

# ENHANCING LEARNING IN THE ENGLISH SPEAKING CARIBBEAN THE EXPERIENCE OF THREE EDUCATIONAL PROGRAMMES

## 1. Introduction

Over the last decades many countries have taken great steps toward expanding the coverage of their education systems, increasing the opportunities for their children and young people to gain access to schooling. These expansion efforts have not, however, always produced good educational results. In spite of their passage through school, a large portion of students do not achieve the minimum expected learning levels.

The right to education is the right to develop as an individual in an integral manner, the right to education is the right to learn and not only to have access to schooling. This is set forth in the Education for All Movement on the basis of the Jomtien Declaration of 1990 to “meet basic learning needs”, the first article of which establishes that “*Every person - child, youth and adult - shall be able to benefit from educational opportunities designed to meet their basic learning needs*”, and in its second article states that this “*requires more than a recommitment to basic education as it now exists. What is needed is an "expanded vision" that surpasses present resource levels, institutional structures, curricula, and conventional delivery systems while building on the best in current practices.*”<sup>1</sup>

After eighteen years since the beginning of the Education for All movement, it is still necessary to combine efforts in order to advance toward improving education policies and practices, and for those policies and practices to produce quality learning. It is precisely for this reason that UNESCO has established the Programme “Enhancing learning: from access to success” whose objectives are:

- To share information and models that can influence learning.
- To identify spheres of action to increase and improve learning from early infancy to secondary education.
- To support ongoing research on these subjects in selected countries.

In order to develop these objectives, at the first meeting of experts organised in Paris by the Division for the Promotion of Basic Education of UNESCO’s Learning Sector (March 2008), under the title “Defining Areas of Action to Enhance Learning: from Access to Success”, it was agreed to conduct and disseminate research work that would make it possible to become acquainted with and systematise innovative initiatives in different contexts of countries in Africa, Asia and Latin America. For the region of Latin America and the Caribbean, this task was assumed by OREALC/UNESCO Santiago, which has contributed with three studies:

1. The first paper concerns two case studies conducted in Chile: one at a school in an urban marginal context in Santiago, and another at a school in a rural-indigenous context in Toconao, near San Pedro de Atacama. This study is based on the hypothesis that schools with inclusive practices improve their students’ learning. For this reason, two schools were selected that, in spite of being located in unfavourable contexts, develop inclusive practices and obtain good academic results.

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<sup>1</sup> Jomtien Declaration (1990). Available on line: [portal.unesco.org/education/en/ev.php-URL\\_ID=9838&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/education/en/ev.php-URL_ID=9838&URL_DO=DO_TOPIC&URL_SECTION=201.html)

2. The second paper presents the systematisation of a bilingual inter-cultural education experience "Learning to read and write in Quechua from the Andean knowledge" developed in a school in Paropata, Canchas province (Cuzco, Peru). This study describes how the school has incorporated Andean knowledge in curricular programming and in the classroom, producing changes and improvements in the reading and writing learning processes in Quechua in primary school students. This research was developed by the *Tarea* foundation in Peru together with the OREALC/UNESCO Santiago *Innovemos* network<sup>2</sup>.
3. The third paper is a compilation of innovative education programmes in English-speaking Caribbean countries, the experiences of which were also systematised by *Innovemos Network*. The three selected experiences are: the "Expanding Educational Horizons" programme to improve reading and math levels in Jamaica; the "Servol Hi Tech Centres" programme in Trinidad and Tobago; and the "Caribbean Centre of Excellence for Teacher Training, CCETT" programme in eight Caribbean countries.

Although the three studies address different subjects and are methodologically different in nature, they have the same aim: to describe concrete education programmes and practices that encourage student learning, identify areas that require deeper and more systematic study in order to improve them, and extract lessons learned that can contribute to the development of education policies and practices that will promote significant learning in the students of Latin America and the Caribbean.

This document contains the results of the third of the mentioned studies, called "*Enhancing Learning in the English Speaking Caribbean. The Experience of Three Educational Programmes*". As mentioned, the report refers to three programmes implemented at the national level in three different Caribbean countries. The first of them is Developer by the Ministry of Education of Jamaica and USAID in 71 schools and 6 NGOs with the aim of improving the literacy and numeracy levels. The second is implemented in Trinidad y Tobago, and it is about digital literacy in secondary students. The third programme is in Belize, Dominica, Granada, Guyana, St. Lucia, St. Vincent y las Granadinas, Trinidad y Tobago, for teachers of primary education.

