

Future Planning: The Implications of Low Fertility and Rapidly Ageing Population on Educational Planning in Barbados

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Abstract:

This paper highlights the problem of population ageing and decline in Barbados within the context of educational planning. The Barbados Human Resource and Development Strategy 2011-2016 Developing National, Institutional and Human Capacity for Sustainable Growth will be evaluated as a response to this problem. Strategic Pillars 2 and 3 of the Barbados Human Resource Development Strategy 2011-2016, which encompass the development of a National Qualifications Framework and a Demand-Driven Educational System are the primary focus of the assessment as a response to the identified concern.

This strategy places emphasis on promoting lifelong learning, expansion of the provision and quality of technical and vocational education and training, and improvement of participation in adult and continuing education amongst its other priorities.

The planning model of Strategic Planning with Anticipatory Framework is used to evaluate the projects through the three stages of Strategic Planning as asserted by Chang (2008):

- I. Sector Analysis*
- II. Policy Design*
- III. Action Planning*

However, the findings of the analysis indicate that while the Sector Analysis and Policy Design of this educational plan were well executed, the Action Planning component was not thoroughly strategized which would hinder efficient implementation of the plans. Recommendations for improvement are indicated to alleviate this deficit.

Key words: educational planning, population ageing, Barbados, technical and vocational education, strategic planning, future planning

The Relevance of Ageing to Educational Planning

Educational systems are concerned with providing educational opportunities to meet the human resources needs in a specific society. The successful execution of this, which is manifested in economic growth and human development of a country, speaks to the efficiency of said system. Angel Gurría, Secretary-General of the Organisation for Economic Co-operation and Development (OECD), unequivocally affirms that, “Education is the key factor in forming human capital. People with better education tend to enjoy higher incomes – a benefit that is also reflected in improved economic growth... Raising human capital raises health levels, community involvement and employment prospects.” (Foreword 2007, 3). The investment in education by the state to provide opportunities for its citizens to acquire knowledge and skills, health and values are the very dynamics of the human capital theory (Becker 1993). In Barbados, the educational system is driven by the advancement of the human capital theory which has led to great social and economic developments in the country over the past forty years of their post-colonial experience (Downes 2001; Jones 2010). The real Gross Domestic Product (GDP) of the island grew from Bds\$316m (US \$158.1m) in 1960 pre-independence to Bds\$954m (US \$477m) in 1999, thirty-three years post-independence. This advancement, despite three periods of major decline due to oil price increases and recessions, was partly due to investment in education and training; and health and nutrition following the epithets of human capital theory as documented in descriptive studies by Worrell 1982; Howard 1989; Wickham 1997; Blackman 1998; Downes and Carter 2000, (Downes, *Economic Growth in a Small Developing*

Country: The Case of Barbados, 2004). Further, Barbados is presently the highest ranked country in the Latin America and Caribbean region (LAC) with respect to the United Nations Development Programme Human Development Index (UNDP, HDI).

Educational planning is driven by planning for the future. Educational planners are not content with knowing the current situation; they are interested in getting an accurate picture of the problems to be encountered in the future. Specifically, they must know how the population will change in future years. As a result, population changes have a direct impact on educational planning.

Additionally, when demographic changes such as population ageing create a condition where the majority of the active working population are older persons, as a result of the effect of low fertility rates and the growth of the ageing population of baby boomers post-war born between 1947 and 1966, it behoves educational planners to make greater investments in human capital. This can be achieved by improving the education and employment prospects of the current generation of young people who will thus become the future generation of the older working persons.

The Second World Assembly of Ageing, held in Madrid, Spain in 2002, addresses ageing as not simply as an issue of social security and welfare, but of overall development and economic policy. As the goal of education, specifically in a developing country such as Barbados is concerned with development, it is of the utmost importance to address the issue of ageing population which is facing the country, through the creation of appropriate educational policy. This argument is supported by the United Nations Population Fund (UNFPA), who advocates that the challenge of ageing population and low birth rate can be addressed by the education sector in advancing human capital by investing in young people today to improve the lives of future generations of older persons.

Flexible employment, lifelong learning and retraining opportunities should be promoted to facilitate not only the future elderly but also the integration in the labour market of current generations of older persons (UNFPA and HelpAge International 2012).

The problem: Barbados in Context

Low birth rate and ageing population projection:

The elderly population is classified by the PAHO Survey on Health, Wellbeing and Ageing in Latin America and the Caribbean, 2000 as those persons who are between the ages of 60 and older (Pan American Health Organisation, University of the West Indies 2005). This is further delineated into the young-old (60 to 75 years) and the oldest-old (75 years and older).

