Taking Responsibility

Educational Reform in Jamaica:

Recommendations from Ireland, Finland and Singapore

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CaPRI
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Executive Summary

Recent research has suggested that anticipated future changes in the global economy will further shift Jamaica's comparative advantages away from traditional labour- and resource-intensive industries. Moreover, vulnerability to climatic and external shocks will further expose production that is dependent upon space to vagaries that lie largely beyond the country's control. One of the few areas in which Jamaica enjoys a comparative advantage that is likely to survive such changes is knowledge-generation. Accordingly, we are calling for a shift towards an increasingly knowledge-intensive economy. By this is meant not necessarily a high-tech economy geared towards information and communication technology, but rather an economy in which productivity in all industries is raised principally by increasing the knowledge-quotient in production (that share of inputs which is accounted for by human capital).

Accordingly, this paper surveys the experiences of Finland, Ireland and Singapore; three small, trade-dependent countries which have faced similar challenges, and successfully shifted towards knowledge-intensive production. Drawing upon their lessons, and a survey of the Jamaican experience, we make the following recommendations for possible future changes to Jamaica's education policy.

- Jamaica needs to expand vocational training at all levels of the educational process.
- More resources should be put into primary education.
- The quality of teaching at primary and secondary levels should be augmented. Pay and other incentives should be used to increase skill levels and performance.
- Access to high-quality education must be expanded at all levels. To improve and standardize the quality of schools, the country should shift towards a location-based model of assigning schools, and hardship incentives should be used to attract good teachers into unattractive schools.
- There should be greater choice and flexibility in the curriculum, particularly at the secondary level, and the country should move away from the traditional examination-based assessment and advancement model.
- Direct government funding of tertiary education should be capped. Students should pay a much higher share of their tuition costs than is the case in the current model and a combination of grants and loans should be used to address issues of access. Government should fund research directly, separating the funds it uses for this purpose form those used for teaching.
- There must be deeper integration of the family and household in the education of children, via a national Home, School, Community Liaison Scheme.
- There needs to be greater emphasis put on foreign-language training, in order to prepare all Jamaicans for an increasingly globalised world.
- Experiments should be conducted to test the merit of introducing patois-language education into the curriculum, with an eye to enhancing the assimilation of children into English-language training.
- The change to a new national education policy should be preceded by a comprehensive national consultative process, soliciting the input of all key stakeholders, supplemented by extensive surveying.

BACKGROUND

The current conditions of the world require knowledge intensity. A knowledge-based society uses brain power to produce economic benefits. It relies on increasing productivity for economic development and -- in a country like Jamaica whose labour costs are relatively high -- is destined to be the key engine of economic growth.

According to Dahlman, Routti and Yla-Anttila, the knowledge economy is centred on the use and adoption of new scientific and technological developments, investments in education and research, the adoption of best practices, and openness (to cultural, social and economic innovations).[1] Jamaica needs to move in this broad direction. With globalization deepening free trade, knowledge is one of the few areas where we can enjoy a comparative advantage. This type of economy requires an innovative, accessible and inclusive education system. Given the need to produce a mass of highly literate graduates with a sound educational base and transferable skills, failure, dropout and matriculation rates emphasize how our current education system is not serving our current or eventual needs. Jamaica may actually enjoy a unique moment of opportunity: We can bypass the traditional phases of development by focusing on knowledge intensity.[2]

The reforms proposed in this paper aim at equipping the population through education and training, for changes in the demand for labour by promoting their adaptability and mobility across industries and sectors. Our proposed reforms will also increase the quality and relevance of skills. A more educated labour force is quicker in adopting new technologies, thereby raising productivity levels.[3]

In this paper, we classify education into three categories:

1. Primary, which is normally the first phase of compulsory education in all three surveyed countries and begins at around age six;
2. Secondary, which is normally the second phase of education and may or may not be compulsory. It can be undertaken in "traditional" high schools, or other second level institutions;
3. Tertiary, which is normally the third phase of education and in none of our study cases is compulsory. Tertiary education leads toward a degree or professional accreditation.

Where the term 'basic' education is used, this is generally not in reference to what we in Jamaica call basic schools, as in pre-primary, but rather meaning the fundamentals of education, i.e. literacy and numeracy.

It is axiomatic that education in Jamaica remains highly stratified and unbalanced. For example, in 2001, ten secondary schools were visited in the Ministry of Education's Social Assessment exercise. In one school, 10% or less of eligible students passed CXC Mathematics while in another school, 98% passed the same exam. The report noted: "Of course part of this is due to the stratification of

[1] See, C. Dahlman, J. Routti, and P. Yla-Antilla, eds., (2006) *Finland as a Knowledge Economy: Elements of Success and Lessons Learned*, Washington, DC: World Bank Institute.
[2] See, J. Routti, (2007) *Innovation Systems and Consensus Programs for Knowledge Economy,* University of the West Indies, Centre for Leadership and Governance, Social Policy Forum 'Strengthening Social Capital.
[3] *World Bank Report No. 38570* "Accelerating Bulgaria's Convergence: The Challenge of Raising Productivity", Poverty Reduction and Economic Management Unit, Europe and Central Asia Region, World Bank, February 2007.

the student intake but a good component is due to the quality of the education offered by the institution".[4] However, inequity is but one of the factors inhibiting the fuller education of the Jamaican populace. Among the others are:

- Inadequate basic education
- Compulsory but unenforced primary school attendance (Even this 'compulsory' education is only from age six to twelve, while the legal working age is fourteen)
- Inadequate knowledge by secondary students of the textbook rental scheme
- A gender imbalance, with the number of girls who attend school regularly greatly exceeding the number of boys
- A lack of public libraries with basic resources. Around the world, libraries are offering access to lifelong learning for adults with short courses, self-teaching language classes and other resources for continued education
- Private extra lessons which are practically a requirement for passing mandatory exams, placing a further financial burden on parents

Addressing all of these will be a grave challenge. However, with imagination, it need not prove impossible. It is the methodology of CaPRI to look at the evidence gleaned from other experiences so as to cast light on our own. For this reason, this paper has chosen to study the cases of Finland, Ireland and Singapore as comparators, as all three are small, trade-dependent economies which successfully managed a transition into knowledge-intensive economies. In the process, they thereby went from being essentially pre-industrial economies to being highly successful developers.

According to the Organization for Economic Cooperation and Development (OECD) education sector assessments of member countries (2001 and 2003), Finland produced the most literate students and those deemed most prepared to confront the challenges and exigencies of the globalised world economy. Ireland's educational system also scored high OECD marks, and is considered one of the best systems in the world, producing some of the most well-rounded and efficient graduates. The strength of Irish education, it is believed, has contributed to Ireland achieving some of the highest growth rates in the OECD through its outstanding economic boom of the late 1990s which occurred at the same time that Ireland was undergoing its most significant educational reforms. It is worth recalling that it was not long ago that Ireland was regarded as a poor, tradition-bound society that would never develop. Finally, the city-state of Singapore has also attracted worldwide attention. Moreover, it has long occupied a strong place in the Jamaican imagination, owing to the fact that it approached its independence in a position similar to Jamaica's – Jamaicans still talk of Lee Kuan Yew's visit to Jamaica to study its model – and yet has proved far more successful since.

