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(E)-DUCATION IN ST. LUCIA: MYTH OR REALITY?

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Abstract: There is an ongoing debate on the economic viability of Small Island Developing States (SIDS) in the emerging e-economy. The centrality of ICTs in the current development discourse, suggests that countries have little choice but to embrace ICTs as a pivotal element in their development strategy. As St. Lucia seeks to diversify its economy away from agriculture to a service-based economy, it has become necessary to equip the next generation with the requisite e-skills to help propel that country into the e-age. The paper interrogates the socio-economic implications of the relatively slow uptake of ICTs in secondary schools on the island.

Keywords: ICTs; information communications technologies; Caribbean; St. Lucia; (e)-ducation; development; SIDS; small island developing states.

INTRODUCTION

The post-independence euphoria, in St. Lucia, as elsewhere in the third world, was soon tempered by the realisation that political autonomy and economic growth were not automatic. As a small developing island-state, St. Lucia struggled with what was an appropriate model for its development. Its insertion into the International Division of Labour (IDL) as a producer of primary commodities to serve the 'needs' of the mother country lingered into independence, and indeed the post independence era.

Historically, St. Lucia has relied heavily on the production of primary commodities (tobacco, followed by sugar and more recently bananas) as the mainstay of its economy. The erosion of preferential trade arrangements under the various Lomé agreements has had an adverse effect on the St. Lucian economy: the liberalisation of trade has exacerbated sliding commodity prices on the international market; declining terms of trade and the drastic drop in the volume of production has seen the income generated by that sector halved over the last 5–10 years. Economic diversification, therefore, has become critical for survival.

The government has sought to stem the negative economic impact of liberalisation by seeking alternative economic activities to generate the much-needed foreign exchange. The initial response of the St. Lucian government has been to expand the tourism and financial sectors, with the hope that these sectors would help bridge the financial shortfall. But tourism too, brings with it its fair share of challenges. Given the verticalisation of the global industry, increasingly national governments are left with shrinking shares of the profit generated.

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As this industry becomes more globally competitive, governments are being forced to offer investors more attractive cocktails of incentives, which means reduced tax earnings for the government. Moreover, the massive capital leakages through repatriation of profits, for example, mean that the expected multiplier effect of the tourist dollar is not being realised.

Additionally, given that the tourism sector requires more semi-skilled and skilled workers, the absorption rate of those previously employed within the agricultural sector is (s)low. The government is left to resolve a huge unemployment problem, which is not helped by the many who graduate from high school and tertiary institutions every year, with few or no job opportunities available to them.

The increasing use and absorption of ICTs in the global economy signalled new hope for countries of the region, which like St. Lucia, were beginning to feel the brunt of economic decline associated with declining commodity prices on the global market. For many in the region, ICTs offer an opportunity to circumvent the encumbrances associated with small size and poor resource endowment. ICTs, it is hoped would offer ailing economies the opportunity to diversify away from the production of primary commodities, to the production of high-value added goods and services.

It is little wonder, therefore, that the government of St. Lucia, like many in the Third World, became very excited about the ICT revolution and the promised benefits. The St. Lucian government hoped that the ICT revolution would resolve the historical problems associated with underdevelopment. Additionally, the government was encouraged by the notion that ICTs offered SIDS the opportunity to leapfrog development. Indeed, St. Lucia welcomed the opportunity to utilise

its greatest resource, its people, in its efforts to trigger economic growth and development.

However, immediately, another reality struck, that its people had to be equipped with the requisite skills to enable their full and productive participation in the emerging global knowledge or information economy. Eventually, it became obvious that in an effort to tackle the human resource problem effectively, urgent attention had to be given to the education system and a (re)evaluation of the curriculum.

TECHNOLOGY AND DEVELOPMENT

The term *development* entered the English Lexicon and was widely used in academic and political circles in the post 1945 era. '*Development*' was viewed as a socio-economic project to alleviate the woes of the newly independent countries of Asia, Latin America, Africa and the Caribbean. These former colonies, having recently gained their independence from their Colonial masters, endeavoured to achieve national development. In the latter part of the 1940s and early 1950s, the causes of relative poverty and underdevelopment rose to the top of the global political agenda, championed in part by the United Nations (UN) and its agencies. Since that time countries have used a range of strategies to help attain higher levels of growth and development.