In 2000, a significant number of young-old people in Barbados were recorded and there was a substantial increase in those just below this threshold, (see figure 1). This indicated a future trend of increased pensioners in as few as ten years and fewer potential workers to support the pension scheme due to a decreased number of younger persons in the workforce caused by declining replacement fertility rates. As a result, this has bolstered the creation of new social security policy by government in 2003 of an increase in the retirement age. The retirement age will be increased further in future years to counteract the dramatic effects of the falling population due to ageing population and falling birth rates (National Insurance Office, Barbados 2005).

According to PAHO (Pan American Health Organisation, University of the West Indies, 2005) using population statistical data, in the year 2000 the proportion of elderly in Barbados was 18.5% of the population, (see figure 1). In 2012, there is the advent of the ageing of the post-war baby boomers, the first of which will be aged 65, which contributes to the accelerated

ageing trend due to increased higher rates of the oldest old which can be accredited to excellent health care.

Barbados is classified as being at an advanced stage of demographic transition with an increase in the proportion of older persons and a decrease in the proportion of younger persons in the population as reported by Schkolnik et al. 2008 (Quashie 2012). While by 2050 roughly 26% of the Caribbean population will be 60 years and over, Barbados is expected to have the largest proportion of aged persons in the Caribbean (Quashie 2012).

This is further substantiated through the use of more recent population data on birth and mortality rates in the island which project that, by as early as 2025, 31% of the Barbadian population will be comprised of the elderly, (see figure 2), as currently only 18% of the population are aged 0-14 years (Commonwealth Consortium for Education 2012)

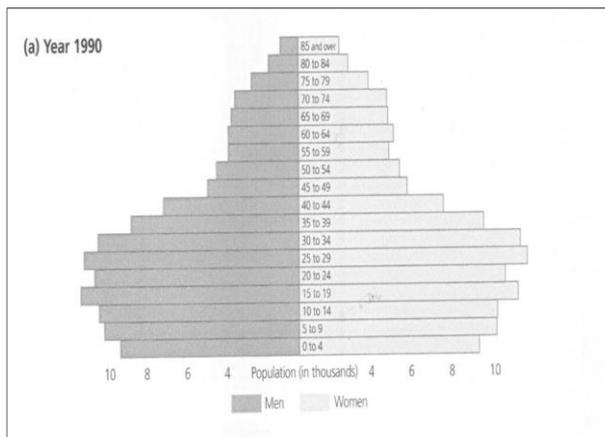


Figure 1 – Population structure by age and sex in Barbados, 1990 (Pan American Health Organisation, University of the West Indies, 2005)

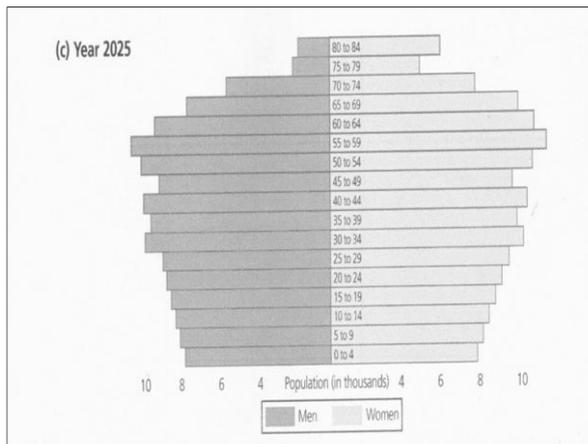


Figure 2 - Population projections by age and sex in Barbados, 2025 (Pan American Health Organisation, University of the West Indies, 2005)

The above graphs show the drastic demographic changes in the population. It clearly delineates that in 1990 the Barbadian population was comprised of mainly younger persons. However, due to below replacement level fertility rates in the population, the projected pyramid has a top heavy perspective which unmistakably illustrates a population with more aged persons than young persons.

Implications for Educational Planning

In these circumstances investment in education becomes even more essential to the future of the country. Barbadians will need to earn more and work longer in order to be more independent in old age and not become a burden to society partially made up of a lower proportion of younger workers.

A comprehensive approach to this population issue through education was noted at the Expert Group Meeting on Policy Responses to Population Ageing and Population Decline of the United Nations Secretariat Population Division. Through the introduction of lifelong learning and training of multi-skilled workers, the consequences of population ageing and decline can be minimised (Zoubanov 2000). The solution is

promoted by Germany and the Republic of Korea and endorsed by the small island developing states of The Bahamas and Trinidad and Tobago whose situation mirrors that Barbados. Correspondingly, the One Bermuda Alliance in the island of Bermuda has embraced lifelong learning as a solution to this population trend, noting that there is greater longevity in the number of seniors with a decline in the number of workers shouldering the cost of supporting them (Bell 2012). Congruently, governments worldwide are introducing lifelong learning policies to help older workers keep up with the increasing demands of the economy as well as to train young people to embrace knowledge and be retrainable at any stage in their career in order to be ready for the effects of globalisation and ageing which is a lifelong process. This approach is reiterated by the International Institute of Educational Planning who suggest implementation of technical and vocational skills development based on individual country context. Moreover, achievement of Goal Three of the Education for All (EFA) goals* which places emphasis on education for young people and adults in the context of lifelong learning adds impetus to the implementation of lifelong learning through Technical and Vocational Skills Development (TVSD) (King & Palmer 2010; UNESCO 1995-2012).