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<sup>2</sup> The Regional Education Innovations Network INNOVEMOS is an interactive site and permanent forum for reflection, production, exchange and dissemination of innovations and educational change. It seeks to contribute to improving quality and equality in education in its various modalities and programmes. Innovemos Network provides an opportunity to act on the commitment adopted at the World Forum on Education for All (Dakar, 2000) by participating countries. The key strategy driving this commitment is the exchange of good practices among the various countries, while it also represents an essential scheme to monitor and follow up the Regional Education Project for Latin America and the Caribbean (PRELAC), approved by the ministers of the region in 2002. For more information see <http://www.redinnovemos.org/>

## **2. Programmes for Enhancing Learning: A brief overview of three experiences**

### ***Expanding Educational Horizons (EHH)***

The programme is designed to improve the standards of literacy and numeracy in primary schools and students of non-governmental organizations through innovative teaching-learning strategies for literacy and numeracy including using technology as a tool to deliver curriculum content. The programme is also data-driven as teachers in the project schools are trained and encouraged to use Jamaica School Administrative Systems software (JSAS) to input data on their students, to monitor and to evaluate their students' performance. The programme in the primary schools is age and gender sensitive. Specifically, there is a gender awareness component that relates to differences in the teaching of and learning by boys and girls, and particularly among boys. Teachers are trained to be gender sensitive, to recognize gender biases and to explore concepts of sex and gender in the schools. Built into the programme, too, is the involvement of parents, the community and the private sector.

The programme employs the cascade training model. All project schools are expected to 'pass on' or cascade teaching and learning methods and strategies they received by transferring their training to teachers in their schools and in neighbouring schools. In effect, resource teachers in project schools are expected to share (cascade) best practices within their schools and in non project schools.

#### Educational and social context

The low levels of performance in literacy and numeracy among students are a major national concern. In particular the low level of achievement in these subjects in the national Grade 4 achievement tests has been disturbing, especially as they form the base for success in other subject areas.

There are a number of reasons cited for low levels of performance in literacy and numeracy that relate to home, school and the society in general. Limited material and other resources in homes and schools, limited interest in reading by students who prefer to watch television, play video games etc, the absence of models of good readers in the home, and traditional reading methods have contributed to the low levels of performance.

#### What are its origins and why did it emerge

The Expanding Educational Horizons project builds on the previous New Horizon for Primary Schools<sup>3</sup> and the Upliftment of Adolescence Projects<sup>4</sup>, which were also sponsored by the United States Agency for International Development (USAID). These programmes focused on improvement of literacy and numeracy in the primary schools. Building on the successes of these past programmes, the present programme continues to focus on the improvement of literacy and numeracy among students in the 71 primary schools and 6 NGOs. The present programme is in fact a second phase to

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<sup>3</sup> The goal of *New Horizon for Primary Schools* (NHP) is to strengthen the ability of schools and parents to improve student performance in reading and mathematics. The NHP employs a holistic, student-centered approach to improvement of instruction and learning in mathematics and reading. For more information: <http://www.moeyc.gov.jm/projects/newhorizons/index.htm#about>

<sup>4</sup> The Uplifting Adolescents Project (UAP) is a joint project of the Governments of Jamaica and the United States of America and financed by a grant from the United States Agency for International Development (USAID) /Jamaica. For more information <http://www.jamaica-kidz.com/about.php>

these earlier programmes with a major difference - this is to graduate schools that are functioning optimally.

### Rationale and theoretical/philosophical framework underlying the programme

The programme is based on the philosophy, espoused by the Ministry of Education in Jamaica, that - 'every child can learn, every child must learn'; specifically, 'every child can achieve high levels of literacy and numeracy and every child must.' Based on recent studies concerning the importance of technology-assisted learning, specifically how children are responding readily and well to learning in that way, the Ministry is emphasizing the use of technology in the classroom. Additionally, the involvement of parents in their children's schoolwork has also been shown to make a great impact on the level of work that students produce. Thus there is the drive to get parents involved in helping their children to learn.

### General and specific objectives

The aims of the project are:

- To improve literacy and numeracy among students in selected primary schools and NGOs
- To encourage greater support to foster sustainability from other stakeholders such as parents, community and private sector for literacy and numeracy
- To incorporate technology as a major tool for the delivery of the literacy and numeracy curriculum
- To assist school management teams through institutional strengthening and to support sustainability.

### Structure of the programme: Stages, processes, strategies, and activities

The work of the project is organized and monitored from the Project Implementation Unit (PIU). The PIU staff includes 2 numeracy specialists, 2 literacy specialists, 2 educational technology specialists and 2 JSAS specialists. The PIU is headed by the Chief of Party/Project Director.

Each school is expected to engage facilitators such as teachers, subject and resource specialists and other stakeholders to support school development planning and the various interventions in each school.

