad on critical enabling skills, basic numeracy, logical reasoning, economic literacy, etc. In this context several programmes have already been identified namely:

Ateliers de Raisonnement logiques (ARL) in France, Critical Enabling Skills (CREST) in Singapore.

- Identification and briefing of part-time trainers with the appropriate andragogical skills, with an interest in poverty alleviation and an interest in the prevention of social exclusion.

- Contract overseas consultants to train groups of Mauritian trainers in the use of these materials (transfer of content and training methodology).

- Adapt materials to Mauritian realities including translation into Creole where necessary.

- Pilot test instruments/tools on target groups of employees, e.g. in the Mauritian sugar industry and on vulnerable groups.

- Modify the materials and methodology (if necessary) based on evaluation of the pilot runs.

- Interim report.

2.2.3 Implementation of local programme (PHASE 3)

- Obtain MQA approval for the programmes and trainers
- Mauritian trainers to train target groups from various industries/companies especially those moving towards knowledge-based activities.
- Disseminate programme as widely as possible especially to vulnerable groups.
- First assessment of the programmes
- Final Report.

3.0 SURVEY OF EXISTING WORK ON CORE SKILLS EXAMPLES/CASE STUDIES

3.1 *Europe*

3.1.1 Introduction

A new strategic goal was set in March 2000 for the European Union: to become 'the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion'. The Lisbon European Council called upon the Member States, to establish framework defining 'the new basic skills'. These were to be provided through lifelong learning and should cover ICT, technological culture, foreign languages, entrepreneurship and social skills (Lisbon European Council, 2000).

The Barcelona European Council adopted a detailed work programme for achieving these common goals and objectives by 20 l0 (European Council, 2004). This programme extended the list of basic skills as follows: literacy and numeracy (foundation skills), basic competences in mathematics, science and technology, ICT and use of technology, learning to learn, social skills, entrepreneurship and general culture. The Barcelona Council conclusions also stressed the need for action to improve the mastery of basic skills. In particular, it called for attention to digital literacy and foreign languages.

The European Commission has established expert groups to work on one or more of the thirteen objectives. The working group on key competences started its work in 200 l (European Expert Group, 2002). The main objectives of the working group were to identify and define *what the new skills are and how these skills could be belier integraled into curricula, mainlained and learned through lifi.*

3.1.2 The educational context

As regards compulsory education curricula, a survey (Eurydice, 2000) revealed a heightened interest in key competences considered vital for successful participation in society. Many of these competences are defined as generic or transversal competences that are subject independent and based on cross-curricular objectives. They usually relate to better management of one's own learning, social and interpersonal relations and communication and reflect the general shift of emphasis from teaching to learning. The terms 'competence' and 'key competence' are preferred to 'basic skills', which was considered too restrictive as it was generally taken to refer to basic literacy and numeracy and to what are known variously as 'survival' or 'life' skills. 'Competence' is considered to refer to a combination of skills, knowledge, aptitudes and attitudes, and to include the disposition to learn in addition to know-how. A 'key competence' is one crucial for three aspects of life:

- personal fulfillment and development throughout life (cultural capital): key competences must enable people to pursue individual objectives in life, driven by personal interests, aspirations and the desire to continue learning throughout life;

- active citizenship and inclusion (social capital): key competences should allow everybody to participate as an active citizen in society;

- employability (human capital): the capacity of each and every person to obtain a decent job in the labour market.

It is proposed to apply the framework for key competences across the full range of education and training contexts throughout lifelong learning, as appropriate to national education and training frameworks:

- General compulsory education, which is increasingly characterized by a change in emphasis — a shift away from 'codified' or 'explicit' knowledge towards 'tacit knowledge' embedded in a learner's personal and social competences.

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- Adult education and training — from 'compensatory' education (including the 'foundation skills' of literacy and numeracy) — to further and higher education and continuing professional development.

- Specific educational provision for groups at risk of social exclusion, for example, migrants, ethnic minorities, young people and adults with low levels of initial educational attainment, those living in remote and isolated areas, etc.

- Educational provision for pupils with special educational needs, learners with special educational needs should have access to suitably differentiated and individualized learning programmes based on the framework of competences.

In the United Kingdom the National Council for Vocational Qualifications (NCVQ), which was established 1986, has designed six core skills units, namely:

- communicative skills
- problem-solving skills
- numerical skills
- computer skills
- foreign languages.

Each core skill has four levels and the units have been planned in such a way as to be integrated into National Vocational Qualifications.

A number of organizations play a role in core skills development. City & Guilds is the leading provider of vocational qualifications in the United Kingdom. Their qualifications assess skills that are of practical value in the work place. They are recognised for their quality and are valued by employers in every sector of business. City & Guilds is a provider of Skills for Life programmes. The Learning and Skills Council, UK aims to make England better skilled and more competitive by helping to develop Skills Academies and Centres of Vocational Excellence using public-private partnerships.

3.1.3 Trends in core work skills

In accordance with the broader approach adopted by the working group on key competences, the overall definition of 'key competence' is as follows:

Key competences represent a transferable, multifunctional package of knowledge, skills and attitudes that all individuals need for personal fulfillment and development, inclusion and employment. These should have been developed by the end of compulsory schooling or training, and should act as a foundation for further learning as part of lifelong learning.

- Communication in the mother tongue, communication is the ability to express and interpret thoughts, feelings and facts in both oral and written form (listening, speaking, reading and writing), and to interact linguistically in an appropriate way in the full range of societal and cultural contexts
- Communication in a foreign language
- Mathematical literacy and basic competences in science and technology. The emphasis is on process rather than output, on activity rather than knowledge.
- Digital competence involves the confident and critical use of electronic media for work, leisure and communication. These competences are related to logical and critical thinking, to high-level information management skills, and to well developed communication skills.
- 'Learning-to-learn' comprises the disposition and ability to organize and regulate one's own learning, both individually and in groups. It includes the ability to manage one's time effectively, to solve problems, to acquire, process, evaluate and assimilate new knowledge, and to apply new knowledge and skills in a variety of contexts.
- Entrepreneurship has an active and a passive component: it comprises both the propensity to induce changes oneself and the ability to welcome, support and adapt to innovation brought about by external factors. Entrepreneurship involves taking responsibility for one's actions, positive or negative,

developing a strategic vision, setting objectives and meeting them, and being motivated to succeed.

- 'Cultural expression' comprises an appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, corporal expression, literature and plastic arts.

The Adult Basic Skills strategy unit has been operational since November 2000 and is based in the Department of Education and Skills -the unit is responsible for driving forward implementation of the national Skills for Life strategy and ensuring efforts to improve literacy, language and numeracy are well co• ordinated. They also provide assessment, learning and teaching materials. The Workplace Basic Skills network provides resources in the form of a toolkit for workplace language, literacy and numeracy.

In France the concept of key skills is extremely broad and complex and the term transferable skills is preferred. The idea of building up a portfolio of skills is widely accepted and analyses of competences are commonplace. *Les Ateliers de Raisonnement logique* (ARL) have been used since the 1980s to develop logical reasoning in the workplace (Hommage and Perry, 1987). Based on studies undertaken by Higele and Schirks in the 1960s at the *Institut National pour la Formation des Adultes ARL* in their current form were developed by Higele, Hommage, Perry and Tabary. *ARL* uses theories of cognitive development devised by Piaget together with ideas from modem cognitive psychology. The programme covers concrete and formal levels of reasoning. It uses a learner-centred approach and includes a diagnostic phase and a remedial phase.