The intervention by the government

In 2010, the Government of Barbados through the Ministry of Education and Human Resource Development in collaboration with the Ministry of Labour created the Human Resource Development Strategy 2011-2016. This Strategy which acknowledges the emphasis that the Government places on the development of human and social capital through the

* Goal Three: 'Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes.'

investment in education and related services, seeks to increase the number of secondary school leavers with appropriate knowledge, skills and competencies to successfully enter the job market or an entrepreneurial economic enterprise.

Through this Strategy the government places emphasis on, promoting lifelong learning, development of a seamless educational system, bridging the gap between academic and technical skills, multiple entry and exit points, provision of second chance education and opportunities for youth, expansion of the provision and quality of technical and vocational education and training, and improvement of participation in adult and continuing education.

The Human Resource Development Strategy highlights several challenges which have led to its development – the major ones being the effect of globalisation and the changes in the labour market. It is noted that the exposure of the economy to globalisation has resulted in changes to work place practices with new entrants to the labour market having to change jobs more frequently than in the past and having to upgrade their skills or even retrain in order to sustain employment. The changes in the labour market are such that unemployment rates are rising and school leavers will have less opportunity to gain employment and will have to be innovative and rely on skills in order to create their own job opportunities. The changes in the job market have resulted in fewer job openings for the younger cohort of the population on the demographic changes of population ageing as a factor which affects this variation.

The Strategy which is based on international best practice and adopts practices from Canada, Trinidad and Tobago and other countries embraces lifelong learning and strengthens links between education and the world of work. It is comprised of four main components: educational attainment, workforce skills; population health and employment policies. Further, the main outputs of the Strategy are: an effective

enabling environment for human resource development; an improved internationally recognised national qualifications framework, a demand-driven education and training programme, a rationalised knowledge management system, and enhanced research to improve innovation, and entrepreneurship capacity. These main outputs are the five pillars of strategic intervention on which the HRD Strategy stands. The two pillars which will be examined as a response to the problem identified will be pillars two and three, Development of a National Qualifications Framework and Developing a Demand-Driven Educational System.

Theoretical framework for analysis

Strategic Planning with Anticipatory Framework:

Educational administrators must be able to anticipate the future; that is, be able to visualise how choices made today will influence tomorrow's educational practice. The essence of planning is to make present decisions based on knowledge of their future impact. (Cunningham 1982).

The Barbados Human Resource Development Strategy will be evaluated with the above adage in mind in order to evaluate its merits and weaknesses as a sound educational plan for the future of the country.

What is Strategic Planning?

Strategic planning is the effect of making decisions in the present which will positively affect the future. When utilising futures research alongside strategic planning, planners seek to understand the possible changes in the society and make plans to counteract any negative consequences. As a result, the planning process is increased in its effectiveness. (Morrison, Renfro, & Boucher 1984).

Statistical data is crucial in strategic planning as "demography remains one of the fundamental sciences

underpinning the work of educational planners”. This will enable ‘the planner’ to make relevant projections to inform future educational planning (Caillods 2003).

Strategic Planning with futures outlook:

Morrison, Renfro, & Boucher (1984) promoted the above framework and hence have reported that “When augmented by futures research, contemporary strategic planning differs from traditional long-range planning in that it adds a special emphasis on discerning and understanding potential changes in the external environment, competitive conditions, threats, and opportunities... It is an approach that gets key administrators "thinking innovatively and acting strategically, with a future in mind" (Keller 1983). Modern strategic planning recognizes that organizations are shaped by outside forces at least as much as by internal ones. In particular, it represents an effort to make this year's decisions more intelligent by looking toward the probable future in coupling the decisions to an overall institutional strategy.” (Keller 1983, 182).” As echoed by Chang (2008), planning is done based on the outcome which you want to achieve and not the input which you have.

Human Resource Development Strategy Analysis

Introduction

Of utmost importance is that a plan is the final result of a process. This process is strategized through the **inputs**, **processes**, **outputs** and **outcomes** of the educational system. Throughout this process:

1. the relevance of the proposed **input** for addressing future needs is evaluated
2. the **outputs** are strategized through the creation of a framework for implementation
3. **the processes** are the analysis of the relationship between the outputs and inputs to produce

implementation strategies which will work in order to achieve the desired **outcomes**

Throughout the process the necessary **financial expenditure** is considered and relevant budgets created to realise the plans.