Finland's experience, in particular, is an example of how knowledge can fuel economic growth in a short space of time. Up until the 1970s, Finland was a resource-intensive economy. Today, it is the most ICT specialized country in the world. Considering that Finland was in a recession in the mid 1990s, featuring unemployment growing from an average of 2-3% to 15% by 1995, this achievement is nothing short of outstanding.[5] This experience clearly demonstrates that long term decisions that

[4] See, B. Carlson, and J. Quello, (2002) *Social Assessment Report*, MOE. On the web at: www.moec.gov.jm/projects/rose/socialassessment.htm

[5] C. Dahlman, J. Routti, and P. Yla-Antilla, eds., (2006) *Finland as a Knowledge Economy: Elements of Success and Lessons Learned*.

will shape education and research are possible, and even necessary, during periods of economic challenge as they show a path to longer term growth and help to institute a competitive edge.[6]

A quick comparison of the current situation of Jamaica with those prevailing in these countries will help to illustrate the scale of the challenges ahead. In Jamaica, daily attendance in primary school is 80.4% and public education is only compulsory from age six to twelve, with even this compulsory education not effectively enforced. By contrast, in Finland, education is compulsory for 9 years while in Ireland, 90% of children go on to second-level education and nearly 60% go on to third-level. In Jamaica, the national average of untrained teachers in 1999 was 18.8%, only 41.9% of teachers in Secondary/High schools were university graduates and only 20% of teachers in comprehensive high schools were university graduates. In Finland, on the other hand, all teachers must have at least a bachelor's degree, with permanent contracts offered only to teachers with a master's degree (it is also worth noting that remuneration is paid according to level of education, not years of service). Singapore does nearly as well, with 50% of primary teachers and 89% of secondary teachers being university graduates, many of them with post-graduate degrees. Meanwhile, teacher/student ratios in Jamaica are 1:32, with some schools rising into the forties; in Ireland, the maximum ratio is 1:29, while in Singaporean high schools the ratio is as low as 1:18.[7]

On the face of it, Jamaica faces a resource constraint. To bring down ratios while improving the skill level of teachers, the country will require both more and better-paid teachers. In part, this can be done by rationalising resource use, for instance, by doing away with pay linked to seniority and replacing it with pay based solely on merit. Reallocation can also help, by shifting resources within the educational system. Nonetheless, as the survey of these countries will reveal, improving education in Jamaica is not just a matter of finding more resources and allocating them more efficiently. Other changes must enter into educational reform.

EDUCATIONAL REFORMS IN FINLAND, IRELAND AND SINGAPORE

Finland

Like all of our comparator cases, Finland's structure as a small, open economy dependent on knowledge, is similar to Jamaica's. Services are Finland's biggest employment sector at 31.1%, followed closely by trade, then manufacturing, with agriculture and forestry at only 7.6%. 60% of 15-74 years olds were employed, with 7%[8] unemployed and 8% students. Since the 1960s, the education sector in Finland has undergone significant changes. Many reforms were put in place to accompany the transformation of the Finnish society from a typically agrarian one to an industrialised one. However, the most important of the reforms were carried out during the 1970s

[6] C. Dahlman, J. Routti, and P. Yla-Antilla, eds., (2006) *Finland as a Knowledge Economy: Elements of Success and Lessons Learned*.
[7] See, Carlson and Quello, 2002; Ministry of Education, Finland, 2006; Department of Education and Science, Ireland, 2006; Ministry of Education Singapore, 2005; UNICEF "Jamaica- The Children- Primary School Years" (2003/2004) http://www.unicef.org/jamaica/children_1569.htm.
[8] 2006 CIA World Fact book

and into the 1980s as a means of ushering the country's evolution into a welfare state based on the model presented by the other Scandinavian countries. Finnish reforms were aimed at providing quality education for the Finnish people regardless of their origins, social status, geographical location, gender, mother tongue or economic resources.[9] In fact, since the end of the Second World War, the main aims of Finland's education system have been to offer equal opportunities for access to all and to raise the general level of education. These aims are similar to our present necessities in Jamaica, and therefore make Finland an appropriate case for comparison.

In order to achieve its goals, Finland deemed it necessary that all key stakeholders in the process -- which includes politicians, technocrats in the education sector, teachers and communities -- play an important part in the shaping and implementation of these reforms. The National Board of Education in Finland therefore issues curricula while teachers and institutions themselves are responsible for assessing performance. There is only one state-wide exam at the end of upper secondary school and all universities in Finland are maintained by the State, though they are mostly autonomous in organising teaching, research and other matters.

In the early 1990s, central steering was decreased and local administration's decision-making was increased at all levels of education in the country. This led to the position and importance of in-school evaluations being strengthened. New legislation was also instituted on January 1, 1999 that obliged all educational institutions to evaluate their own operations and outcomes.[10] Evaluations were specific, and aimed at ensuring that the objectives of education legislation were being met. Although individual schools are independent in evaluation, they must adhere to clear Ministry goals. In-school evaluation has resulted in increased efficiency in evaluation as well as more appropriate results, since there is a closer connection of the school to personal, individual issues. This approach allows for the development of education according to local conditions.

Ireland

Ireland, like Jamaica, is a parliamentary democracy. As in Finland, the state is central in education but in Ireland there is a significant focus on diversity and the individual. For this reason, Ireland has an extensive and Ministry-structured partnership with all stakeholders in education. The Ministry of Education is responsible for introducing legislation which is, in turn, implemented by the Department of Education and Science.

In 1991, the Irish government took the stance that education should be the impetus for the cultural, social and economic development of the state. As was the case in Finland, the Irish Minister of Education mapped out a highly collaborative approach to reforms by including the participation of all "stakeholders" in education in shaping proposals. As a result of this initiative, and coinciding with a favourable OECD 1991 report on the Irish model, the government published a discussion paper, setting out aims for reforms of the education sector, including curricular reforms at all levels and much educational legislation.

[9] E. Aho, K. Pitkanen, and P. Sahlberg, (2006) *Policy Development and Reform Principles of Basic and Secondary Education in Finland Since 1968*, Education Working Paper Series, Number 2, Washington, DC: World Bank Education Advisory Service.

[10] EURYDICE/CEDEFOP/ETF, June 2003, "Structures of Education, Vocational Training and Adult Education Systems in Europe". Luxembourg, 2003 http://www.eurydice.org/ressources/eurydice/pdf/041DN/041_LU_EN.pdf

The government's "Charting our Education Future" (1995) listed five key tenets/reforms to be taken into account: quality, equality, partnership, pluralism and accountability. This led to the National Development Plan 1999-2006 which laid out the major reforms to the Irish education model.[11] Reforms featured strategic goals from the Department of Education and Science a partnership approach to education policy-making, ways to promote equality and inclusion, and adopting a leadership role in the knowledge society. For example, the National Council for Curriculum and Assessment (NCCA) advises the Ministry of Education on curriculum development for early childhood to post-primary education. The NCCA is made up of teacher unions, parents' groups, school officials, industry and trade union interests and operates on a consensus basis.

Ireland is committed to partnership and inclusion. "The Statement of Strategy 2003-2005" of the Department of Education and Science has included the establishment of a number of independent and statutory agencies to lead work in specific areas, particularly the Education Welfare Board and the Special Education Council. Additionally, extensive legislation has established government-proposed reforms. These include the Education Act (1998), the Qualifications Education and Training Act (1999), the Education Welfare Act (2000), the Official Languages Act (2003) and the Education for Persons with Disability Bill (2003).