ARL is designed as a set of progressive logical reasoning exercises that can be utilised in a customised way to meet the specific needs and requirements of the groups involved. The main objective is to build/enhance self-confidence among participants to enable them to cope better with situations requiring problem solving, analytical and good communication skills. The learners:

- analyse work and life situations in a logical and organised way

- develop and practise their communication skills, in particular, presentation, argumentation and listening skills

- enhance their problem-solving capacity through the analysis of a set of practical situations

- practise intellectual operations at different levels, namely concrete and formal levels, until they feel comfortable with such operations

3.2 USA

3.2.1 The educational context

The United States enrolls over 48 million students in primary and secondary education at all grade levels, and another 4 million engage in some form of early learning prior to starting school. In addition, it is estimated that between 500,000 and one million students are tutored at home for part or all of their school years. There are over 91,000 public schools, including over 63,500 primary schools (including over 11,000 middle schools), over 22,100 secondary schools, over 3,700 combined (primary and secondary) schools, and over 1,600 special education and alternative schools. In addition, there are over 27,400 private schools of all levels and types. The average primary school enrolls under 500 students and the average secondary school over 700 students (U. S. Network for Education Information, 2005).

3.2.2 Trends in core work skills

Vocational and technical education is offered at both the secondary and postsecondary levels in the United States. This type of instruction is provided both for unlicensed and licensed occupations, and ranges from general and basic skills to complex technical programs requiring extensive postsecondary level study and practice. In addition, vocational and technical programs are frequently offered by employers, unions, professional associations, and private training services as well

as by traditional educational institutions, and they are among the most popular types of education to offer via distance education technologies.

The Secretary's Commission on Achieving Necessary Skills (SCANS) was set up by the "Secretary of Labor" to identify and define the skills that young people should possess in order to "be successful" in the world of work (Scienter, 2005) .The SCANS commission produced its first report in 1991 entitled "What Work requires of Schools" which highlighted that effective and high quality performance at work requires the worker to possess a solid base in linguistic and computer skills, the capacity for reflection and careful thought (in order to transfer and contextualize knowledge) and personal skills that make the worker reliable and responsible.

SCANS defined the so-called "fundamental skills" which were divided into three areas:

- Basic skills;
- Thinking and analysing;
- Personal qualities.

Fundamental skills are complemented by skills referred to as "workplace skills" are subdivided into five areas:

1. Resources
2. Information
3. Interpersonal
4. Systems
5. Technologies

3.3   *Canada*

3.3.1   Introduction

Canada is a confederation of ten provinces and three territories. In Canada, the provinces and territories are responsible for elementary, secondary and postsecondary education. As a result, Canada has no national or federal department of education. Although there are a great many similarities in the thirteen education systems across Canada, each reflects the diversity of its own regional history, culture, and geography Education@Canada (2005).

Canada has two official languages — English and French. English is the primary language for approximately three-quarters of the population, with French the primary language for the remainder. Most French speakers live in Quebec where they form a majority. There are also French minority groups in all parts of Canada, the largest concentrations being in New Brunswick, Ontario, and Manitoba. Minority language education in Canada (English or French) is guaranteed wherever numbers warrant.

3.3.2   The educational context

Although primary responsibility for education rests with the provinces and territories, the Government of Canada plays an important support role in education. The mandates of several federal government departments intersect with education — in areas such as official languages, postsecondary education funding, and human resource development. In addition, the federal government has responsibilities relating to the elementary and secondary education of Registered Indian children attending First Nations-administered or federal schools on reserves, or provincially-administered schools off reserves, and provides financial assistance to these students at the postsecondary level.

In 1967, the Council of Ministers of Education, Canada (CMEC) was formed to act as the national voice of education in Canada. CMEC is the forum in which the

provincial and territorial ministers meet to discuss matters of mutual interest. CMEC is also the body that represents the education interests of the provinces and territories in working with national education organizations, the federal government, foreign governments, and international organizations.

Virtually all postsecondary institutions in Canada have the authority, by charter or local legislation, to grant academic credentials. Generally speaking, universities are the degree-granting institutions — offering undergraduate degrees (bachelor's and honours) and graduate degrees (master's degrees and doctorates). Colleges offer vocationally-oriented programs of study leading to certificates and diplomas.

3.3.3 Trends in core work skills

In Canada the term Essential Skills is used. Essential Skills are not technical skills but rather the skills people use to carry out a wide variety of everyday life and occupational tasks.

They are the enabling skills that:
- help people perform the tasks required by their occupation and other activities of daily life.
- provide people with a foundation to learn other skills
- enhance people's ability to adapt to workplace change.

Common essential skills include: Reading text; Working with others, Thinking skills, Continuous learning, Writing, Oral communication, Document use, Numeracy (Math) and Computer use.

3.4   *Asia*

3.4.1   Introduction to the Singapore case study

Singapore is a country which over the last 60 to 70 years has demonstrated an unflinching commitment to developing its most precious, not to say only major asset, people. The philosophy and values of education and lifelong learning embraced by the government for many years can be summarized in the following address made by the current Prime Minister:

"We have been moving in recent years towards a more flexible and diverse education system, aimed at providing students with greater choice and ownership in their learning. (...) These approaches in education will allow us to nurture our young with the varied skills needed for the future.(...) We want to nurture young Singaporeans who are intellectually curious, and willing to think in new ways, solve new problems and create new opportunities for the future. And, equally important, we want to help our young to acquire sound values and develop the strength of character and resilience to deal with life's inevitable setbacks, and be willing to work hard to achieve their dreams."