In short, strategic planning is concerned with accomplishing a final mission. In order to complete this mission, goals, objectives and operations must be identified.



Figure 3 – Strategic Planning Pyramid (created by Applewhaite, 2013, adapted from Oketch, October 11, 2012)

These components are best operationalized through the ‘Three Stages of Strategic Planning: I. Sector Analysis; II. Policy Design; III. Action Planning (Chang, 2008). The Barbados Human Resource Development Strategy 2011-2016 will be evaluated under these headings which correspond to the strategic planning pyramid (see figures 3 and 4).



Figure 4 – Relationship between Strategic Planning and Strategic Pyramid Components

Analysis

I. Sector Analysis

Boshoff, (1989) advocated a situation audit to include a SWOT[†] analysis which was to consider the strengths and weakness of the educational system – the internal environment, and the opportunities and threats present in the society as a whole which represents the external environment. This would allow the planning team to consider alternative futures in order to conceive the mission which would create the necessary change.

Similarly, Chang (2008) advocated a critical analysis of internal and external aspects of the education system. This would permit a review of how the system functions to meet people’s needs and economic demand as well as an examination of various driving forces behind the education system – the economic condition, socio-demographic situations and developments. This would lead to the identification of critical issues, challenges and construction of remedial actions and policy provisions.

Within the Barbados Human Resource Development

[†] SWOT is an acronym for Strengths, Weaknesses, Opportunities, Threats

Strategy 2011-2016 the document suggests that a sector analysis did take place and included the above elements.

Internal environment

The document outlines the evaluation of the internal environment in the commitment that the Government of Barbados has made by placing great emphasis on the development of human and social capital through a significant financial investment in education in the past which has led to great social and economic growth for the country. This is outlined below as per the Strategy document:

Over the 44 years since independence, Barbados has been transformed from a low-income economy dependent on sugar production into an upper-middle income economy that, while relying heavily on tourism and financial services, has been resilient in the face of external shocks. With a Gross Domestic Product of USD 3.4 billion (at current market prices), a population of about 275,000 and a per capita income of USD 12,455 (over USD 18,000 on a Purchasing Power Parity basis) poverty is amongst the lowest in the Caribbean.

Social indicators have been strong by Caribbean standards with the 2009 UNDP *Human Development Report* ranking Barbados 37th among 190+ countries. The Government of

(Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), p. 8)

The Government continues to invest heavily in this area in order to continue to improve the lives of the people of Barbados and its continued social and economic development: “The Government is committed to increasing the number of secondary school leavers with the appropriate knowledge, skills, and competencies to successfully enter the job market or to embark on an economic enterprise” (Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), 7).

External environment

The Strategy documents the analysis of the external environment through examination of the economy, changes in the labour force, the impact of globalisation and the deficiencies in the current educational system such as the need for training

in specialised skill areas. It is clear that these elements have been identified from a well-constructed SWOT analysis and have hence motivated the formulation of the Strategy as presented below:

“There is a focus on preparing a labour force that can meet the changing demands of an open economy increasingly impacted by dynamic external forces. Further, the government is cognisant of the growing need for specialised skills in emerging areas such as offshore financial and business development, tourism management, and agro-processing” (Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), 7).

The country's placement on the OECD 'white list'⁶ for its transparency in for international tax jurisdictions has helped to sustain offshore business activity. It is expected that foreign direct investment and other private capital flows will recover to the pre-financial crisis level. According to the World Economic Forum's *Global Competitiveness Index*, Barbados remains in the world's top 50 at 44th in the 2009-2010 ranking, which gives it the top ranking among CARICOM states. It scored well in terms of good institutions (20th) and infrastructure (21st) as well as higher education (26th). However, the *World Competitive Report* notes that Barbados suffers from low labour market efficiency, poor work ethics, and low labour productivity.

The increasing exposure of the economy to globalisation has resulted in changes in work places practices, organisational structures, and cultural attitudes. New entrants to the labour market and those in it cannot necessarily expect to remain in the same job for the rest of their lives. People will have to change jobs more frequently than in the past and thus will require upgrading or retraining. In recognition of this change, the introduction of a

(Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), p. 9).