The relationship between technological development and socio-economic growth has long been a subject of debate within the Social Sciences. The transformative nature of technology has been central to the development discourse. As the newly independent states of the third world sought to become 'developed' they were fed a constant staple of 'technology driven' economic growth models. Essentially, the West had benefited tremendously from the Industrial

Revolution, with Europe leading the pack, and the *rest* were required simply to emulate that success. Much of the literature (whether it is the neo-liberal, convergence thesis, the techno-optimistic or techno-deterministic discourse) seems to suggest an automaticity associated with technological change. However, the literature on technological change and development rarely engaged with the issue of what 'technological change' really means for development in peripheral countries, particularly, SIDS.

Notwithstanding this, still, the path to development in the current techno-economic paradigm is very much defined by the innovation, use and application of modern ICTs. As the global economy has evolved to reflect that development, countries can ill-afford to neglect ICTs as a central component of any development strategy.

St. Lucia, a small island economy (like many others in the region) has struggled to find an appropriate model for growth in the face of tumultuous changes both intra-nationally and in the global political economy. ICTs have been trumpeted as the new hope for those previously trapped in the bottom stratum of the global economy. St. Lucia has embarked upon policy initiatives that seek to trigger the requisite changes so as to facilitate its (re)-positioning in the world. The Education sector has been earmarked as the starting point of that endeavour, beginning with integration of ICTs in Schools.

Hence the paper assesses *the socio-economic implications of the relatively slow uptake of ICTs in secondary schools in the Small Island Developing State of St. Lucia.*

REGIONAL E-DUCATION INITIATIVES

The increasing use of ICTs in education is revolutionising pedagogic approaches to learning and teaching. As the world entered the information or knowledge era, all that was needed, assumedly was 'grey matter' – raw brains. That grey matter, however, needed to be schooled in a particular way, to enable their effective participation in the global knowledge and information economy. It is that realisation, which in part informed the global move towards incorporating ICTs in schools, both as part of a new pedagogic approach and curriculum offering.

The desire of governments in the region to utilise technology for pedagogic purposes has found expression in The EduTech 2000 Initiative; The FastForward Initiative and establishing of the University of Trinidad and Tobago (UTT); and the OECS Education Reform Project. But sustainability of these initiatives such as Trinidad and Tobago's Secondary Education Modernisation Program (SEMP), St. Lucia's EDUTECH and TVET projects remain a concern.

OECS education reform

The global economy has been described as a knowledge-based economy. The governments of the region recognise that to participate effectively in the new economy, its people need to acquire skills well beyond the traditional basic literacy and numeracy skills. The rationale for the development of ICT learning outcomes is reflective of technological developments and the required competencies in the new techno-economic paradigm. Much of the impetus for curriculum change and the incorporation of ICTs has been championed by The Organisation of Eastern Caribbean States (OECS)[1] Secretariat.

The Draft ICT Policy for the OECS states explicitly, "the benefits of making ICT an integral part of educations systems today cannot be overemphasised".[2] The OECS initiated curriculum change in the region,

with the view to making ICTs an integral part of modern day pedagogy at the primary and secondary levels of the education system. This is reflected in the various policy initiatives at the regional level much of which has been spearheaded by the OECS Education Reform Unit.

The ICT Plan for OECS educations systems set out some very specific objectives.[3] They are to,

- Promote the harmonisation of activities, approaches and standards in the educational uses of ICT within the Education System.

- Encourage the principals, teachers and students within the education system to use ICT, meaningfully, to enhance the teaching-learning process.

- Ensure that there exists equitable access to ICT resources by all students and teachers within the Education system.

- Demonstrate the Ministry of Education's (MOE) commitment to ensure that all students and teachers attain the skills necessary to be considered computer literate.

- Ensure that all school leavers are provided with the required ICT skills for employment or entry to specialised training in the Information Technology field.

- Foster the concept of Life-Long Learning among students and teachers and also within the general populace of each OECS territory.

- Provide greater professional development opportunities for all ICT educators in the OECS.