In Ireland, there is a wide spectrum of educational choice at all levels, complemented by the commitment of all partners to regularly update and constantly review curricula. Although new reforms have included compulsory full-time education from ages 6 to 15, they have mostly focused on greater flexibility for students, so that each student has a more individualized learning path. By contrast, the options available to Jamaican students after the primary level have pretend to offer a greater flexibility, but provides these in seven unequal entities: all-age schools, new secondary, comprehensive high, secondary high/traditional high, technical high, agricultural/vocational and independent high schools, all viewed with varying degrees of legitimacy.

Consequent to Ireland's in-school flexibility, Ireland has a highly educated populace and admission and retention rates are high. Currently, 90% of children go on to complete second level education and nearly 60% go on to third-level. Universities, for example, have seen a significant increase in admission rates over the past 4 decades. In the academic year 1965/66, Ireland admitted 16,000 students to its universities. This had nearly doubled by 1980/81 to 26,000, and has seen more than a 50% increase by 1997/98 (61,000). Within these numbers, programmes in technology, which did not exist in 1965/66, are now graduating 40% of all tertiary students[12] resulting in Ireland's graduation rate of students in science and technology being higher than the European average.

[11] The National Development Plan/CSF (1999-2006) was launched on November 15, 1999 and involved an investment of over €50 billion of Public, Private and EU funds in numerous projects and initiatives throughout the country, including education and training to promote 4 key goals: continued sustainable national economic and employment growth; strengthen and improve Ireland's international competitiveness; foster balanced Regional Development; promote Social Inclusion. The next phase of the plan (2007-2013) entitled "Transforming Ireland- A better quality of life for all" has now been launched and can be found at http://www.ndp.ie/documents/ndp2007-2013/NDP-2007-2013-English.pdf

[12] T. Dooney, (1999) *Ireland*, Higher Education Authority Ireland. On the web at http://www.oecd.org/dataoecd/41/40/2675784.pdf

Teaching in Ireland is a highly competitive profession, even for well-qualified teachers, thus ensuring that only the best are chosen. Both primary and post-primary teachers are required to serve one probationary year. If they successfully complete this, then a tenure route follows.

Singapore

The Ministry of Education (MOE) of Singapore has extensive powers in terms of education policy. It directs the formulation and implementation of all education policy and, from 2006, the MOE took over full ownership for curricula.

The MOE adopted a new mission statement in 1997 of "Thinking Schools, Learning Nation" (TSLN) to place more emphasis on creativity. This shift has been the key to the recent transformation of Singapore's education system. Going further, since 2003 there has also been a focus on building the spirit of Innovation and Enterprise (I&E) with the idea of instituting a core set of skills for life and attitudes toward national development. In 2004, the government of Singapore initiated "Teach Less, Learn More" (TLLM) to further pursue TSLN and I&E so that students can be more engaged in their own learning. This system features much less dependence on tests and one-size-fits-all instruction, and places more emphasis on varied forms of teaching and learning skills for life. Teachers are called upon to teach better, and there is a desire to improve the interaction between teachers and students. Teaching is also more focused on developing a true understanding of material; teaching students to think critically and ask questions as well as the ability to independently seek solutions. This orientation is designed to truly engage the minds of students.

In Singapore, recent reforms include the introduction of new Ordinary Level courses, more focused on technology and practical skills. New types of schools have also been introduced into the system to allow for development of students with different talents, abilities and rates of learning. In addition, there are specialised independent schools such as – the Singapore Sport School, the NUS High School for Maths and Science and a proposed Arts school. There are several educational avenues in the Singaporean system, with an emphasis on excellent quality at each level. At the secondary level, Special, Express, Normal (Academic) and Normal (Technical) are the options that students are placed in based on their Primary School Leaving Examinations results. At the upper secondary level, there are several alternative schools and qualifications, such as the International Baccalaureate[13].

The Ministry of Education in Singapore has further made a commitment to trimming syllabi at the primary and secondary levels, without compromising students' preparation for higher education. This is to allow for greater flexibility while focusing on core knowledge. Independent learning and experimentation is encouraged, whereas reliance on rote learning is reduced.[14]

Since 1990, Jamaica has been moving along similar lines, however success as measured by test scores has not shown a positive impact of the shift from rote learning to a more student-centred approach. The Revised Primary Curriculum (RPC), New Horizons Project (NHP), Reform of

[13] The International Baccalaureate Diploma Program is an internationally recognized educational program offered in English, French or Spanish and prepares students for entrance into university.

[14] See, Ministry of Education (2006) *Singapore Education 2006- Transforming learning from quantity to quality,* Singapore. On the web at www.moe.gov.sg/corporate/yearbook/2006/teach.html

Secondary Education (ROSE), Expanding Educational Horizons (EEH), Literacy 123 and Transformation are all initiatives which focused on more student-centred instruction. In these approaches, the teacher is viewed as a facilitator who should tailor the various activities to meet the needs of students. In schools where these initiatives have been implemented, there is an indication of some positive effects. However, the question of sustainability is of concern. For example, NHP was followed by EEH, but there was a two year hiatus between the projects. When EEH began, it was found that much of what was implemented during NHP was no longer practiced in the schools. Teachers had reverted to pre-NHP delivery and orientation of learning. Further, the fact that instruction in Jamaica is still 'test driven' with results on the Grade 4 Literacy Test and the Grade Six Achievement test being prime determinants of placement and advancement is apparent. Training, workshops and collegial support may be in place, but the nature of the tests and the importance of the tests, raises anxiety among students, parents and teachers resulting in 'extra lessons' and drills designed to improve performance on the tests. The necessary classroom instruction that will encourage creative, analytic and independent thought has not yet been the reality.

As we can see from our comparator cases, most do not rely heavily on tests at the lower levels of education to determine performance. Our reform proposals, instituted by the Ministry, guided by a national vision and with a commitment by all key stakeholders would also move quickly away from tests which promote rote learning, to learning which promotes innovative thinking.

THE STRUCTURE OF THE EDUCATIONAL SYSTEM

Finland

In the 1970s a comprehensive primary school system was introduced into Finland. The main feature of this system was the introduction of a nine year compulsory phase, as opposed to the six year un-enforced compulsory primary level education phase in Jamaica. The nine-year primary comprehensive system has advantages both for students and teachers alike. During this "unbroken" phase, Finnish students are introduced to a wide variety of subject areas from physical education to technology education and from art to home economics. The nine compulsory years have allowed students enough time to "learn" and to develop significant competency in these areas. The advantage for teachers is that it gives them enough time to complete their respective syllabi and to ensure that students develop competency in different fields. After these initial nine years, students have one of three options: they can leave school (the path the least opted for by the Finns), the can continue to the upper secondary general school, or they can choose to go to one of the many vocational schools that exist.

In the early years of the reform and even into the 1980s, vocational training was not highly favoured by students. Their attitudes were largely influenced by the taboos carried over from earlier periods on the relative importance of traditional grammar schools over vocational ones. This is similar to current thinking in Jamaica. In Finland, direct attempts were made by government officials to change what they perceived to be a dangerous conception, especially as Finland moved towards developing its industrial capacities. In 1975, Parliament passed the Enlargement of Vocational Education to Developing Regions, which aimed, among other things, to increase capacity and thus enrolment in the vocational track. Deliberate attempts were later made to democratise the teaching of vocational

subjects. Since 1982, all students within the system are exposed to a few subjects from the vocational curriculum. These were introduced in stages; curriculum development in the fishing and dairy industries was introduced in 1982; business and administration in 1983; agriculture and forestry in 1984; gardening, arts and crafts and home and institutional housekeeping in 1985; technical and engineering in 1986; healthcare in 1987; and social welfare in 1988. Over time what has been witnessed is an exponential increase in the number of students registered to pursue further studies in one of the disciplines from the vocational curriculum. In 1988 there were as many as 67,000 students enrolled in vocational training.[15] This was far above the government's target of 61,200 students.