Identification of critical issues and challenges

The Strategy highlights a number of challenges and needs which are facing Barbados as the catalyst for the change promoted in the document:

- Impact of Globalisation
- Structural Changes within the employment sector
- Employment
- Growth of the Small Business Sector
- Social demand for tertiary education and training

-Education and Training for the Civil Service (Ministry of Education and Human Resource Development 2010)

“The wage economy is not generating sufficient new jobs in which case a proportion of entrants will seek self-employment for which vocational (and life skills) will be needed to prepare them for adulthood and working life” (Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), 13)

As a result of the above external environment, along with the challenges presented, the following response, specifically with regards to the issue of the deficiency in lifelong learning has been made transparent. These components can be seen to have coloured the formulation and construction of remedial actions and policy provisions through the Barbados Human Resource Strategy.

II. Policy Design

In strategic planning, the policy design is created from an exploration of the SWOT analysis. The Strategy document outlines the goals and objectives of the ultimate mission.

“The Barbados Human Resource Development Strategy is premised on a seamless, high quality, demand driven, enabling environment aimed at empowering citizens to actively contribute to sustainable growth and development in a dynamic and globally competitive economy. The strategy recognises the need to provide a solid basic education and to promote lifelong learning as the foundation for every individual’s personal and professional development. It adopts a holistic approach to human resource development which facilitates strategic linkages among stakeholders” (Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), 70).

The vision and mission of the Human Resource Strategy Document coupled with the purpose is as follows:

7.1 Vision Statement

An efficient, well-coordinated, effective, knowledge-led, and demand-driven human resource development system responsive to global conditions and Barbadian aspirations.

7.2 Mission Statement

To develop national, institutional, and human capacity so that the potential of all Barbadians is fully realised.

7.3 Purpose

The overall objective of the proposed Barbados Human Resource Development Strategy is to increase competitiveness to allow sustainable growth and poverty alleviation. This would involve building human capacity, and improving employability of Barbadians in order to reduce vulnerability among youth and to improve overall productivity.

As a result the following objectives were highlighted to be the driving forces to the policy:

- a) Increasing the number of secondary school leavers with the appropriate knowledge, skills and competencies to successfully enter the job market or embark on an economic enterprise.
- b) Emphasis on promoting lifelong learning;
- c) Development of a seamless educational system which will bridge the gap between academic and technical skills allowing for multiple entry and exit points
- d) Provision of second chance education and opportunities for youth through the expansion of the provision and quality of technical and vocational education and training
- e) Improvement of participation in adult and continuing education.
- f) Development of a competency-based system of certification and the establishment of an internationally recognised national certification and qualifications framework. (Ministry of Education and Human Resource Development, 2010, 7).

These have led to the construction of the five pillars of strategic

intervention:

1. Effective enabling environment for human resource development
2. Improved internationally recognised national qualifications framework
3. Demand-driven educational system
4. Rationalised knowledge management system
5. Enhanced research, innovation, entrepreneurship, and development capacity (Ministry of Education and Human Resource Development, 2010, 70-71)

Pillars 2 and 3 speak directly to the problem of an ageing and declining population. This will be remedied through the creation of lifelong learning policies to help older workers keep up with the increasing demands of the economy- ‘demand-driven educational system’ - as well as to train young people – ‘improved internationally-recognised national qualifications framework’- to embrace knowledge and be retrainable at any stage in their career in order to be ready for the effects of globalisation and ageing which is a lifelong process.

2. **An improved internationally-recognised national qualifications framework** responsive to the dynamic requirements of the competitive and productive sectors, including mechanisms for the development of competency based certification.
3. **A demand-driven educational system** that incorporates systematic needs assessment mechanisms, includes appropriate strategic measures to meet the needs of marginalised youth, and ensures private-sector involvement in education and training provision.

Strategic Pillars 2 and 3 (Excerpted from *Human Resource Development Strategy 2011-2016*, (2010), p. 70)

The policy is succinctly articulated as being “... a vital response strategy in addressing the current symptoms of the downturn in the economy ... while mitigating the risk of longer term impacts. Acquisition of new competencies, skills enhancement, improved institutional efficiency, and effective dialogue among stakeholders will assist in developing a sound workforce and in meeting the overall development objectives of the country.”

(Ministry of Education and Human Resource Development, 2010, p. 8). It is noted that “A clearly formulated policy can play an important “operational” role as a reference for action. It can help guide decisions and future actions in educational development...” (Chang 2008, 5).

III.Action Planning

Action planning, as previously affirmed, encompasses the operations sector of strategic planning. This is the point where the plan moves from vision to reality. The relationship between the inputs and outputs, or the goals and objectives are processed and solidified to produce implementation strategies to achieve the desired outcome. Essentially, action planning details how the future will be shaped through the plans articulated in the policy design. Throughout the action plan, the financial expenditure is applied to the specific resources, both human and material which are needed in order to contrive the plans for the achievement of the mission.