- Create a cadre of ICT educators with the requisite skills and competencies to use and promote ICT as a tool in the enhancement of the teaching/learning process.

- Make provisions for the continuous upgrade of the ICT skills of educators.

- Encourage and facilitate the use of the internet as a research and communication tool among students, parents, teachers, principals, other MOE officials and members of the community.

- Provide the avenue for increased electronic networking and collaboration of educators and students in the OECS region.

- Facilitate the implementation of information systems that enhance efficiency within administration.

- Encourage partnerships between the various stakeholders in the Education Sector in undertaking IT related ventures.

- Make provisions for the frequent upgrade of all ICT tools including software used for educational purposes.

- Increase the awareness of intellectual property and copyright laws with respect to the use of software and information in general.

These objectives, at first glance are very ambitious, though, perhaps necessary. The limited success, 7–8 years since the implementation of the policy, is perhaps a function of the plurality of the intent (as expressed in the objectives above).

The objectives have also found expression in requisite competencies for effective and meaningful participation in the e-economy. The OECS identifies these as becoming increasingly relevant in today's work climate. They are:

- inductive thinking

- generalist (broad) competencies

- ICT competencies enabling expert work

- decision-making

- handling of dynamic situations

- teamwork competencies

- communication competencies.[4]

These competencies require explicit, consistent, targeted policy intervention. The countries of the OECS having recognised the necessity for curriculum change and innovation have, therefore, embarked upon various reform measures.

The National impetus

Historically, St. Lucia has faced acute shortages of highly skilled personnel. Hence, the island faces significant challenges in responding to the demands of the knowledge economy ('digital economy'). This is particularly evident in the education sector, where more needs to be done to address the current techno-deficit.

As St. Lucia seeks to diversify its economy away from a heavy reliance on raw material production, it has become necessary to equip the next generation with the requisite e-skills to help propel that country into the information and knowledge age. A key concern is the extent to which the government has been able to incorporate ICTs as a primary pedagogic tool, and whether ICTs form a critical or substantive part of the curriculum offering.

St. Lucia's IT in Education initiatives have been informed largely by the OECS draft Policy on the integration of IT in Schools. In 2002, the MOE embraced the OECS Education Reform Policy, adapting it to its needs, reflected in its draft policy on the integration of ICT in education: proposed policies. The island's program was directed at secondary schools in the first instance, with the intention of rolling it out into Primary Schools eventually.[5]

The draft policy document explains the rationale for integrating ICTs into schools.

It alludes to the changing nature of the global political economy, triggered by the ICT revolution, which has been fuelled by globalisation and the ease of exchange across borders, cultures and people. Moreover, knowledge and information have become critical factors of production in the current techno-economic paradigm.

The policy states explicitly,

> "Knowledge-based industries require an educated labour force of computer-literate individuals who themselves understand and can harness the power of ICT. In response to the demands for producing such a labour force, many countries have changed the objectives of their education system and have directed much of their attention to the development of ICT skills in schools."[6]

The draft policy goes on to explain the anticipated benefits and potential of ICTs. For example, ICTs have the potential to improve student's learning by enhancing the pedagogic process; develop teachers' professional capability; and strengthen institutional capacity.[7]

All 18 secondary schools on the island participate in the CXC IT program and are equipped with computer labs[8] (see Table 1), though at varying degrees of functionality in terms of networking and quality of equipment.[9] In addition, at this level there are various types of labs: for instance, there are labs devoted exclusively to the CXC IT program; those are for internet navigation and general research and then there are those that are part of a Learning Resource Centre (LRC).

The myth exposed

The potential of ICTs to jump-start ailing economies has risen to the top of the global political agenda. However, despite the new

Table 1 Snapshot of ICT resources in schools

School type	Number	ICT profile
Primary schools	86	• 20 Schools have labs
		• Roughly 10 PCs per school
Secondary schools	18	• All have labs
		• Roughly 20 PCs per school

St. Lucia Ministry of Education (MOE).

optimism that pervades much of the discourse on ICTs and development, many of the historical barriers that have thwarted the best developmental efforts of developing nations, continue to pose a tremendous challenge to the full employment and attendant benefits of ICTs (Rigobert, 2006a, 2006b).[10]

Barriers to e-ducation in St. Lucia

1 *The lack of human resources*

Sourcing teachers with the requisite e-skills is proving difficult. This issue is further compounded when in search of teachers with the combined teacher training education and e-skills.