Finland however has had continued success in their attempt to find balance and achieve parity between vocational and academic training. They have sought partnerships between the two streams, allowing students to take courses in both vocational and traditional academic institutions so as to choose from a wide range of topics of interest. Also, the vocationally-educated may enter academic studies and qualify for work previously only "reserved" for the academically-educated.

In terms of the quality of the services offered, since the 1980s teachers are employed only on the basis of having at least a first degree. To facilitate this transition, the 3-year teachers' colleges certificate programme was phased out and replaced by a degree programme that lasts up to 5 years. Through a process of academisation, most categories of teacher education are either totally integrated into universities, or at least the pedagogical components qualifying teachers are offered by universities. Primary school teacher education, secondary school teacher education, and pre-school teacher education have all been integrated into universities. The departments of teacher education in Finland are now complete university departments. They offer both basic degree programmes (B. Ed. and M. Ed.) and doctoral programmes (D. Ed.).[16] During training, emphasis is placed on acquiring skills in general studies, subject studies, pedagogical training and practical training from the classroom. Today, statistics indicate that a majority of Finnish teachers have at least a master's degree. It is important to note that the interests behind furthering their studies were great because having a master's degree was the only condition for receiving a permanent contract in the country. In addition to this, teachers in Finland are paid according to their level of education and not on the number of years of service.

Another unique feature of the Finnish education system is the absence of all major access examinations before the end of primary education. Therefore, unlike in Jamaica where students sit the GSAT exam at the end of six years of primary schooling in order to determine students' competence to attend one high school or another, no such exams take place in Finland. Instead, in-school evaluations are organised by teachers.

Ireland

In Ireland primary education lasts eight years. There are no formal, state-wide exams at the end of primary school, but, like Finland, assessments take place in-school by teachers. The recently

[15] E. Aho, K. Pitkanen, and P. Sahlberg, (2006) *Policy Development and Reform Principles of Basic and Secondary Education in Finland Since 1968*.
[16] S.E. Hansen, (1999) *Teacher Education in Finland- Updating the 1996 SIGMA Report.* On the web at http://tntee.umu.se/publications/v2n2/pdf/10Finland.pdf

completely revamped primary curriculum covers a wide-range of topics, engaging a variety of approaches to teaching and learning. The Primary curriculum is divided into six areas:

1. Languages
2. Mathematics
3. Social, environmental and scientific education
4. Arts education (visual, music, drama)
5. Physical education
6. Social, personal and health education

These areas encompass traditional approaches, as well as including the needs of the globalised, modern world, such as compulsory language training and environmental studies at the primary level. Around these broad topics, the curriculum is child-centred, rather than subject-centred, and provides for flexibility in timetabling and teaching methods.

Secondary education has two cycles; the three-year junior cycle, leading to the junior Certificate Examination and the senior cycle, leading to the Leaving Certificate Examination. Both secondary-level exams are state examinations which are set and assessed externally. There are three choices of Leaving Certificate Programs: the Leaving Certificate Programme, which must be taken by those wishing to pursue higher education; the Leaving Certificate Vocational Programme[17] and; the Leaving Certificate Applied, which is an individual-centred programme preparing students for adult and working life. All secondary-level schools follow a curriculum set by the Ministry of Education, and examinations are set and marked centrally, however there are also options, within schools, to pursue the International Baccalaureate or the British A-levels.

Singapore

Primary education consists of a four-year foundation stage and a two-year orientation stage in Singapore. The MOE, recognizing that students beginning school have different levels of ability and need personalized attention, have committed resources to having no more than 30 students per class for grade 1 starting in 2005 and for grade 2 in 2006. The first (EM1) and second (EM2) streams of primary education, traditionally separating children by ability, have also been merged. In addition, schools now have the flexibility to set their own primary four year-end examinations. Uniquely, the Ministry of Education has made available a grant of SGD $100,000 to individual primary schools who wish to apply to develop any special programs they may want to implement. This is in order to enable schools to differentiate themselves with programmes in which they are strongest.

The MOE does what HEART-NTA has been trying to do in Jamaica- they ensure that early secondary school leavers are taken care of by training them in a wide range of practical and professional skills, matched with industry needs.

[17] Ireland's Leaving Certificate Vocational Programme is a school leaving certificate with a strong vocational aspect. The programme consists of some traditionally academic subjects, coupled with three compulsory link modules on enterprise education, preparation for work and work experience. The programme gives students the same opportunity to proceed to universities and colleges as the students taking the established Leaving Certificate. See Tobin 1997

A small number of Institute of Technical Education (ITE) students go on to polytechnics or even universities after they graduate with their ITE Higher Technical Skills Diplomas. Therefore the ITE is important as a "second chance" for those students who missed out on completing their secondary education for various reasons.

Vocational Training in Europe

There has been significant focus on Vocational Education and Training (VET) systems in Europe in the past 20 years. As opposed to 40 years ago when academic training was key, now in all of continental Europe there is an institutionalized national system of VET aimed at producing workers who are flexible and responsive to modern demands of the economy. The importance of these systems have grown to meet new global requirements, such as the global flow of information technologies, affecting processes as well as production, and the increasingly international global competition ensuing from the widespread availability of new technology and speed in delivery of products/processes.Consequently, there is an increased demand for workers particularly versed in key skills who are able to move quickly and smoothly from formal training institutions to employment, with little on-the-job training. These initiatives also fulfill another requirement; that workers be more autonomous with the ability to solve problems quickly.

It is true that European policies aimed at increased formalized vocational training have involved significant influx of government spending, but it is useful to consider the future benefits of such an investment

CURRICULUM

Ireland

The Junior Certificate course is well-balanced and general in nature. The core courses in the Junior Certificate are Irish, English, Math, Civics, Social and Political Education, Personal and Health Education and Physical Education. The Ministry has approved 26 courses that can be part of the Junior Certificate. In addition to the core compulsory courses listed, the school can choose others to offer.

As mentioned before, in the senior cycle of secondary education, students choose a Leaving Certificate program, the Leaving Certificate (LC), the Leaving Certificate Vocational Programme (LCVP) or the Leaving Certificate Applied (LCA). Like the GCE/A-levels in Jamaica, the Leaving Certificate is used by employers, as well as being a determinant for a place in tertiary education.

Singapore

From grades 1- 4, the foundation stage in Singapore, 80% of curriculum is allocated to ensuring that students have a working knowledge of English and a good grounding of their Mother Tongue and Mathematics. The other 20% of time is devoted to Science, Music, Art & Crafts, Social Studies, Civics and Moral Education, Health Education and Physical Education.

There are various streams for secondary education, depending on the student's choice as well as their learning abilities and interests. There is the Special/Express course, leading to the GCE, the Normal (Academic) course and the Normal (Technical) Course.

At the post-secondary/tertiary level, Singapore offers Junior Colleges/Centralized Institutes (pre-university), Polytechnics, the Institute of Technical Education and Universities, as well as Specialized Independent Schools, such as the Singapore Sports School.[18]

[18] Ministry of Education, Singapore, 2004, www.moe.gov.sg/jcreview/Specialised%20IS.htm

INFRASTRUCTURE

Finland

In Finland, there are 593,000 students in compulsory basic education, age seven to sixteen. This comprehensive education lasts 9 years. Instruction is given by class teachers in the first six years, then by subject teachers in the last three, as per the Basic Education Act 1998.[19] Schools are zoned. Local authorities assign a place in a school to each student, determined by their geographical proximity to the school.