This view is supported by Chang (2008) who notes that, “Action planning is the preparation for implementation. An action plan aims to translate into operational terms the policy directions that education authorities intend to implement in a given time horizon. It is a tool for “clarifying” to some extent the goals and strategies in relation to the education policy” (Strategic Planning in Education: Some Concepts and Methods 2008, 6).

The Human Resource Development Strategy 2011-2016, in preparing for the execution of the policy has created logical frameworks for each of the strategic pillars. For the purpose of this analysis, the logical frameworks associated with pillars 2 and 3 which highlight the implementation strategies for the National Qualifications Framework and the Demand-Driven Education and Training System will be evaluated.

The Logical Framework approach also referred to as the

log frame, which was utilised by the Government of Barbados is a recognised tool for action planning. Chang (2008) continued to note that while there are various methodologies and techniques of action planning the Logical Framework approach is one method being used most often in the educational sector by different countries and agencies.

Of great significance as submitted through Save the Children (2003), the Logical Framework is clarified through the following description:

“It is a way of testing the *logic* of a plan of action by analysing it in terms of means and ends. This helps to:

- clarify how the planned activities will help to achieve the objectives
- be explicit about the implications of carrying out the planned activities in terms of resources, assumptions and risks” (Gosling with Edwards 2003, 222).

The Logical Framework Analysis (LFA) as proffered by Gosling with Edwards, (2003) will be utilised to evaluate the log frames. The table below, the Explanatory Logical Framework, presents a brief overview of the structure of a log frame and the aspects which it should cover in order to be considered effective. This will be used to analyse the National Qualifications Framework and Demand-Driven Education and Training System log frames prepared by the Government of Barbados.

NARRATIVE SUMMARY	INDICATORS OF ACHIEVEMENT	MEANS OF VERIFICATION	ASSUMPTIONS	COSTS
<p>GOAL -The rationale, the higher order objective of the project to which the project contributes</p> <p>PURPOSE -What you want to achieve, the effect of the project on the wider society -How long it will take and who will be affected</p> <p>OUTPUTS -What you want to achieve in itemised detail and quantifiable terms -Results of completed activities which should lead to the achievement of project objectives</p> <p>ACTIVITIES/INPUTS -What is actually to be done -How you will achieve the outputs identified, obtainment of necessary inputs (resources) in order to produce the outputs</p>	<p>The measures put in place to verify the accomplishment of the Goal, Purpose and Outputs</p> <p>Indicators must be targeted in terms of Quantity, Quality and Time (QQT)</p> <p>Carrying out the activities should achieve the outputs, so the success of the activities is measured through the indicators for outputs</p>	<p>Sources of data needed to verify the Goal, Purpose and Outputs Indicators and the status of the Activities.</p> <p>Indicators and Means of Verification provide the basis for project monitoring and evaluation.</p>	<p>The uncertainties that will be faced during the implementation of the work</p> <p>Assumptions identify the factors affecting activities, outputs, goal and purpose in order to be realistic about what is feasible.</p>	<p>A summary of the project budget related to the procurement of the inputs</p>

Explanatory Logical Framework (created by Applewhaite 2013 adapted from Gosling with Edwards 2003 and Yates October 25, 2012)

In brief, a log frame should:

1. Highlights the goal and purpose of a plan and shows how, through specific activities the detailed outputs will be realised.
2. Presents the resources necessary to execute the plan along with the finances needed to procure them.
3. Illustrates the assumptions and risks so as to recognise factors that would affect the project or need to be managed to limit their detrimental impact to the success of the mission.

The tables below present the log frames outlining the National Qualifications Framework and Demand-Driven Education and Training System in the Human Resource Development Strategy 2011-2016:

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Annex 5.2: National Qualifications Framework

Strategic Objective: Development and implementation of an internationally-recognised national qualifications framework.

Activities	Performance Indicators	Means of Verification	Assumptions	Indicative Timeframe	Estimated Cost (BDS)	Responsible Agency
<p>Activity 2.1: Development of Policies, Procedures, and Guidelines</p> <ul style="list-style-type: none"> Development of appropriate policies to support implementation of the NQF. Development of guidelines to support HRD Policy. Amendments to the BAC Act approved by Cabinet Introduction, promotion of NQF and sensitisation of public to NQF. Formation of NQF Committee 	<p>PI.04: NQF Policy, Procedures, and Guidelines developed and implemented by 2014</p>	<ul style="list-style-type: none"> Approved NQF Policy Amended BAC Legislation Approved PR plan 	<ul style="list-style-type: none"> Budget Approval Adequate human resources to support implementation 	July 2011-July 2014	\$1,500,000	<ul style="list-style-type: none"> BAC
<p>Activity 2.2: Development of National Qualifications framework</p> <ul style="list-style-type: none"> Stakeholder meetings held with employer and employee representatives, ML, MEHR, and educational providers Discussion, definition, and agreement on the NQF levels. Promotion of NQF among stakeholders. Registration of educational providers with the BAC Movement towards programme accreditation by a recognised 	<p>PI.05: At least 40 educational providers registered by 2014</p>	<ul style="list-style-type: none"> Approved NQF in place NQF legislation in place PR programme launched List of registered providers published in Official Gazette Register of qualifications in place At least 40 qualifications registered on NQF 	<ul style="list-style-type: none"> All stakeholders agree on descriptors and levels Labour Market information available Continual dialogue with regional and international education and quality assurance agencies 	July 2011-March 2013	\$2,000,000	<ul style="list-style-type: none"> BAC