<div align="right">Prime Minister Lee Hsien Loong, 12 August 2004.</div>

Singapore was founded as a British trading colony in 1819. After joining the Malaysian Federation in 1963, it separated from the federation and became independent in 1965. It is now one of the world's most prosperous countries with strong international trading links and with per capita GDP equal to that of the leading nations of Western Europe. The country comprises the main island and around 50 smaller islands. Chinese constitute more than 75% of the community, along with Malays and Indians. Singapore also has a large number of foreign workers. The People's Action Party (PAP) has been the dominant force since independence. Singapore is often referred to as one of Asia's "economic tigers".
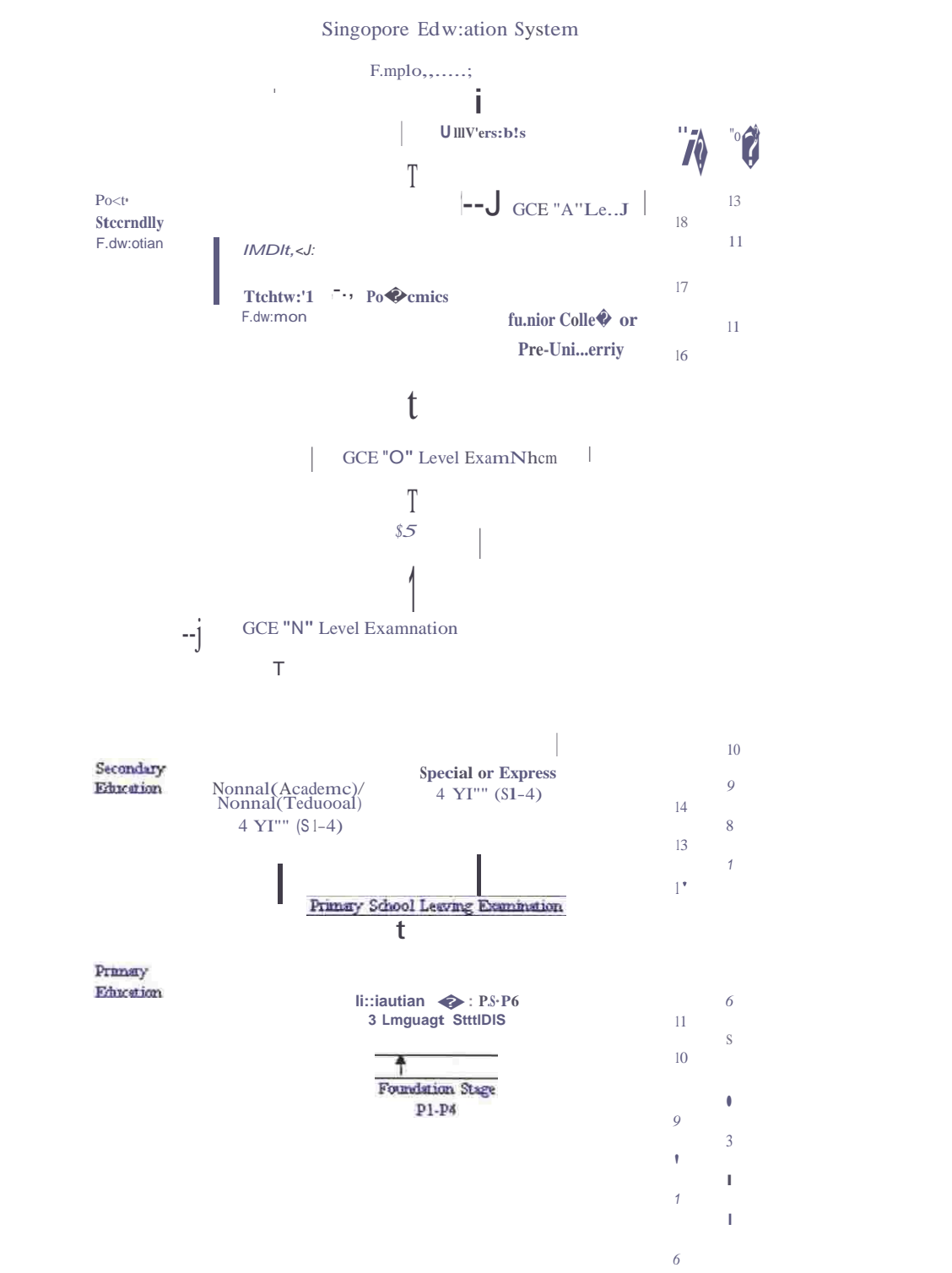
3.4.2   The educational context of Singapore

Singapore's education system is founded on the following main policy objective: to bring out the best in every pupil, develop sound moral values, good citizenship, and the skills necessary to meet the demands of a rapidly changing world. The national curriculum strives to achieve these goals.

The education system is based on the British model and provides the opportunity for formal education to all children. Most children attend school for an average of ten years. Except for select subjects taught in the mother tongue. English is the language of instruction in most schools. After the Primary Leaving School Examination (PSLE) during the sixth year, the student enters secondary school for an additional four or five years of education (Fig. I).

Following the GCE "N" or "O" level examinations at secondary level, students can go for post-secondary education depending upon their desires and qualifications. They have three major options: they may enroll in the technical or commercial institutes under the Institute of Technical Education (ITE) for specialized training or certificate programmes; students with appropriate GCE "O" levels may attend the polytechnics to pursue diploma courses; or they may enroll at junior colleges or pre-university centres to prepare for the Singapore• Cambridge General Certificate of Education "Advanced" (GCE "A") level examination. Results on the GCE "A" level examination determine the students' eligibility for tertiary education.

Figure I: Singapore education system

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3.4.3 Trends in core work skills in Singapore

The development of a vocational education and training (VET) system in Singapore has been marked by dynamic changes and initiatives undertaken over the years in response to changing needs of the education system, society and industry. Vocational and technical training can be traced back to 1930 in Singapore when the first Government Trade School was set up. However a formal system was only put in place in 1973 when the Industrial Training Board (ITB) was formed under the Ministry of Education.

Since then the system has been restructured twice. In 1979, the ITB was merged with the former Adult Education Board (AEB) to form the Vocational and Industrial Training Board (VITB). In 1992, the VITB was restructured as the post‑secondary Institute of Technical Education (ITE). While the VITB focused mainly on expanding its training capacity and range of courses to meet the increasing demand for skilled manpower, the priority of the ITE is to provide secondary school leavers with higher-level skills training and more opportunities to gain access to Polytechnics and to enable working adults to follow training in a range of occupational areas. The mission of the ITE is "to create opportunities for school leavers and adult learners to acquire skills, knowledge and values for lifelong learning" (ITE, 2000). Indeed, while it continues to provide and promote quality technical training to school leavers, it is exploring new avenues in the field of worker education to upgrade the skills of the workforce and intensify industry‑based training through apprenticeship and On-the-Job Training (OJT).

Through the ITE and other institutions such as the Workforce Development Agency (WDA), - established in 2003 to act as a catalyst and champion of workforce development - Singapore has succeeded in developing a comprehensive system of continuing education and training (CET) for working adults to enable them acquire or upgrade their skills.

ITE offers two national worker education programmes: the Basic Education for Skills Training (BEST) and Worker Improvement through Secondary Education (WISE) for working adults who have missed out on a basic education in their earlier years. These are foundation programmes that prepare them for further upgrading and retraining. They are both offered in six-monthly modules on a very flexible mode, during office hours, evenings as well as weekends through a network of institutions involving ITE institutes, company training centres and other public centres.

BEST was introduced in 1983 to upgrade the education of working adults in English Language and Mathematics up to Primary Six Level. WISE which was introduced in 1987 on the same model aims to upgrade workers' education m English Language and Mathematics up to Secondary 4 N level.

Skills training programmes (Modular Skills Training (MOST), Training Initiative for Mature Employees (TIME) and Adult Co-operative Training Scheme (ACTS) are also offered by the ITE for the upgrading of working adults who wish to acquire a new skill, upgrade existing skills or update skills namely because of changing technology.

The Critical Enabling Skills Training (CREST) programme is a national initiative which was launched in Singapore in 1998 as a strategic response to the knowledge economy. CREST aims to transform workforces to continuously adapt to change, learn new skills and meet the challenges of the knowledge age. This programme is founded on seven core skills which have been identified as critical enablers to enhance competitiveness of organisations and employability of the workforce. The CREST initiative began under the aegis of the Productivity Standards Board (PSB) Corporation in collaboration with a training partner, the International Business Performance (IBP), a division of the Financial Training Company (FTC) specialising in professional development and business training, with a series of

training programmes being specially developed to build/enhance the skills identified as critical enablers:

- Learning to learn
- Workplace literacy
- Listening and oral communication
- Problem solving and creativity
- Personal effectiveness
- Group effectiveness
- Organisational effectiveness and leadership.

CREST programmes were developed to create a shift in mindset thereby empowering staff to learn, think and innovate. In line with the vtsion and objectives of the Ministry of Education in Singapore to bring in choice and flexibility in education to "light a tire" in the people instead of "tilling a vessel with knowledge" (Prime Minister Lee Hsien Loong, 2004), the CREST training approach focuses less on teaching and more on learning. The approach is based on experiential, active learning and encourages also reflective and independent learning.

Over the years many organisations have benefited from CREST and the product itself has evolved to best meet the challenges and exigencies of the knowledge age. A new version of the CREST programme, the PSB Core Enabling Skills Training Programme (PSSCORE) which is even more focused on employability skills, has since been launched by the PSB Corporation. PSSCORE has also been deployed in Iran and Indonesia.