Ireland

In Ireland, there are 618,000 students in compulsory basic education, age six to sixteen. Compulsory education spans both primary school, ages 6-12, and secondary school, ages 12-16. Secondary school can be in the form of community, comprehensive or vocational schools. After primary school, children are admitted to the junior cycle of the secondary school of their parents' choosing.

Singapore

Singapore has 173 primary schools catering to 282,793 students. There are 156 secondary schools for 200,358 students and 12 mixed level schools for 26,888 students. At the primary level, approximately 50% of teachers are university graduates. In secondary school, 89% of teachers are university graduates. Many of the teachers who are graduates also have a post graduate degree. In Singapore, each student is provided with at least 10 years of general education. Gender balance is also exemplary in Singapore as in almost every level of education, the male to female ratio hovers around 1:1.

FUNDING

Finland

In Finland, educational funding and construction of schools is divided between state and local authorities. Local education authorities also receive a state subsidy for operating costs. These subsidies vary from 25% to 50% of the costs and the amount of the local authority's tax revenue.

[19] See, Ari Antikainen, (ed.) (2005) *Transforming a learning society: The case of Finland,* Bern, P. Lang.

The state and local authority are responsible for the maintenance of both primary and secondary schools. For operating costs, both receive 57% from the state and 43% from the local municipality. Teachers' salaries are usually paid by the municipality.

There is hardly any truly private (non-subsidized) education in Finland. Where private schools exist, these are mainly international schools or religious schools. Universities in Finland on the other hand are financed directly from the state budget. However, it is significant that most public funding for research is competitive.[20]

Ireland

All new schools are paid for entirely by the State. 95% of all secondary schools are publicly funded, with the remaining 5% being private schools which charge school fees.

DISCUSSION OF EDUCATIONAL REFORM IN JAMAICA

Jamaica is not unique in the fact that its resources are constrained. Public debt may be 133% of GDP in Jamaica (2006), but in the Seychelles (who have a similar GDP per capita to Jamaica) public debt is 166% of GDP (2006) and they have an excellent, government supported national education system.[21]
Jamaica spends a greater proportion of its GDP on education than most other Caribbean islands, however this does not necessarily translate into superior quality, as the island has specific concerns that other countries do not face. Education is our primary defense against aggressive globalization. It is unfathomable that we spend over 50% of GDP on servicing public debt while our future suffers from poor investment in our people. Earlier decisions which brought forth a debt trap must not affect our chances for a sustainable future. The government must enlist creative methods to find the funds needed to ensure that education produces what is needed.

FEATURE ON IRELAND

Ireland
Population: 4 million
Population under 15: 21% of population
GDP: $177.2 billion (USD)

Jamaica
Population: 2.8 million
Population under 15: 33% of population
GDP: $13 B (USD)

Between 2000 and 2005, €2 billion was spent on educational infrastructure in Ireland. At the primary level, this delivered 57 new schools, 251 large-scale refurbishments/extensions and 4,598 small-scale upgrading projects. At the post-primary level, there have been 19 new schools, 129 large-scale and 1,457 small-scale projects. A devolved minor works grant, given to address repairs, paid to all primary schools on an annual basis, also came from these funds, as well as 4,000 individual grants for the provision of furniture and equipment in schools. The school management authorities further enlist the services of private consultants for design of required works, along clear government-set requirements.

The Department for Education and Science (DES) in Ireland has funded new schools in order to provide school accommodation for pupils in rapidly developing areas where no schools previously existed; to facilitate merging of schools; and to replace old school buildings that were in extremely poor condition.

There are specific guidelines from the DES with respect to room sizes and layouts, type of construction, mechanical and electrical building services and information and communication technology. The government specifies that all schools must follow these guidelines for infrastructure. At the primary school level, new school buildings range from 8-32 classrooms. The majority are 8-classroom schools. This type of school must have:

- 8 en-suite classrooms
- 2 specialist rooms for leaning support with resource teachers to facilitate the teaching of pupils with special needs

[20] C. Dahlman, J. Routti, and P. Yla-Antilla, eds., (2006) *Finland as a Knowledge Economy: Elements of Success and Lessons Learned*.
[21] M. Purvis, (2004) *Education in the Seychelles: An Overview,* National Institute of Education and Youth, Republic of Seychelles. On the web at http://www.seychelles.net/smdj/SECIIC1.pdf

In recent years, the Ministry of Education has written extensively on the need for changes in the Jamaican education system. Through the Green paper (1999), the subsequent White Paper (2001) and the most recent "Transforming Education in Jamaica" (2007), important changes have been proposed. All three express the desire to develop a partnership between the Jamaican people as a whole and education in particular. The partnership agreement however is overly bureaucratic. The partnership provides for 6 different entities, with no clear focus, running the risk of expensive and inefficient processes. A true partnership is needed - one which takes commitment on the part of the government as well as commitment on the part of the people as a whole in the recognition that our social constraints can only be supplanted by strengthening education.

The Ministry's "Way Upward" places great emphasis on the implementation of Information Communication Technology (ICT) throughout Jamaican schools, however the point is being missed slightly. The effort should not merely be placed on access to computers, but rather on the possibilities that ICT allows. The rest of the world is not a threat because of ICT per se; it is a threat because through strong *basic* education, at a very young age, students are instilled with an educational curiosity enabling them to use ICT resources to extract relevant information. The Ministry papers consistently do not go far enough and fail to offer concrete recommendations for real change. The papers read as creative wording, allowing government to inject funds here and there, but ultimately are designed to ensure the status quo.

The Ministry explains that the national education system will be "performance-driven" and "results-oriented" but so far the results have not been impressive. The Ministry's "Incentive Fund" is also unreasonable. From September 2003, the incentive fund is to be used to support schools which demonstrate excellence in terms of organization and enterprise as well as educational performance. It is often the schools with greater resources that perform better and are able to hire quality staff to ensure good organization. Schools with computer labs, well-stocked libraries, classroom IT facilities, science labs, and so forth, have an advantage. The "Incentive Fund", therefore, may be serving to make schools less equitable, not more.

- General purpose room for PE
- Library
- Principal's office, administration area and staff room
- External play areas, including junior and senior ball courts

At post-primary level, schools can cater for up to 1,000 pupils. A typical school has 800 pupils, and this type of school must have:

- 24 general classrooms
- PE Hall for PE facilities
- Specialist rooms for teaching subjects such as sciences, home economics, woodwork, metalwork, art, technical drawing, etc.
- Computer rooms and multi-media language laboratory
- Library
- Principal's office, administration area and staff room
- External play area including 6 ball courts

The average cost for a new school (€) in Ireland is:
8-classroom primary school: 3,000,000
16 classroom primary school: 4,400,000
800 pupil post-primary school: 15,000,000
1000 pupil post-primary school: 17,200,000

Ireland has been able to deliver school buildings quickly and efficiently through Generic Repeat Design (GRD). It is the generic design of a 2-storey 8-classroom primary school, where additional modules of 4 classrooms can be added to give either 12-classroom or 16-classroom options. The benefits of GRD are speedier delivery of the project, saving of land due to the buildings being two-storey and savings on design fees.

Ireland manages the cost of construction by having fixed price contracts for school building projects. The major tenet of this is that additional costs are not added to the contract to deal with wages or construction price inflation. Additionally, school building projects are widely advertised in an open and transparent competition.