Activities	Performance Indicators	Means of Verification	Assumptions	Indicative Timeframe	Estimated Cost (BDS)	Responsible Agency
<p>accreditation body.</p> <ul style="list-style-type: none"> Development of NQF Portal 						
<p>Activity 2.3: Development of National Vocational Qualifications</p> <ul style="list-style-type: none"> Formation of Lead Bodies in support of NVQs. Development and approval of standards in various areas. Education and training of curriculum specialists. Development and distribution of various curricula. Education, training, and certification of Assessors/evaluators. Conduct of assessments. Granting of awards for successful completion of NVQs. 	<p>PI.06: At least 10 different National Vocational Qualifications operational by 2014</p>	<ul style="list-style-type: none"> Published Standards TVET Council's Annual Reports Curricula developed by BVTB 	<ul style="list-style-type: none"> Successful pilot of CVQs/NVQs in secondary schools Availability of CVQs/NVQs to the workforce through post-secondary and tertiary institutions 	July 2011-March 2014	\$5,000,000	<ul style="list-style-type: none"> TVET Council BVTB MEHR
<p>Activity 2.4: Implementation of Educational Quality Assurance Mechanisms</p> <ul style="list-style-type: none"> Establishment of quality assurance policy, processes, and guidelines for public and private education and training institutions. Development and implementation of a Quality Assurance Plan. Continual conduct of quality assurance throughout implementation of the Strategy. Implementation of National Competence Based Education 	<p>PI.07: Competency standards and CBET curricula used by TVET providers by 2014</p> <p>PI.08: A quality assurance mechanism in place by 2012</p>	<ul style="list-style-type: none"> Quality assurance plan in place TVET Council's Annual Reports BAC Annual Report Approved CBETA system in place 	<ul style="list-style-type: none"> Timely publication of reports Policy, procedures and guidelines in place 	July 2011-March 2016	\$15,000,000	<ul style="list-style-type: none"> TVET Council BAC/MEHR BVTB

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Activities	Performance Indicators	Means of Verification	Assumptions	Indicative Timeframe	Estimated Cost (BDS)	Responsible Agency
and Training system. • Education and training provided for Quality Assurance Officers in audits, systems, and processes.						

(Excerpted from *Human Resource Development Strategy 2011-2016, (2010), pp. 125-127*)

Annex 5.3: Demand-Driven Education and Training System

Strategic objective: Development of demand-driven educational services including improved educator preparation programmes, career planning, quality assurance, and improved provision of second-chance education and training.

Activities	Performance Indicators	Means of Verification	Assumptions	Indicative Timeframe	Estimated Cost (BDS)	Responsible Agency
Activity 3.1: Enhancement of labour market information Systems to provide relevant HRD related information • Assessment/Audit of all LMI produced by both agency and periodically to identify information gaps • Tracer studies • Sector studies • Other relevant research studies: • Occupational & skills needs survey • Labour force projection model • Job turnover survey • Longitudinal survey • Upgrade of BARSOC • Dissemination of information to TVET institutions to develop programmes	PI.09: Available information to relevant users PI.10: Re-established labour market information advisory committee by 2012	• Minutes of Meetings • Administrative records • Approved reports BARSOC Technical Assistance Consultancy Report Approved BARSOC	• Committee is re-established • Labour Market Information System in Place • Timely responses from sources of information	Sept2011-April 2013 2 yrs	\$5,500,000 \$675,000	• ML (MRSU, BVTB, TVETC) in collaboration with MEHR
Activity 3.2: Enhancement of career planning services for students and the labour force • Establishment of guidelines for	PI.11: Career planning services in place by 2014 • Guidelines approved by 2011	• Research reports (HRD related Publications) • Registers of agencies providing career	• Increase number of career counsellors	July 2011-March2014	\$50,000,000	• ML(NEB and BVTB) and MEHR