The Singapore Employability Skills System (ESS) is a new programme designed to address the needs for current key employability skills. The programme comprises of a set of five modules (communication and relationship management, problem-solving and decision-making, initiative and enterprise, personal effectiveness, health and workplace safety) that are conducted at supervisory as

well as at operations levels. For people who work at operations level and who have already gone through basic skills training like the CREST, this programme enables them to go one step further in terms of developing current specific employability skills.

3.4.4 Conclusion on the Singapore case study

Singapore is already on an upward curve as regards the dynamism of its VET system and the development of core work skills. The challenges that lie ahead for the country are obviously the sustainability of this trend along with a continuous and increased responsiveness to change. Some of the major VET challenges for Singapore are embodied in the very mission of the Ministry of Manpower, namely endeavouring to promote the creation and sustenance of a globally competitive workforce "to enable Singaporean workers to meet the challenges of the global economy in the 21st century, so that all Singaporeans have the skills and the opportunity to realise their potential, have rewarding careers in quality work environments, and the economic security to enjoy their full lives." (Website, Ministry of Manpower, Singapore). This can only be achieved by namely enlarging the talent pool in Singapore, promoting more "progressive and motivational people-management practices" (Website, Ministry of Manpower, Singapore) and supporting the supply of an adequate manpower to sustain the country's long-term economic competitiveness while sustaining and preserving a cohesive society.

Indeed, the culture of lifelong learning is strong in Singapore. Emphasis is laid on the need for Singaporeans to adapt, learn and re-learn skills, attitudes and competencies for lifelong competitiveness and employability. There is a strong national will and drive to create and sustain a great workforce that will be looked upon as the regional and global benchmark. To achieve this, Singapore is investing a lot on the gradual empowerment of its people to become actors of their own development and to create their own desired future through enhanced

capacity development. Its aspiration to move from a good to great workforce is what is currently driving its VET initiatives.

3.4.5 Introduction to the Malaysia case study

A fast-developing country striving to keep pace with the rapid changes taking place in the knowledge age, Malaysia is a federation of thirteen states and three federal territories, consisting of two regions separated by some 640 miles of the South China Sea. Malaysia's population is around 25 million. It is a multi-ethnic and multi-religious society which comprises a majority Muslim population and an economically powerful Chinese community; Indians and indigenous tribes constitute a minority of the population. Malaysia is also among the world's biggest producers of computer disk drives, palm oil, rubber and timber; it manufactures a car (the Proton), and has a wide scope for the expansion of its tourism industry.

3.4.6 The educational context of Malaysia

Education is under the jurisdiction of the Ministry of Education in Malaysia. Primary education covers a period of six years in Malaysia and aims to provide pupils with a good foundation in reading, writing and arithmetic. What is particular about the system is that all primary school pupils are promoted to form one which is the foundation year of secondary education, irrespective of their performance at the end of primary education. Secondary education is divided into three main levels: lower secondary, upper secondary and university levels. Lower secondary prepares students to develop life skills and to be responsible citizens. Academic streaming to the upper secondary whether in science, arts, technical or vocational streams, is done after completion of a national assessment test at the end of the lower secondary level.

Youth vocational training is becoming a national development priority in Malaysia. Alongside the Ministry of Education, there are other ministries, namely the Ministry of Human Resources, and public and private agencies involved in the vocational training of youth to meet industry manpower needs.

3.4.7   Trends in core work skills in Malaysia

The Ministry of Human Resources in Malaysia is the public body responsible for providing the appropriate environment to enable the emergence and development of a competitive workforce in the country. There is a strong trend towards refocusing on skills training in Malaysia and revaluing the vocational tag from which Malaysian students have shied away for long. The move into the knowledge and high-tech age has resulted in a greater demand for highly skilled and adaptable workers. Employers are laying more emphasis on overall competences of individuals, especially core work competences and generic skills such as communication, interpersonal relationship, problem solving and teamwork as opposed to purely technical skills. A major challenge for the country lies therefore in not merely preparing the workers for the utilisation of new technologies, but in developing those transversal work skills that will enable them to adapt rapidly to increasingly changing work contexts.

The Ministry of Human Resources is aware of the shortcomings of the current technical and vocational training system in Malaysia which focuses too much on specific subject matter and technical competencies associated with performing specific tasks and linked to specific industries, and not enough on other aspects of human resource development. To further develop the country's technical and vocational training, the government decided to implement a Dual Training System in 2001. This system had been designed out of the basic recognition that technical and vocational training should be more closely inter-linked with the actual work environment. A major focus of this project is the enhancement and reinforcement of the partnership between training institutions and the industry.

3.4.8 Conclusion on the Malaysia case study

In its endeavour to prepare the country's workforce for employment and enhanced employability, Malaysia faces the challenge of actually uplifting and modernizing its VET system to make it a more attractive, reliable and viable option for its people.

3.5 *Australia*

3.5.1 Introduction

Australia is geographically relatively isolated and its nearest neighbours are Papua-New Guinea, Indonesia and New Zealand. Formerly a British colony, Australia acquired its independence in 1901. Since then, it has had a federal system of government. Although physically very vast, most of the country is uninhabited or only sparsely settled, the majority of the population (close to 80%) being concentrated in the cities and major towns. Low birth rates combined with a rise in life expectancy at birth means that the proportion of older people has been increasing steadily in Australia. With an ageing population and a declining number and proportion of young people, one of the challenges facing the country is that of being able to meet its needs for a skilled, trained and adaptable workforce.

The standard of living and quality of life in Australia is relatively high, actually among one of the highest in the world. Some factors having contributed to this include its richness in natural resources, social and political stability, steady and sustained economic growth, a wide range of economic activities, continuous government investment in economic and social infrastructure, namely in education and training, a relatively small population and efficient immigration programmes to expand the available workforce.

3.5.2   The educational context

Australian education system has historically been based on some general principles:

- Compulsory education from ages 5 to 14 years
- Largely free primary and secondary education
- Equality of access and opportunity for all groups in the community
- Recognition of social, cultural and religious diversity
- The need to develop basic skills and competencies in key areas (e.g. social development of the individual, literacy, numeracy, technological awareness)
- The need to prepare people for the world of work and for the workplace environment
- Opportunities to progress to higher education or vocational education and training
- Meritocracy in selection processes.

The education and training system in Australia includes the following levels:

- Pre-school (up to 2 years for children between 3 and 4)
- Kindergarten (1 year)
- Primary school (6 years)
- Lower secondary school (4 years)
- Upper secondary school (2 years)
- Vocational education and training (no fixed duration, may begin at secondary school)
- Higher education (3 to 5 years for a degree or honours degree)
- Post-graduate higher education (no fixed duration)
- Adult and community education (no fixed duration).

3.5.3 Trends in core work skills

A major characteristic of the Australian VET system is that it has evolved over a long period of time and has undergone substantial reforms over time to better meet the challenges of an evolving set of economic and social needs. One of the main focuses and constants of Australia's VET system has been the development of up-to-date skills in the workforce to enable the country to better adjust to the rapid technological change and the increasing globalization of the world economy.

The establishment of a modem VET system can be dated back to the 1970s when a national system of publicly funded Technical and Further Education (TAFE) institutes and national government subsidies for apprenticeships were introduced. In the early 1980s, the National Centre for Vocational Education Research (NCVER) was set up. NCVER is now Australia's principal research and evaluation organization for the vocational education and training (VET) sector in Australia.