To manage minor building projects that come up from time to time, an annual grant is paid to all primary schools of €3,809.21 to use, without government intervention, on small-scale development that they deem important and for emergency works.

In Jamaica, secondary education is provided in seven different types of educational institutions. These are all-age schools, new secondary/high, comprehensive high, secondary high/traditional high, technical high, agricultural/vocational and independent high schools. The strategy of the Ministry of Education is to introduce a national common curriculum from grades 7-9 to regulate the type of education being offered in all different schools. This initiative was presented through ROSE. However, it is believed there should be electives, even at grade 7. As demonstrated from the comparator cases, introduction to a wide variety of subjects has worked.

Although in Jamaica all high schools do offer some vocational courses, in the traditional high schools these are limited to offerings such as technical drawing and the 'new' high schools are geared towards other vocational courses, such as auto mechanics.

Focus on technical/vocational training is mainly placed at the tertiary level and is often offered in community colleges and specialized institutions. The Vocational Education and Workforce Training and Certification System in Jamaica is coordinated and sustained by the HEART Trust-National Training Agency (HEART-NTA). The vocational curricula in Jamaica is offered through a network of HEART-operated institutions, as well as within many partner institutions including colleges, community-based bodies, private training providers and on-the-job training. So far, intense vocational education has not penetrated "mainstream" education. Efforts to avail secondary school students in their final two years in school of the opportunity to compliment their general education certification (Caribbean Examination Council, etc) with work-based NVJQs have not been fully supported by the Ministry of Education, despite our comparator cases showing that skills to compliment education enhance the ability of the student to work once completing his or her education. This position speaks to the belief that there is a dichotomy between general education and vocational education. As we have seen, to compete within our globally-impacted society in Jamaica, and for Jamaica to compete with the world, we need the most well-rounded, adaptable individuals. Vocational skills will help to produce this.

RECOMMENDATIONS FOR EDUCATIONAL REFORM IN JAMAICA

In Jamaica, the main concerns identified by the Ministry of Education and Culture have been the quality of educational programmes, access and inequities. These concerns prompted the government to introduce ROSE. ROSE I set out to help improve performance by supplying textbooks and that was achieved through the Secondary School Textbook Program (SSTP) where students could rent text books and teachers were trained in using these textbooks. However it was discovered that a number of grade 7 students could not read the traditional textbooks, and so low vocabulary books were written and being used. ROSE II found that students were still not achieving and it was discovered that the rewritten textbooks were not being used and those trained in their use seemed to have left the system.

ROSE was ultimately meant to produce a common curriculum in all institutions housing grades 7-9. However, offering a common program in extremely varied circumstances will not achieve parity, but will rather serve as a frustration to parents, teachers, students and administrators. This is especially true at the secondary level as the basic education that the individual has received before grade 7 will influence their capacity to succeed with the common curriculum.

A core curriculum is important, but we should use best practice to guide our policies. As we can see from our comparator cases, globally countries are moving away from a rigid common curriculum. The goal should be flexibility of learning (like in Ireland) rather than attempting to fit all into one. Singapore's example of this is also excellent.

ROSE eventually renamed and refocused the high school system in Jamaica designating all secondary schools, those technical, vocational and academic in orientation to be now called high schools. However, the differentiation still remains. As we come to nearly 14 years of ROSE implementation, significant achievements are lacking and it may be worth conducting a wide survey of individual schools to see what exactly ROSE I and II have achieved.

Suggestions for Reform

As noted, the Ministry has specific concerns about Jamaica's education. We add to the Ministry's concerns the need for the following:

- Adaptable and highly skilled workforce
- Population feeling socially connected to education, i.e. all individuals understanding the importance of education and feeling like stakeholders in that success
- A change in attitudes towards education; i.e. the fear that goes along with mandatory exams should be alleviated, higher education not seen as reserved for the economically privileged
- Attendance must be made compulsory at primary level and beyond grade six
- To support compulsory education, develop a core of truancy officers from the police force

- Because men overwhelmingly commit violent acts and are the victims of violent acts, we need to encourage more male participation in education, i.e. aim for a male to female ratio on par with the real population ratio of student age
- More emphasis should be placed on vocational skills for all at primary and secondary level
- Transfer more funds from tertiary level to primary and secondary education. *[see box on funding tertiary education]*
- Often in Jamaica, the teacher makes the difference. We need to employ sound research capacity into figuring out how to attain and retain more individuals with talent and drive to work in sometimes difficult situations. Teachers who consistently register good results should receive additional training and advanced degrees. We can use these individuals to promote a master teacher initiative, having these teachers serve as mentors for new staff members.
- Reduce dropout rate, particularly at upper secondary and improve enrolment at all levels. This can be achieved by making all stakeholders involved in the education process, which will occur through the introduction of Jamaica Home School Community Liaison *[see box entitled Jamaican Home, School, Community Liaison]*.

Lessons Learnt from Ireland, Finland and Singapore

Both Ireland and Finland have ensured continuity in the learning process and there are important lessons to be learnt from the ways in which they have done this. Ireland has made education mandatory up to age 15 with no primary leaving examinations. Finland has instituted a 9-year comprehensive primary sector. In both cases, certain subjects are systematically introduced from the primary level. Among these, particular importance is given to foreign languages and information technology. In terms of the syllabus, there may be something to learn from the Finnish model of reintroducing civics into the school curriculum at all levels. Finnish policymakers have over the years emphasised the need to incorporate civics into the curriculum because of the benefits that such instruction would have on nation-building.

JAMAICAN HOME, SCHOOL, COMMUNITY LIAISON

Our major recommendation is the introduction of a Jamaican Home, School, Community Liaison Scheme (JHSCL) as practiced in Ireland. JHSCL scheme would be an innovative partnership to address our needs. It has been the key to Ireland's successful overhaul of their formerly substandard education system, and can be Jamaica's as well.

Ireland's HSCL began in 1990 with the explicit goal of breaking down the barriers of access, progression and attainment in education. In 1997, the OECD commented on Ireland's HSCL saying that "parental involvement, especially in the areas of socio-economic deprivation, does not just benefit the children and the school- it is a crucial aspect of lifelong learning."[a] As the Department of Education and Science states "the guiding principles which underpin HSCL aim to target the causes of educational underachievement by focusing on the adults whose attitudes and behaviours affect the lives of the children."[b] This not only includes parents and guardians, but also teacher and community personnel.

<u>The scheme in Ireland</u>

There is an HSCL coordinator as well as a local committee of the HSCL scheme. There are 12 basic principles that govern the scheme which enlists the complementary skills of parents and teachers:

1. The scheme is unified and integrated at both the primary and the post-primary level. There is a team approach, and only one coordinator serves one family. Also, courses and activities are provided for parents.

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[a] OECD (2003) The Role of National Qualifications Systems in Promoting Lifelong Learning, Background Report for Ireland 2003. On the web www.oecd.org under Publications.