2 *Techno-phobia and aversion to new ICTs*

One of the greatest challenges to the integration of ICTs in schools is the lack of enthusiasm (especially on the part of the more mature teachers), techno-phobia and a seeming aversion to the new technologies. Teachers tend to be lukewarm or timid about the introduction of ICT as the new mode of delivery. They do not have the requisite e-skills to enable them to maximise ICTs as pedagogic tools.

3 *The lack of financial resources*

This has proven to be a monumental challenge to the government. In the midst of an economic crisis, prioritisation often means cuts in expenditure in seemingly less important areas. Often, it is initiatives such as the computerisation of schools that suffer. The Minister of Education lamented that "ICTs in schools" had yet to attract the level of budgetary allocation that was critical to the technological transformation envisaged.[11]

4 *The absence of multiple sources of funding*

The shortcoming delineated at number two, is further exacerbated because of the schools' heavy reliance on the government for funding. Sources of external funding are limited and sporadic.[12]

5 *Limited 'places' in schools*

Owing to the financial constraint alluded to above, secondary schools, such as the St. Joseph's convent, were being forced to restrict the number of students who opt to 'take' IT as an examinable subject at CXC/CAPE. This reflects the extent to which the schools are unable to respond to the rising demand for IT.

6 *The cost of ICT hardware and software*

The exorbitant cost of ICT hardware and software is proving to be prohibitive. Small islands states like St. Lucia with limited budgets can ill-afford to meet that cost.[13] Additionally, families cannot readily afford to equip the home with a PC to augment whatever training or interest the youth may have in ICTs.

7 *The relative absence of a holistic methodology for the integration of ICTs in schools*

The Minister of Education, Hon. Arsene James,[14] alluded to this difficulty. This view is also reflected in part in the Draft policy.[15]

8   *Intra-National Divide: connectivity issues*

Still many schools, especially those in the rural districts have difficulties with networking and connectivity. Though, admittedly, this may not be confined strictly to the urban-rural dichotomy, and may have more to do with economic circumstances.

9   *Maintenance*

Many of the schools can ill-afford the exorbitant maintenance charges. Repairs and upkeep of the equipment are proving to be a tremendous challenge. Very often the schools do not have the in-house resources and are forced to outsource the maintenance of the equipment.[16]

10   *Old or obsolete hardware*

Computers in many of these schools are well over three to five years old, which further compounds the maintenance challenge denoted earlier.[17]

11   *Absence of national ICT-awareness*

While the government and certain pockets of the society have a general appreciation for ICTs, there are still too many corporations, institutions, organisations that have yet to embrace ICTs as key factors of production. In the least, the hope is that ICTs would be seen as enablers, with the potential for enhancing productivity and efficiency and ultimately increasing profitability.

Although the experience varies from island to island, generally, the governments of the region are yet to invest sufficiently in the education sector to trigger a qualitative improvement in the graduates that flood the market at the end of each academic year. The challenges highlighted in the case of St. Lucia suggest that the integration of ICTs in schools is an uphill challenge, and corrective measures need to be consistent and targeted. This of course requires massive investment of capital which perhaps is not as readily available as one might hope.

Moreover, while up until now the focus has been on endogenous impediments, one has to be cognizant of the exogenous factors, the workings of global capitalism that in part have informed this intra-national problematique.[18]

POLICY RESPONSE: RECOMMENDATIONS

Skills and resource deficiencies present two of the greatest challenges to the IT in education initiatives championed by the Ministry of Education in St. Lucia. Additionally there is yet a mass embrace of ICTs as a significant component of organisational development and general business practice. The private sector is yet able to revolutionise its business procedures and processes to reflect paradigmatic changes in the global business environment. That hesitance can prove costly, especially to small and medium enterprises that may be further marginalised in the national and global economies if they do not embrace e-business. There may be very well substantiated socio-cultural reasons for this. Hence, policy formulation and implementation must be rooted in socio-cultural analysis if it is to be successful. There can be no economic analysis that is not steeped within the cultural context of the evolving economy or nation.