The country also began to implement competency-based training in the late 1980s. In 1992, all states, territories and the Australian Government agreed to the establishment of the Australian National Training Authority (ANTA) and a co-operative federal system of vocational education and training with strategic input by industry. The ANTA was a Government statutory authority established to provide a national focus for vocational education and training (VET). ANTA's mission was to ensure that the skills of the Australian labour force were sufficient to support internationally competitive commerce and industry and to provide individuals with opportunities to optimize their potential. ANTA reported to an industry-based board and was an administrator and adviser. As from July 2005, ANTA was abolished and its responsibilities were transferred to the Australian Government Department of Education, Science and Training.

The Australian Qualifications Framework (AQF) was established in 1995 to bring all post compulsory education and training qualifications into one national system of qualifications. The AQF is a single, coherent framework for qualifications from Senior Secondary Certificates through to Doctoral Degrees. It links together all these qualifications and is a quality-assured national system of educational recognition that promotes lifelong learning and a seamless and diverse education and training system. It covers qualifications issued by secondary schools, vocational education and training (VET) providers and higher education institutions. Thus all qualifications are nationally recognized in Australia.

National Training Packages were also developed across a wide range of industries and occupations in the 1990s, thus introducing the concept of sets of nationally endorsed standards and qualifications for recognizing and assessing people's skills. In 1998, the number of VET students in Australia had reached a record of 1.5 million at the same time as the New Apprenticeship system encompassing the former apprentice and traineeship systems was introduced, whereby practical work was combined with structured training to give a nationally recognized qualification with relevant work experience.

Basically the VET system in Australia is characterised by considerable diversity, flexibility, world standards and high levels of participation from all stakeholders. It can be noticed that pathways to gain skills needed to join the workforce whether for the first time or not, for re-skilling and skills upgrading, are various and include:

- Acquiring work-related skills either through secondary education or specific vocational education and training programmes delivered in schools
- Acquiring core work skills or more intensive work skills leading to a certificate or diploma qualification via a TAFE institute or another registered VET provider

- Enhancing work-related skills through training provided by employers to employees and which may as well lead to a formal nationally accredited qualification
- Undertaking an apprenticeship or traineeship with a registered VET provider (combination of formal off-the-job and on-the-job training)
- Gaining professional skills through a graduate or post-graduate award programme at a university.

Today over 1.5 million people (representing above 12% of the entire population of working age in Australia) undertake publicly-funded VET programmes. Most of them are adults who are training for skills upgrading, for core work skills development or re-training for job-related purposes, increased employability and flexibility. The major outcome from participation in VET in Australia is an employment outcome, whether it is for obtaining or changing employment, or securing a promotion. Another outcome relates to employers' satisfaction with training provided and its overall impact on business productivity. Indeed, according to a survey conducted by NCVER on employer satisfaction with vocational education and training in Australia in 1997, nearly three quarters of employers in Australia who have employed a VET graduate within the last two years reported an increase in productivity that can, according to them, be attributed to the skills received from VET.

3.5.4 Conclusion

The issues facing Australia are not very different from those currently facing many countries around the world: changing industry structures as a result of trade globalization, the pressure to innovate to remain competitive in the global arena, the changing face of many occupations in the age of technology, an ageing workforce which has to adapt to an increasingly changing and unstable work environment, the increased difficulty to ensure sustainable economic and human development in this type of context.

Increased emphasis is being put on lifelong learning and the need for skills upgrading, retraining and for developing employability/core work skills in Australia's education and training system. In 2003, a national strategy for Technical and Vocational Education and Training (TVET) in Australia for the period 2004-20 lO was issued jointly by the ministers responsible for TVET. The document entitled *Shaping our Future* (ANTA, 2004) sets out the vision and objectives for TVET in the context described above and describes the strategies for achieving them. Australia's experience of vocational education and training shows that having a clear national policy that is stated and disseminated is a key ingredient in the development of a consistent national VET system. The success of Australia's VET system can also be attributed to its framing of national objectives for vocational education and training that can be measured and monitored so that progress can be reviewed.

Australia is increasingly moving towards lifelong learning as the notion that skill acquisition, upgrading and re-learning is gradually becoming a prevailing feature of the country's economy and society, and of its VET system. There has been a shift in the focus of the VET system from the preparation of youth for entry to the workforce (which is considered no longer sufficient in the actual context) to a stronger emphasis being put on core skills formation and development for an adult workforce whose average age is increasing. These persons are faced with changes, including technological changes so rapid and stemming mainly from the globalization of economies, that they can only expect their jobs/occupation to evolve and the need to adapt becoming a constant.

3.6   Africa

3.6.1   Introduction to the South Africa case study

The social, economic and political development of South Africa has been profoundly shaped by policies of apartheid that built divisions and advantaged one population group (whites) both educationally and economically at the expense of other population groups. The logic of apartheid implied that education and training in the country was for long racially segmented, thus resulting m a polarised and unbalanced education and training system with which the new government has had to grapple since the abolition of the apartheid regime and the institution of democracy in South Africa in 1994.

South Africa's economic growth under apartheid was mainly based on its richness in natural resources, namely on minerals-extraction. After 1994, the new government sought to encourage a more export-oriented industrial sector, which led to important developments in the manufacturing and services sectors.

When comparing results of various surveys which have been conducted, it appears quite clearly that for a country of its wealth and resources, South Africa has been under-performing in development terms on both social and economic indicators:

- Human Development Index 2003 (South Africa's rating was down at 0.684 in 2003 compared to 0.741 in 1995 and GDP-HDI rank of--64 which is among the worst in the report)
- World Competitiveness Report 2001 (South Africa ranked at 42 out of 49 countries surveyed)
- African Competitiveness Report 2001 (South Africa ranked 7th behind Tunisia, Mauritius, Botswana, Namibia, Morocco and Egypt) – (Human Science Research Council, 2005)

3.6.2 The educational context of South Africa

Key challenges after 1994 in educational reform include the need for increased competitiveness to face a new global environment and to transform an apartheid•driven educational system into a democratic one whereby access be democratized, new institutions set up and a quality system introduced to include namely new curricula, teaching and learning modalities.

As regards the governance of education in South Africa, it is administered both nationally and provincially. Whereas it was initially planned that a single Ministry of Education and Training would be formed after the first democratic election, this idea was finally abandoned. Education and training in South Africa are thus under the aegis of the Department of Education (DoE) and Department of Labour (DoL) respectively.

Notwithstanding the divisions of authority between education and training m South Africa, there is a strong commitment on the part of the South African government to the integration of education and training. The South African Qualifications Authority (SAQA), which was established in 1995, is a body appointed by the Ministers of Education and Labour to promote the development of a National Qualifications Framework (NQF) for the integration of education and training provision through a common set of qualifications. This body also monitors and audits achievements in terms of education and training standards and qualifications, ensuring thus that the bodies and structures in the VET system are in line with the principles of the NQF and meet international standards. (South African Qualifications Framework, 1995)

In its endeavour to give a new boost to the VET system in South Africa for a more integrated approach, the South African government has been focusing on a number of measures, namely the restructuring and consolidation of the Further Education and Training (FET) sector. The new FET policy in South Africa aims at

building responsive public institutions that will address education and skills development goals for individuals and industry as well. The turning point in the transformation of the Further Education and Training (FET) sector in the post-apartheid period was the release of *A new institutional landscape for public fur/her education and training colleges* report (DoE, 2001) which was the result of investigations and conclusions for the consolidation of the still fragmented FET sector. In a relatively short lapse of time, technical colleges in the country were reduced from 152 to 50 through a merging process that aimed at transforming these colleges into autonomous, efficient and market-led institutions while, at the same time, focusing on learning, personal development and citizenship. However, whilst the merger process has happened, the sector still has a long way to go in terms of improving the quality and relevance of curricula and programmes offered. Although a highly desirable and clear policy vision is still missing in the FET sector, the government has signified its intention to capitalise and pay more attention to this sector in the next five to ten years to strengthen its capacity.