[b] Department of Education and Science (2002), Statement of Strategy 2003-2005

2. The thrust of the scheme is preventative rather than curative. The coordinator works with and strengthens the family so that absenteeism, and other disruptive behaviour, will be reduced.
3. The focus of the scheme is on the adults whose attitudes and behaviour impinge on the lives of children, namely parents and teachers.
4. The basis of activities in the scheme is the identification of needs and having those needs met. All initiatives, including courses and classes for parents, are organized as a direct result of a needs identification process, organized by the coordinators.
5. Parents are a resource for children at home, in classrooms and in the community. With various activities, from paired reading in the classroom at the primary level, to giving seminars/modules on interviewing technique at the secondary level, parents are involved right at the heart of the classroom.
6. Parents serve as community leaders and as educational home visitors. Part of HSCL is the training of parents to be educational home visitors. In this capacity, there is more possibility for reaching the most marginalized families and parents who have been taught in the principles of the program now have the skills to offer support to other families. Parents are equipped with an information pack on the primary or post-primary school, give information about school activities, uniforms, book rental schemes, homework, etc, and they also listen to the concerns of the parent, especially with respect to progression to post-primary. This parent-to-parent contact provides local leadership that can have a multiplier effect for other areas in the society.
7. Home visitation is a crucial element in establishing bonds of trust with families. HSCL is based on outreach. Coordinators aim to be non-threatening and friendly and their basis is "encouragement". Home visits occupy 32% of the coordinator's time.

For its part, Singapore's recent focus on Teach Less, Learn More (TLLM), Thinking School, Learning Nation (TSLN) and Innovation and Enterprise (I&E)[22] at all levels of education is enviable; although reduced and restructured, there is still a heavy reliance on national examinations at the primary level and the advancement from primary to secondary level in Singapore greatly resembles the model in Jamaica, where students sit for an examination, and based on merit, choose their secondary school. We in Jamaica need to move away from this structure because of our limited success with national examinations. However, Singapore has committed to trimming syllabi and offering non-traditional types of accreditation. To this end, in 2008 School Graduation Certificates will be introduced that will reflect students' academic, as well as non-academic, achievements. Also, to reward innovation, credit is now given to student-initiated activities and community-based work. This should be looked at in detail as an approach for dealing with the complex, globalised world that requires unique thinking.

The role of teachers is crucial. As Ireland has shown in its investment in teachers, they are central to improving quality, and so more emphasis should be placed on their working conditions, decision-making role and salaries. Resources to enable this can be derived by cutting the quantity of teachers at the primary level and increasing quality. We cannot overlook the benefits of having well-trained and competent teachers in classrooms. There is strong emphasis placed on quality of teaching in Ireland, Singapore and Finland. Both Ireland and Finland require at least a bachelor's degree to be eligible to teach. In Finland, all subject teachers are required to have at least a master's degree in the field that they intend to teach in. Following the Finnish model of phasing out teacher's colleges and introducing a 5-year degree programme could be a good approach for Jamaica. This could be

[22] TSLN is the MOE's Singapore) vision of a citizenry capable of meeting future challenges with skills gained from an education system geered towards the needs of the 21st century. Part of this vision is TLLM, which is about teaching better and preparing young people for life, rather than preparing them for examinations, and I&E, which tries to achieve a mentality among young people to be inquisitive, think creatively and robustly go about solving problems. (Ministry Of Education, 2006)

achieved by transferring resources from the teacher's colleges to the universities and making admission criteria as strict as traditional university admission, as per Finland's successful example of this.

A key lesson from each country is the importance of being flexible and responding to changes, and the crucial role that a responsive education system plays in this being possible.

We have explored the current educational practices of three example countries; Ireland, Finland and Singapore, which have world-renowned and exceptional school systems, all designed to meet the requirements of a knowledge economy. We have also briefly touched on a country with similar economic constraints- the Seychelles- to demonstrate that reform is achievable. Due to Ireland's history and its current successes, we believe that this country has made the most significant change, and their approach is very attractive for Jamaica's needed reform. Ireland's Home, School, Community Liaison is enviable, and to achieve all other changes to our system, such a scheme would ensure success and sustainability.

8. Networking with and promoting coordination of the work of voluntary and statutory agencies increases effectiveness, eliminates duplication and leads to an integrated delivery of service to marginalized children and their families.
9. HSCL is a full-time undertaking. Coordinators are not engaged in the day-to-day running of classrooms, in order to ensure clear boundaries with respect to areas of responsibility and so that the coordinators focus on their mandate of engaging the adult's in children's lives as well as the community.
10. The liaison coordinator acts as an agent of change in the school and in the community.
11. Community "ownership" of the scheme is promoted through the development of the Local Committee. HSCL coordinators are responsible for setting up a local committee who will identify school-related issues at the community level that impinge on learning. They will work with other interest groups to address these issues.
12. The HSCL coordinator is a highly qualified teacher who is released from all teaching duties and takes on liaison for HSCL full-time. The HSCL coordinator supports the entire family.

Although the Ministry of Education - Jamaica has committed to partnership in principle, there has been no scheme of such a large, formalized scale to promote this. The JHSCL would be Ministry-driven but community led, giving it legitimacy and all stakeholders would feel involved in the partnership. In Ireland, HSCL supports marginalized students, increases cooperation between home, school and community and empowers parents. We can use this example to achieve our greater goals for educational reforms in Jamaica.

Innovative Ideas for Reform

Supported by JHSCL, there are a number of reforms that need to take place to lead Jamaica to becoming a knowledge-intensive economy. They include:

1. Increase number of years of compulsory education from 6 years of education (age 6-12) to 9 years of compulsory education (age 6-15). Children should be required to attend school up to grade 9 and this should be enforced by Truancy Officers.

2. We must transfer resources to primary education, as basic literacy and numeracy are the keys to sustained learning. Investing in basic education is one of the Millennium Development Goals which advocate promoting lifelong learning, based on the principles of the G-8 Cologne Summit Charter on Aims and Ambitions for Lifelong Learning. The Charter, which endeavours to enable people to adapt change, contribute to their communities and garner important skills and knowledge, identifies areas where particularly developing countries need to address with urgency, focuses on education.

3. Phase out the various types of secondary high schools. Implement a zoning system for public schools and strive for equity. We have to see what has been working elsewhere instead of trying to re-invent the wheel. Schools to be re-zoned by community. Each school will serve a particular area and students are assigned to the school in their area. Each school will have the same facilities. In keeping with the Canadian model, students would have the option to attend schools outside of their area if parents feel strongly enough. However, as opposed to the Canadian model where the student pays only the added tax, to try to discourage this option, we in Jamaica could charge the full economic cost to parents exercising this option. To attract good, but ambitious, teachers to particularly challenging environments, pay and other incentives could be

FUNDING TERTIARY EDUCATION

This paper is calling for a substantial increase in public investment in primary, secondary and vocational education. But in a context of high debt, it would be impossible to call for additional government expenditure on education. To free money in the budget to meet this goal, one has to look at offsetting cuts in expenditure elsewhere. One option which is mentioned repeatedly is to eliminate the direct subsidy for tertiary education.

Among the arguments against continuation of the direct subsidy is that the chief beneficiary of higher education in Jamaica is the middle class, the very class most likely to be able to afford higher education. Because the existing funding regime provides an across-the-board subsidy that does not discriminate among recipients as to need, it arguably provides more assistance than is needed by some students but – because the subsidy does not cover the full cost of university tuition – not enough to others who come from lower-income backgrounds.

Furthermore, individual returns to investment in higher education are considerable, and occur fairly quickly, making it logical to ask the chief beneficiaries of that education – the students themselves – to bear its expense. Compounding this is the fact that Jamaica, as a recent World Bank study[c] documented has among the world's highest rates of emigration among university graduates. In effect, therefore, what government investment in higher education is currently doing is subsidizing the development of foreign, developed economies. A funding model which limits these externalities possesses obvious advantages.