The skepticism reflected needs to be tackled head-on. Organisations — both within the public and the private sector — that adhere to traditional processes and procedures must be given incentives that encourage them to make that shift from the old — to the new paradigm of business. The government's efforts to do so, which seem limited, are not helped by the apparent dearth of 'success' stories that could encourage those yet to do so, to incorporate ICTs in the organisational system. Moreover, given the time lag between implementation and real gains (increased

efficiency, enhanced productivity, rising profitability) institutions are slow to embrace ICTs. It is often perceived as an unnecessary capital investment with little or no benefit in the near future. Moreover, the relative absence of a supporting regulatory and financial environment does little to lure institutions into the e-world! Hence, the evident risk aversion and the hesitation of entrepreneurs to redefine business models to reflect the centrality of ICTs. This is most evident in SMMEs.

Therefore, the question remains, is St. Lucia moving towards becoming an information or knowledge society? Is there a rising demand for graduates with the requisite e-skills? Have e-skills become one of the key competencies that employers require?

Recommendations

1. Identify a consistent, reliable source of funding to finance and sustain e-education initiatives.

2. Devise a coherent pedagogic methodology for incorporating ICTs.

3. Initiate 'bridging' opportunities, to link graduates with e-skills to potential employers so that they can be incorporated/absorbed into the workforce.

4. Engage stakeholders (private and public sectors) and indeed the wider population, with a view to sensitising them about the merits of incorporating ICTs into their organisations/institutions and everyday activities. In some cases graduates with e-skills are not afforded the opportunity on their jobs to utilise their e-skills. Some organisations, institutional structures, processes and procedures are still dated.

5. Reduce the cost of ICT hardware and software, making them more affordable for working class families.

6. Create more opportunities for integrating ICT into the curriculum, by equipping teachers with the e-knowledge to facilitate learning and teaching in the information age. (For example, initiate curriculum change at the Teachers Training College, with ICTs at the core.)

CONCLUSION

Since its independence in 1979, St. Lucia has been an agrarian economy. Today, St. Lucia, like several Caribbean countries is heavily reliant on agricultural production and services, especially tourism. The dismantling of the preferential trade arrangements articulated under the various Lomé conventions has exposed St. Lucia to the vagaries of the international market and rendered it volatile and vulnerable to external shocks in the global economy (the negative effects of which are evident in the current financial and economic crisis, for example). The changing tide in the global political economy towards free market economics has meant that St. Lucia no longer benefits from the relative insulation offered by the UK specifically and more generally the EU, and as such is being pitted against bigger more richly endowed economies, with obvious economic implications. The commodity crisis triggered by this wave, has seen the income generated by the sale of primary commodities halved. The attendant economic crisis that this has sparked throughout the Windward Islands has left governments scrambling for viable alternatives.

The advent of new ICTs has ushered in new hope for countries such as St. Lucia that do not benefit from rich natural resources or economies of scope and scale. The developmental potential of ICTs it is hoped will help propel small vulnerable economies like St. Lucia unto the growth

path. However, much of that developmental potential can be tapped into only when some very important prerequisites are met. Increasingly, the youth are being called upon as the new vehicle for the future, as they are best poised to acquire the requisite e-skills to participate more meaningfully in the national economy, and by extension the global e-economy.

However, St. Lucia has had very limited success in fully incorporating ICTs into the education system, and ensuring that the workforce of the future is well e-equipped to participate fully in the e-economy. The findings suggest that the paradigmatic underpinnings and justifications for policy change in the education sector are not well ventilated or appreciated. Technology integration in schools appears to be a priority and is central to the objectives necessary for a new and innovative approach to teaching and learning on the island. Every so often, there is mention of the potential of ICTs, but that rhetoric has yet to be translated into any real policy initiative that attracts the requisite budgetary allocation. Which sometimes raises the question *how much of a priority is it really?*

The paper reveals, therefore, that there are some serious challenges to be overcome should St. Lucia wish to transform its human resources so as to realise the goal of effective participation in the new global e-economy.