The NQF was reviewed in an attempt to balance the interests of both the Departments of Education and Labour in 2003. At the same time, stakeholders expressed concerns about the complexity and bureaucracy around the system which was more constraining than enabling the achievement of the goals of the system. (HRSC, 2005)

3.6.3 Trends in core work skills in South Africa

Skills development in South Africa has been identified as a major issue by the new democratic regime. In his statements on a national development vision for South Africa on his accession to presidency in 2004, Thabo Mbeki described skills as means to achieve international competitiveness as well as a means to reduce poverty, hence the gap between the 'two nations' which has characterised South Africa due to its uneven historical development. Since 1994, significant attempts have been made to upskill the South African working class and to improve access to learning. (HRSC, 2005)

The building of an inclusive and effective skills system, with in-built flexibility and mobility has thus been a major challenge for the new post-apartheid government since its inception. A National Training Strategy Initiative (NTSI) was issued in 1994 and provided much of the basis for the issue of a Green Paper on a Skills Development Strategy in 1997 and the setting up of a National Skills Development Strategy (NSDS) in 2001. A levy-grant system aimed at involving employers more in the training of their workforce, new Sector Education and Training Authorities (SETAs) and the introduction of learnerships (a complex contractual agreement for a fixed period between the learner, the provider and the employer, a model that followed the apprenticeship model) were some of the main recommendations in the Green Paper.

A National Skills Authority (NSA) was created to act as a high-level institution for the coordination of skills development at national level. At sectoral level, the new SET As were given the responsibility for evaluation of workplace skills plans (which is a requirement for enterprises claiming back grants against the levy system) and the development of sector skills plans, for developing and registering learnerships, for quality assurance in training provision, and for administration of the grants received through the training levy. Interestingly, one fifth of the total levy income is dedicated to strategic and developmental interventions, including a focus on skills development for small, medium and micro enterprises.

Following the recommendations of the Green Paper, a Skills Development Act came out in 1998. It established a new legal framework for the notion and system of learnership to expand and move beyond the traditional apprenticeships which had been quite narrow in their approach. It also made provision for the development of flexible short skills programmes directly linked to occupations and leading to credits that could be combined towards a qualification. The 2001 National Skills Development Strategy (NSDS), through which the Department of Labour attempted a skills revolution in South Africa by setting targets for the

skills development system, was reviewed in 2005 to address more specifically the issue of building bridges between education and training for an integrated system. Indeed, concerned about the negative impact of a poor integration of education and training on skills development in South Africa, the government has thus been attempting to strengthen the skills system through some measures that are specifically oriented towards human resource development in the country. namely:

- A 'cluster' system was introduced to enable departments in key areas (e.g. social or economic policy) to regroup themselves and plan short to medium•term strategies.

- A Human Resources Development Strategy (HRDS) was elaborated in 200 l with the objective of reducing the mismatch between demand and supply of human resources. This was proposed to be achieved through the provision of a baseline on demand and supply issues in human resources development and the development of a set of indicators against which progress in the spheres of education and training were to be measured by 2005/06.

- State of skills reports have been published by the Skills Development Planning Unit set up in 1999 by the Department of Labour to provide update information on the state of skills and skills development needs for South Africa.

In the 2003 State of Skills report, some key features of the South African (SA) labour market were given as (State of Skills in South Africa 2003, Department of Labour, South Africa, 2003):

- the challenge of unemployment (there had been an increase in the number of unemployed from 2.5m in 1997 to 4.8m in 2002)

- the profile of the unemployed (youth unemployment continued to be a striking feature of the labour market in South Africa, the 15-34 year age group representing 71 % of the unemployed according to a labour force survey in 2002)

- the proportion of African workers with relatively low educational levels remained low
- the equity profile of the labour force showed that African workers remained underrepresented in certain high skill occupations
- skilled and semi-skilled occupations had become dominant in the make-up of the South African workforce, as had been the case in many other countries.

The 2003 report laid emphasis on the fact that current skills needed in the SA labour market were not identifiable only in relation to occupations. but also in the areas of core/basic and generic skills required for individual development and to enable workers to contribute more meaningfully to their organizations. In that respect, some of the most relevant generic skills per sector (primary, secondary and services) were identified by the SETAs. The analysis showed the following sectoral trends:

- The demand for basic skills is high in all sectors and include namely Adult Basic Education and Training (ABET), numeracy and IT skills
- There is also an important demand for generic skills across sectors, like communication, working with others, collecting and interpreting information. In the secondary and tertiary sectors, there is also a high demand for general management, supervisory, leadership and financial skills.

Since 1999, the National Productivity Institute (NPI) in South Africa has been transformed to play a major role in South Africa's national strategies and priorities, namely in terms of skills development. This institution is mandated by a tripartite drawn from government, civil society and business to enhance the productive capacity of the nation. It reports to the Minister of Labour. The NPI has designed and implemented several programmes to contribute to promote a productivity culture in the country, ranging from awareness and understanding programmes to skills development programmes. The *6M Business Simulation* designed by the NPI to raise awareness of basic business principles among employees at all levels has been very effective in increasing employee

commitment. The originality and specificity of the programme lies in its simplicity. It makes use of a very participative approach and visual aids (models) to reach out to all types and levels of audiences, even the barely literate. Other basic worker education programmes offered by the NPI include productivity awareness and quality improvement.

The Youth Development Trust (YDT) of the Youth Development Agency is also actively involved in the promotion of life and core skills development, more specifically to address the issue of high youth unemployment in the country, namely among graduates of the higher education system. With the collaboration and sponsorship of the private sector, the *Make a Connection* (MAC) programme, which prepares unemployed graduates for the world of work by building life/core skills necessary to find a job and succeed in the workplace, has been implemented. The skills developed include job searching, personal financial management, using ICT, entrepreneurship, building self-confidence, communication, teamwork and problem solving.

3.6.4 Conclusion on **the** South Africa case study

The government of South Africa has set bold and ambitious objectives in terms of skills development as a tool for social and economic development in the country. It is obvious that there is no quick fix solution to the important skills shortages in key economic sectors with which the country is faced. It will take time and considerable effort to fill in the skills gap which has been a feature of the country as a result of pre-apartheid government policies. However, the series of measures that have been taken to improve the status of skills in South Africa since it has acceded to democracy in 1994 demonstrate that there is a will and commitment to promote skills development as a national development priority. Core skills development certainly plays a key role in this respect as South Africa faces the challenge of raising the skills profile of its labour market which is currently characterised by high unemployment levels, and the low educational levels of the workforce.

3.6.5 Introduction to the Botswana case study

Botswana is perhaps mostly known on the African continent for its economic success. The discovery of diamonds in the country contributed considerably to its economic development. However economic development has not been simultaneously balanced by social development. Botswana is quite lowly ranked in the Human Development Index, classifying itself in the medium human development range. Its challenges lie namely in the control of HIV/AIDS which is rampant in the country, the reduction of inequalities, of poverty and rising unemployment.

Botswana's population is relatively small, around 1.7 million for a country of size 581730 square kilometres. The political system is founded on a multi-party democracy. However, since the country got its independence from Britain in 1966, a single party has been in power, the Botswana Democratic Party (BDP). The economic strength of Botswana has allowed it to develop the necessary infrastructures for longstanding and strong economic activity.