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Activities	Performance Indicators	Means of Verification	Assumptions	Indicative Timeframe	Estimated Cost (BDS)	Responsible Agency
<ul style="list-style-type: none"> career planning services. Establishment of a central coordinating career planning and counselling centre to facilitate the provision of career planning services and information in and out of educational institutions and the labour force. Strengthening the Guidance Counsellors Association Assessment and upgrade of the career planning services section of the National Employment Bureau. Development of educational programmes in career planning. Assessment and upgrade of the career, guidance, and counselling sessions of the NEB. 	<ul style="list-style-type: none"> Education and training programme(s) developed by 2014 Increased demand for career planning services Knowledge-driven career planning programmes incorporated into annual action plans of MEHR and ML 	<ul style="list-style-type: none"> counselling Prospectus of relevant institutions 				
<p>Activity 3.3: Enhancement of second-chance educational system</p> <ul style="list-style-type: none"> Assessment of system for delivery of second-chance education and training. Development of an Action Plan for improving second-chance education and training. Establishment of a monitoring 	<p>PI.12: Number of persons enrolled in second chance programmes increased by 5% annually</p>	<ul style="list-style-type: none"> Administrative records 	<ul style="list-style-type: none"> Continued Government financing for the second-chance programme 	<p>April2011- March2016</p>	<p>\$10,000,000</p>	<ul style="list-style-type: none"> ML, MFYA and MEHR

Activities	Performance Indicators	Means of Verification	Assumptions	Indicative Timeframe	Estimated Cost (BDS)	Responsible Agency
<p>and evaluation system for second-chance education and training.</p> <ul style="list-style-type: none"> Provision of intervention strategies and counselling services for students at risk of failure, particularly in post-secondary and tertiary institutions. 						

(Excerpted from *Human Resource Development Strategy 2011-2016, (2010), pp. 128-130*)

The analysis of the National Qualifications Framework and Demand-Driven Education and Training System log frame alongside the explanatory logical framework revealed the following:

- **Goal**

The main goal is evident through the Strategic Objective.

- ***Purpose***

Despite the formulation of the goal there is no evidence of a *Purpose* of the project coming out of the Strategic Objective.

- ***Outputs***

What are revealed as the *Performance Indicators* which would be considered as the *Indicators of Achievement* actually describe *Outputs* of the project.

- ***Activities***

The Activities which are noted do not specify any *Inputs* in order to achieve the ends. Further, they identify more outputs to the project without detailing at any time exactly how they would be accomplished.

- ***Indicators of Achievement***

As previously mentioned The *Performance Indicators* detail a lot of *Outputs*, however, in some circumstances quantifiable results are noted especially in the Demand-Driven Education and Training System Framework in which the success of one of the projects will be measured by the percentage of persons enrolled in the programme annually. However, there is no indication of any quantifiable measurable enrolment in the National Qualifications Framework.

- ***Means of Verification***

These do not lead to project monitoring and evaluation.

- ***Assumptions***

The assumptions made are fair assumptions that are realistic and would hinder the implementation of the project. However, when assumptions are identified the activities should reflect an attempt at mitigating their effect. However, in this

circumstance it is not evidenced by the log frame that this was done.

- **Costs**

While the log frames outline how much money will be spent it does not highlight any specific resources to be procured in order to realise the plans.

Throughout the log frame there is no indication of how the plans will be carried out in order to achieve the mission. The log frame also does not address how things will be implemented; it only outlines that things will be done. There are no specific activities which explain the execution.

When analysed alongside the explanatory logical framework, the framework produced by the Government of Barbados is found to be an inadequate implementation tool.

There is no mention of training of staff or new programmes to be created in schools. The log frame also fails to address capacity building particularly through procurement of additional academic or administrative staff. The documentation of the bolstering of the infrastructure in order to accommodate new technical and vocational training in schools or the building of new facilities is lacking. Moreover, there is no mention of plans to facilitate the recruitment of candidates to follow the new vocational training programmes and continual professional development programmes on which the project is based.

Conclusion and Recommendations

Within the Human Resource Development Strategy 2011-2016, the Government of Barbados presented the ideology of the change necessary very succinctly and was extremely thorough in that aspect of the planning process. The approach taken by the government is one which in theory should be successful in mitigating the negative effects of population ageing and decline.

However, examination of the log frames created reveals a lacklustre approach to the implementation of these plans.

Notably, the government could have done a few things much better. The budget outlined in the implementation strategies should be presented in a more specific manner in which the resources necessary to carry out the plans are identified. Although financial considerations are mentioned their allocated spending areas are vague. This may offer opportunities for corruption to occur which is in fact contrary to the transparency for which Barbados is well-known.

The goals and outputs should be clearly stated as well as the activities necessary to achieve them. More detailed explanations of exactly what will be done needs to be identified. Further, the assumptions and risks need to be addressed by the creation of activities which will mitigate these insufficiencies in the system.

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