Nevertheless, it is also the case that if the Jamaican economy is to become knowledge-intensive, it will need to expand its pool of university graduates. If anything, therefore, government policy should be geared towards widening, not narrowing, the pool of university

[c]. United Nations Economic and Social Council POP/945: Commission on Population and Development, 39th Session, "Feminization of Migration, Remittances, Migrant's Rights, Brain Drain Among Issues, As Population Commission Concludes Debates", 5th April 2006, www.un.org/News?press/docs/2006/pop45.doc.htm)

implemented, rewarding these teachers with a "hardship pay".

4. The quality, competency, efficiency and productivity of teaching at primary and secondary levels should be augmented. Pay and other incentives should be used to increase skill levels and performance.

5. For the first few years, primary schools that are already doing well should receive a lesser proportion of funding than those that need to catch up. Once all primary schools are equitable with the same range of students/teachers/classroom, with all schools having the same set of basic infrastructural requirements, then each school can begin to get an equal share of the funds set aside. With significant funding being diverted away from tertiary education, those primary schools that are already doing well will not "lose" as they will be receiving a lesser proportion of the greater pool of funds.

6. Generic Repeat Design for new school buildings to minimize design costs.

7. Government funding for schools should be allocated in this manner
    a. 65% for primary, 35% for post primary, 5% for tertiary

8. Invest more in the provision and instruction of relevant information technology; Ireland has shown its commitment to information technology, and there has been a significant increase in students studying engineering/technology courses at the third level, preparing students for the technological world. In addition, information technology can extend educational opportunities to target groups and can improve the quality of education through computer instruction, and research through access to the World Wide Web. In our globalised world, communication and modern technology are imperative for success. Computer and internet use should also be introduced at the most basic levels of education in Jamaica.

9. Institute changes in syllabi: Flexibility and new

graduates. And given the current operation of financial markets in Jamaica, in which loans must generally be secured, a privately-funded higher education system would risk marginalising those Jamaicans who come from modest backgrounds but have made it to university or college by dint of their talent and hard work.

Finally, it is important to bear in mind that teaching is but one of the services delivered in higher-education institutions. Research, which is essential to a country's cultural well-being, to its economic competitiveness, and to its policy formulation, is a function in which the government retains a strong interest.

One possible way to reconcile these competing imperatives, therefore, is with a funding model which, first, separates research from teaching; and second, shifts the burden of expenditure for teaching towards the principal consumers – the students – but in such a way as to enhance access and expand higher education.

Research is clearly a function in which there are substantial externalities which, can bring great benefit to a country. Government therefore retains its interest in directly subsidizing research. But it may be useful to a government to fund research not through direct subsidies, but through competitive bidding to government funding agencies. This would permit the government to set broad, transparent policy goals which the granting agencies should serve in the allocation of funds. All the same, if research is to abide by global standards, government must keep a distance from the agencies, setting budgets and parameters, but in no way influencing the allocation of grants, whether to institutions or individuals. Equally, it is important that the government not focus too narrowly on matters of economic efficiency when setting policy goals. Such things as a vibrant literary culture, to use but one example, are important to a people's well-being, and the establishment of such broader goals must also be among the government's priorities.

On the assumption that some tertiary institutions will succeed in attracting a significant part of their budgets from research grants, the shift to a private model of funding for teaching would not necessarily lead to students suddenly having to assume the expense of what is sometimes called full economic cost; the ratio would be smaller than that currently used in institutions like the University of the West Indies Mona when determining what share of

options in curriculum; trim formalized syllabi to be replaced with broad targets, allowing students to creatively achieve targets.

10. Recognize secondary level graduation based on academic as well as non-academic achievement, and also community activities and initiative; It is interesting to note that the Indian experience shows that a focus solely on economic productivity runs the risk of producing students who are not good citizens. This has been used to account for the rise of Hindu nationalist militancy. The need to balance economic goals with political and social ones needs to be maintained.[23]

11. We should look at the introduction of formalized patois into schools by professional linguists. It has been shown worldwide[24] and recently in Singapore[25] that students who are taught their mother tongue or vernacular in schools are more confident and self-assured.

12. A new statement of strategy, incorporating the results from a nationwide survey of all education stakeholders.

13. Articulation of education reform initiated by government, supported by all but with strong support and vision from the public sector. There must be a three-tiered commitment of government, industry and education representatives when developing new policy that culminates in JHSCL. They must articulate what Jamaican education in the 21st century globalised world needs to achieve and commit to its achievement.

their education students currently pay for. Nevertheless, the increase in tuition fees would be substantial. To enable students to absorb this expense, in such a way as to actually increase the number of students who could avail themselves of higher education, government could provide full loans to students for their education, but on terms more generous than the existing regime. Either through its own loan bureau, or through guaranteeing loans provided by private banks, the government would "up-front" the cost of a student's education, paying all interest for the time the student is in school (including post-graduate studies), and for a short transitional period after education has been completed and the candidate is seeking employment.

For this model to function effectively, it would be imperative for the government to create a credit bureau. Upon graduation, students who migrate would then assume the full cost of their loan, and default rates would presumably be low: university graduates who migrate would be highly likely to be legitimate migrants, operating in the formal economy, and thus with a comparatively low propensity to default. Their loan repayments would then provide future revenue which the government could use to expand its loan programme.

The government has a strong interest in keeping graduates at home, though. One way to do this would be for the government, through either tax concessions or the assumption of payments, to assume the burden of payments for as long as the graduate remains in Jamaica. Should the graduate migrate prior to the date's amortization, he or she would assume the burden of the remaining debt. However, were a graduate to remain in Jamaica through the full term of the loan, he/she would have effectively availed him/herself of a free university education. Yet it is likely that the government would make back the cost of this direct, ex post subsidy through the higher tax revenues that would attend a more dynamic economy (the result of more graduates staying at home).

[23] Nussbaum, Martha. (2007) Fears for Democracy in India. *Chronicle of Higher Education*, 18 May. On the web at http://chronicle.com/temp/reprint.php?id=t15b1l92nf46jb6sq8b82dpsct9f9003

[24] J. Fox, (1995) *The Carleton Academic English Assessment: initial inquiry and validity.* Ottawa, Ontario: Carleton University.

[25] Ministry of Education, Singapore, www.moe.ed.sg.

CONCLUSION

More than addressing our particular social problems, a strong educational core as well as the capacity to think innovatively, is now a requirement for survival in our globalised world. With skills in greater and greater demand by employers, labour markets leave very few options for those left with an inadequate level of education. Our educational system must be relevant, inclusive, accessible and of the highest quality. Every single child in Jamaica should be educated in a comfortable environment with very little financial strain on parents. We must find the means to do this or we will inevitably suffer the knock-on consequences.

The financial reality in Jamaica seems to tell us that we have to work with what we have because the funding is simply not available. However, attempts to improve the status quo are, firstly, not working and secondly, not enough. Education is one of the few products that we can rely on in the competitive world. Because of this, our system needs to allow our young people to reach their full potential as well as equip them with critical thinking abilities to ensure current and future economic success.

Globalisation severely affects the labour market, and the skills required, especially in countries like Finland, Ireland, Jamaica, and Singapore which have small, open economies and as such are highly dependent on competitiveness in knowledge and high skills areas to achieve economic growth. This, in turn, increases the demands on their respective education systems. We have drawn on a number of lessons from the Irish, Finnish and Singaporean experiences.

Like Ireland's 2004 country-wide survey, the changes proposed must be preceded by a national consultative process via a nationwide survey to ensure that all stakeholders- parents, communities, administrators, teachers and business leaders- have an opportunity to directly influence education policy formation.

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