Considered as the 'engine of growth' in the country, diamond mining, though it is still the backbone of the economy, has been declining in terms of its contribution to the GDP as Botswana faces and tackles the challenge of economic diversification. This can be observed through the expansion of its services sector, namely international financial services and tourism, and the promotion of private• sector manufacturing companies. Economic diversification, employment creation and poverty alleviation have been identified as the key challenges in Botswana's Ninth National Development Plan 2003/4 (HRSC, 2005). This has significant implications in terms of skills development in the country and necessitates an expansion and refocusing of its national skills development system.

3.6.6 The educational context of Botswana

Since it has acquired its independence, Botswana has been focusing on reviewing and improving its education system to ensure that adequate educational facilities are made available to the entire population. Considerable progress has been made in that sense to increase access to education at all levels as opposed to the restricted access to education to only a few privileged individuals which had prevailed under the colonial regime.

A 10-year goal of ensuring every Botswana child has access to basic education through the provision of schools that cater for children from Standard One to Junior Certificate (ten years of education) was set in 1995 following the *Revised National Policy on Education*. Beyond this, the revised national policy makes provision for a special focus to enable every child to have universal access to education from primary level to secondary and tertiary levels to reach the dream target of 100 percent by 2016. The year 2016 features prominently in most Botswana programmes, and education is one of the priorities listed in preparing the country to "own" its future. The long-term vision for the country in terms of education, as encompassed in the Vision 2016 Report, is to go beyond basic education to create an educated and informed nation by 2016.

"By the year 2016, Botswana will have a system of quality education that is able to adapt to the changing needs of the country as the world around us changes."
(Government of Botswana, 1997)

3.6.7 Trends in core work skills in Botswana

Alongside its endeavour to provide a solid foundation for Botswana's education system to develop, the government also feels the need to address the challenge of increasing the number of more highly educated and adequately skilled people to meet job market demands and reduce dependency on foreign labour. In response to the issue of shortage of skilled manpower which Botswana is currently

experiencing, the government is focusing on a better aligning of the country's education system to its actual socio-economic needs. Adequate preparation for the world of work is as well one of the central goals of the curriculum of the national education policy. To enable Botswana to move from a traditional agro-based economy to an industrial economy, greater emphasis is being laid on the development of human resources.

The VET system in Botswana is relatively young. There started to be a boost in the system when the country accessed to independence. A range of institutions ensure the provision of technical and vocational education and training (TVET): namely the University of Botswana (previously Botswana Polytechnic) which delivers engineer degrees, diplomas and certificates, Technical Colleges (TCs, formerly Vocational Training Centres) which deliver National Craft Certificates (NCCs) and the Botswana Technical Education Programme (BTEP), Botswana Brigades which provide certificates in a variety of trades, and private training institutions.

TVET policy and legislation in Botswana is underpinned by Vision 2016. The focus is on the empowerment of citizens to become productive and the creation of a pool of entrepreneurs who will contribute to boost up employment through the establishment of new enterprises. Vision 2016 also makes provision for alternatives to purely academic study. The role of TVET is thus also to provide adequate vocational and technical training options during and after secondary school.

Alongside Vision 2016, other policies regarding education and training in Botswana address the specificities of TVET, namely the Revised National Policy on Education (RNPE) and the National Policy on Vocational Education and Training (NPVET). In 1994, the RNPE proposed the development of an integrated national training system and the establishment of the Botswana Training Authority (BOTA) which is the statutory body responsible for the coordination

and promotion of vocational training in Botswana. The BOTA builds on its partnership with the private sector (well represented on its board) to address the challenges of vocational training in Botswana.

A series of key TVET challenges have been identified in the mid-1990s namely: greater access and equity to TVET for secondary school leavers, women and disabled people; quality, relevance and focus of the system to respond more effectively to the current needs of the labour market as well as the potential need of the economy for training; ensuring that TVET which has long been looked down by the community as a "second rate educational option" becomes a viable and widely accepted and trusted option; articulation, mobility and integration of TVET with the overall human resource development system to come up with a nationally agreed framework; and internationally accepted learning outcomes and competencies, and adequate financial incentives to give a boost to the sector.

Among recent developments in the TVET sector in Botswana, there has been an attempt to promote a new curriculum designed to provide core work skills that employers are looking for their modern workforce since 2001. The Botswana Technical Education Programme (BTEP), which is provided by the Gaborone Technical College (GTC), is one of the key elements of Botswana's response to globalisation challenges. The specificity of the BTEP is that it is quality assured with the Scottish Qualifications Authority (SQA). This type of partnership with a reputed external organisation is a clear signal of the commitment of the government to go in the direction of education and training systems able to deliver to world standard.

At the same time, HIV/AIDS is considered as the primary developmental challenge currently facing Botswana. According to a UNAIDS report in 2002, it is estimated that Botswana has the highest rate in the world with a prevalence of HIV/AIDS at 39 per cent of those aged 15 to 49 years. This is likely to have a significant impact on education and skills available, both direct and indirect. Not

only is there a social cost attached to the increasing number of orphans as a result of the death rate due to HIV/AIDS, demographic projections estimate that the school-age population will drop considerably, perhaps 30 per cent more than it would have without the prevalence of AIDS, by 2010. This implies direct costs of care and treatment as well as indirect costs to the economy in terms of the drain on skilled human resources and repercussions on skills training in Botswana.

3.6.8 Conclusion on **the** Botswana case study

In Botswana, the VET system can be said to be relatively young and evolving. Policy-wise, there are various initiatives that are being put into place to come up with a more integrated and coherent system that places the development of core work skills as a priority. However, in spite of its overall economic success, the country is faced with a set of challenges affecting its VET system and skills development. This is what is namely motivating the need for a process of reflection and reform in Botswana.

4.0 THE MAURITIAN SITUATION

4.1 *Education and Training framework*

The Government of Mauritius seeks to position the island as a knowledge hub to meet the needs of and exigencies of an increasingly competitive, knowledge-based and globalized economy. It has been recognized that the distinctive assets of countries, especially of countries with no or limited natural resources, are the least tangible and more valuable and lasting assets like knowledge, skills, innovation and creativity of the people. The sustainability of the wealth of nations is being more and more linked to the process of building up countries' capacity by investing in the knowledge base and in the development of existing human resources.

The Industrial and Vocational Training Board was set up in April 1988 with the following objectives:

- to advise the Minister on matters relating to training
- to monitor the needs for training in consultation with relevant authorities
- to administer, control and operate training schemes
- to provide for, promote, assist in and regulate the training or apprenticeship of persons who are or will be employed in commercial, technical and vocational field.

In 1989, regulations were made for the setting up of the National Training Fund, now cited as IVT (Imposition of Levy) Regulations 1989, and these were amended in 2000. Every employer has to pay a levy in respect of every employee who is an insured person and the levy is 1% of the remuneration payable to the employee.

In 2000, a Ministry of Training, Skills Development, Productivity and External Communications was set up in Mauritius with the vision of creating a nation having a highly adaptable, versatile and up to date labour force. A set of unique challenges for the development of human resources in Mauritius faced this new Ministry, namely that of driving strategically human resources towards a knowledge and skills-based society.

Between 2000 and 2001, at the request of this Ministry, several rrussrons on training options in Mauritius were conducted by the International Labour Office (ILO). Among the observations that were made by the ILO, it came out that in Mauritius, the Vocational Education and Training (VET) system had developed to suit mainly low value-added forms of production, with institutional structures such as the Industrial and Vocational Training Board (IVTB) being designed to support the immediate needs of employers. Such issues as widespread unemployment or the wider implications of employability of the Mauritian labour force had not been catered for by the system.