BIOGRAPHY

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NOTES

[1] The OECS was established on 18 June 1981 by the Treaty of Basseterre. One of its primary objectives is to promote co-operation among the Member States at the regional and international levels. The OECS comprises nine member states, namely, Antigua and Barbuda,

Commonwealth of Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia and St. Vincent and the Grenadines.

2 OECS Draft ICT Policy: Strategies for Implementing ICT Policies in the Education Systems of the OECS (January 2003).

3 The 15 objectives can be found at Draft ICT Policy. OECS Draft ICT Policy: Strategies for Implementing ICT Policies in the Education Systems of the OECS (January 2003).

4 For a detailed list and discussion see Organisation of the Eastern Caribbean States (OECS) Education Reform Unit Strategic Plan 2001–2010, April 2001, Located at http://www.oecs.org/ oeru/documents/OERU%20 Strategic%20Plan.pdf, Cited July 11 2009.

5 The Ministry of Education (MOE) is currently working on an updated draft policy that seeks to replace the old one. The new policy it is anticipated will be more tailor-made to the specificities of St. Lucia. At the primary school level, therefore, the thrust to have computer labs has had to come from the schools themselves. Only a small number of primary schools have computer labs. Others have incorporated IT technology in smaller Learning Resource Centres (LRCs) in their libraries or classrooms. The MOE is now embarking on a multi-million dollar programme to outfit primary schools on the island with computer labs. This is still at the planning and evaluation stages.

6 See Draft Policy Document for the Integration of ICTs in the School System, pp.1, 2.

7 Ministry of Education, Human Resource, Development, Youth and Sports, Government of St. Lucia. Draft Policy for the Integration of Information & Communication Technology in the Education System, pp.1–2, Located at http://unpan1.un.org/intradoc/groups/public/documents/tasf/unpan024792.pdf

8 Many of the PCs have been donated by Corporate Sponsors, with Cable and Wireless being the largest donor to date.

9 There is great variation in the quantity and quality of hardware available at the Secondary Schools. The more modern schools built within the last five (5) years or so, tend to have more labs, are networked and better equipped.

10 See for example, Rigobert (2006a).

11 Interview with Minister of Education, Hon. Arsene James, 2007.

12 The St. Lucia Chamber of Commerce, Industry and Agriculture; St. Lucia Hotel and Tourism Association (SLHTA), the St. Lucia Small Business Association (SLISBA); and the St. Lucia Manufacturer's Association (SMA); The National Skills Development Center; and The Poverty Reduction Fund and the Basic Needs Trust Fund are some of the institutions that have in the past constructed Computer Labs for various Schools and Resources Centers in several communities. (Draft Policy for the Integration of ICTs in the Education System, Government of St. Lucia).

13 Draft Policy for the Integration of ICTs in the Education System, Government of St. Lucia, notes on p.3, that,

"The introduction and sustainability of ICT in the education system are also expensive. The capital cost of the equipment needed to begin the process is obvious. A little less obvious is the high level of recurrent costs associated with the effective use of ICT, which results in a more accurate analysis of the total cost of ownership. Every attempt must therefore be made to optimise the benefits of such large investments, and to develop cost effective implementation, integration and maintenance procedures."

14 Interview with Minister of Education, 2007.

15 "*These initiatives, however, have been implemented in the absence of a carefully thought-out national plan with guiding policies and strategies*", Draft Policy for the Integration of ICTs in the Education System, Government of St. Lucia, p.2.

16 The Ministry of Education has three (3) IT technicians who are largely responsible for the maintenance of computers in the schools on the island.

17 A recent survey of ICT in Schools in the Caribbean highlights this problem as a significant challenge and shortcoming of the Integration of ICT in Schools initiative. See "Survey of ICT and Education in the Caribbean Volume II: Country Reports. The World Bank, 2009.

[18] See for example, "The continuing relevance of structuralism in assessing prospects for Caribbean development in the new techno-economic paradigm". In World Sustainable Development Outlook 2006. Global and Local Resources in Achieving Sustainable Development. Edited by Allam Ahmed. SPRU — University of Sussex, UK.

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