In December 2000 an ILO consultant, Mr Anthony Twigger was requested to develop a national training strategy for Mauritius. The Terms of Reference for the consultant were:

- To assist in developing a national training strategy for Mauritius in line with the national development strategy.
- To examine critically the present mismatch between the supply and demand for labour and advise on how to identify the manpower requirements for the different sectors of employment for the next five years.
- To advise on the most appropriate methodology for assessing training needs.
- To look into the present organisation of training activities and advise on the most effective means for ensuring coherence among training providers, both public and private, with a view to eliminating duplication and waste.

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- To advise on the setting up of modem mechanisms geared towards the improvement and monitoring of training with a view to ensuring its effectiveness.

The resulting report (ILO, 2001) contained three themes each with one or more objectives as follows:

1. *Theme I: Balancing economic demand and human resource supply*

Objective A1:   to be instrumental in setting up an Economic/Human Resource Development Body to ensure the correct balance between economic, social and skill demands.

Objective A2:   to subject its training activity performance to regular benchmarking analysis and to be instrumental in setting up similar benchmarking approaches relating to national productivity and competitiveness.

Objective A3:   to extend the evaluation work currently undertaken by the IVTB to include random assignment and quasi-experiment assessment exercises and to ensure that all new programmes, particularly those aimed at youth, have built-in assessment procedures.

Objective A4:   to raise awareness of knowledge management in Mauritius, to be instrumental in introducing knowledge working in receptive organisations, and to overcome some of the barriers which prevent knowledge sharing.

Objective AS: to raise awareness of high performance working approaches and to be instrumental in getting at least one public sector and one private sector organisation to adopt such approaches.

2.   *Theme 2 – Maximising employability and human resource mobilisation*

Objective BI: to ensure labour force employability and human resource mobilisation through: (i) being instrumental in establishing an appropriate human resource environment in Mauritius; (ii) being instrumental in achieving national awareness of optimum human resource utilisation procedures; and (iii) ensuring coordinated human resource development activities which match supply with demand for skills.

3.   *Theme 3 – Coordination linkages between public and private sector education and training*

Objective CI: to develop and establish a network of effective linkages between education and training and public and private sector organisations so that a flexible training system can be achieved which is responsive to economic and social demands, particularly in small and medium enterprises.

Following the "Twigger report" A Task Force on the National Integrated Training Strategy was set up and a series of education and training reforms was implemented. This Action Plan had the overall goal of providing the necessary guidelines and parameters for the achievement of "Lifelong learning for Employability and International Competitiveness" in the country. Among the different issues which were discussed, came out the need to create a top-level mechanism that would promote human resource development in line with national economic and social objectives, stimulate a culture of training and lifelong learning at all levels for increased employability and productivity, and provide the necessary human resource thrust for the successful transformation of the economy into a Knowledge Economy.

The first step involved the creation of the Mauritius Qualifications Authority (MQA) in 2001 as the regulatory body for training.

The objects (MQA, 2004) of the Authority are:

- to develop, implement and maintain a National Qualifications Framework (NQF). The NQF objective is to rationalize the existing certification systems. The NQF consists of 10 levels covering qualifications from Primary Level (level 1) to doctorate ((PhD] level 10).
- to ensure compliance with provisions for regulation and accreditation
- to ensure that standards and qualifications are internationally comparable.

The Human Resources Development Council (HRDC) was set up in August 2003 following the recommendations of the Twigger Report and the Task Force on the National Integrated Training Strategy.

The functions (HRDC, 2004) are to:

- advise the Minister on the formulation of human resource development policies and strategies;
- establish linkages between the education and training systems and the work place;
- provide a forum for constant dialogue and consensus building among stake holders on all matters related to human resource development;
- take appropriate measures to reduce the mismatch between demand and supply of human resource;
- commission research in the field of human resource development;
- encourage employers to invest in the training of their employees with a view to upgrading their skills and acquiring new skills;
- initiate and monitor studies on the relevance and impact of training activities in relation to the socio-economic development of the country;

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- promote knowledge management and bench marking at enterprise and national levels with a view to improving the effectiveness of human resource development;

- identify and monitor the implementation of appropriate skills development and apprenticeship schemes and programs;

- monitor the participation of employers, employees and job seekers in training schemes and programs;

- develop schemes for retraining and multi-skilling;

- provide incentives for training institutions to acquire and upgrade their equipment and facilities;

- manage the National Training Fund and

- perform such other functions as are necessary to further the objects of the Council.

Eleven medium term strategic objectives were developed in the Strategic Plan of the Council, among which figures the promotion of core employability skills for the Mauritian workforce.

Strategic objectives	Actions/Initiatives
6. Promote employability skills including literacy and numeracy in the workforce	• Encourage regular review of existing curricula at level of TVET schools and institutions including in-house training centres • Develop a basic Numeracy/Literacy training programme • Encourage NGOs to run Numeracy/Literacy training • Use of audiovisual facilities to promote Numeracy/Literacy training programmes
7. Promote attitude training at all levels	• National campaign on desired attitudes and core skills

4.2   *The way forward for a Mauritian core skills strategy*

Even if an integrated approach to core skills development m Mauritius, as underpinned by the national integrated strategy for human resource development, still has to be worked out, training in basic education and core skills have been a recurrent feature of the socio-economic landscape of the country since its accession to independence in 1968.   Various public, private and non-governmental organisations and networks, e.g. !VTB, Regional Training Centre (RTC), Societe pour la Promotion des Entreprises Specialisees (SPES), CARITAS, Ledikasyon pu Travayer (LPT), have been conducting such training, mostly on an ad-hoc basis at community or sector levels.

As from July 2005 the Ministry responsible for training in Mauritius is the Ministry of Education and Human Resources and the motto of the new Government is "Putting people first". It is thus expected that the Government will create an appropriate environment for the development of human resources in general.

Currently there are several projects on literacy in Mauritius and the !VTB has introduced core skills into its Foundation Courses. The HRDC is committed to the development of core workplace skills and is working towards a national project. In order for Mauritius to develop a national project it will be necessary to raise awareness of the need for such training and there will need to be a commitment from employers as well as incentives provided by Government.

The Regional Training Centre (formerly Robert Antoine Sugar Industry Training Centre) has undertaken a collaborative pilot project with HRDC for the pilot testing of a core skills project developed for a Mauritian agricultural target audience. This involved training of a group of trainers (between 25 February and 3 March 2004). In all, nine persons have followed and completed the train-the• trainer programme which was conducted by Mr Gerard Hommage, France, one of

the key persons involved in the design of *ARL,* with the collaboration of Mrs Genevieve Serre, an experienced *ARL* trainer from Reunion Island. Following this, four pilot groups of IO trainees were selected from four sugar estates. Each group was provided with 15 hours (3h/day over 5 days) of training at the level "*Decouverte* ".

After this first level of training the course contents and methodology are to be revised in the light of suggestions from trainers and observers. Training of groups of participants that successfully completed the first course will be undertaken in 2006 at a second level: *"Approfondissement"* (again 5 days /group). An evaluation of the pilot project will be undertaken by the HRDC and the project will then be extended to further groups.

Phase 2 of this MRC project, as described in Section 2.2.2, needs to be implemented to constitute an adequate pool of resources, including resource persons able to adapt and deliver core skills training to target audiences in need.

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