The recommended support at the school site will comprise of the following personnel: School principals; Project specialists; Resource specialists; Territorial Education Officers; The Curriculum Implementation Team; Resource Teachers (including representatives from 6 NGOs); Stakeholders, partners and the schools' communities.

The 71 primary schools are placed in clusters for training purposes. Principals recommend teachers, who are trained as resource teachers. These resource teachers in turn, share their training with other teachers at their schools. The trainers of the resource teachers, the PIU and Resource Specialists, introduce creative and innovative strategies for the teaching of literacy and numeracy. Additionally, they engage resource teachers in the use of technology to enhance the delivery of the literacy and numeracy curricula, as well as train the resource teachers to be gender sensitive in their pedagogical practices. Training also involves on-going site visits, workshops and

clinical supervision. These activities are aimed at supporting the work of the resource teachers.

The resource teachers are thus teachers who have been trained to be computer literate, to be comfortable using technology assisted writing tools such as AlphaWord or AlphaSmart or technology assisted reading tools such as Dana with Writeoutloud software. They learn to create and engage their students in digital storytelling. Additionally, they are introduced to Web Page Development, possibilities with Power Point and professional development online. The production of interesting reading texts and the enjoyment of reading and writing by students have been some of the outcomes. This has also led to a significant rise in literacy and numeracy levels.

These teachers have also been exposed to current reading methodologies. These included ways of teaching fluency such as teacher modelling fluency, using literature texts to teach maths, using reading strategies for comprehension such as QAR<sup>5</sup> (Question Answer Relationship), use of Readers' Theatre to aid writing.

### Balance of the programme

#### *Strengths and achievements*

- There is a one to one interface between resource specialists and resource teachers in schools. Resource specialists will also visit schools to observe teaching, the learning situation and to offer on-site training and support. Resource specialists, moreover, act as facilitators and not as supervisors.
- There is regular training of resource teachers
- The use of technology to enhance the delivery of the literacy and numeracy curriculum. This includes the use of technology assisted writing tools, for example AlphaWord or AlphaSmart; technology assisted reading tools, for example Dana with Writeoutloud software, use of computer-based numeracy software, for example Math Amigo.
- Teachers are generally now comfortable with the use of technology.
- The production of mini-guides to assist teachers with strategies for improving literacy, numeracy and the use of technology.
- The sensitization of teachers to gender issues (especially improving the performance of boys) in their pedagogical practice to improve standards of literacy and numeracy.
- The graduation of 17 project schools based on the criteria: improved standards of literacy and numeracy as reflected on the national grade 3 numeracy and grade 4 literacy tests, good classroom practices along with a school improvement plan, the regular use of JSAS in the school, a School Board in place, and private sector support in place. These schools now operate as models for other schools and share best practices. Though graduated they still receive training and visits and project personnel.

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<sup>5</sup> QAR means Question-Answer Relationship which is a way to help students figure out how to go about answering questions based on a given text. More information <http://www.greece.k12.ny.us/instruction/ELA/6-12/Reading/Reading%20Strategies/QAR.htm>

- The EEH project has developed, implemented and analyzed a numeracy test at the grade 4 level, called the General Achievement of Numeracy (GAIN). This test has been recognized by the Ministry of Education and will be used nationally in 2009.

#### *Limitations*

- The human resources needed to manage this extensive project in 71 schools are limited.
- Resource teachers' continued use of the new strategies in their classroom needs to be ensured. These strategies though more effective than strategies previously used, require different skill sets, such as the use of technology and are therefore deemed more demanding.

#### Projections

- The vision is that more schools will graduate. This will increase the number of model schools sharing best practices in literacy, numeracy and the integration of technology.
- Significant improvement in literacy and numeracy among students in primary schools and NGOs.

## **Servol Hi-Tech Centres**

The Hi-Tech Programme seeks to provide training in computer literacy and advanced electronics to graduates of SERVOL's<sup>6</sup> Adolescent Development Programme (ADP)<sup>7</sup>, in order to meet labour market demands in specific growth sectors of the economy of Trinidad and Tobago. The Hi-Tech centres turn out over 400 graduates each year with certificates in Computer Technology, Digital Electronics, and Computer Control Electronics.

### Educational and social context

In Trinidad and Tobago, many young persons, mainly urban males, are increasingly dropping out of the formal school system or failing to achieve at the required levels. There is therefore great potential for deviant behaviour from these youth, which would constitute a serious threat to the social order.

There are two distinct educational paths at the secondary level: 1) the traditional grammar school sector, which offers 5–7 years of continuous schooling in mainly denominational schools with successful academic records. The students selected to attend these schools are for the most part the high performers in the national selection examination at the end of primary schooling; 2) an alternative sector, which was established after 1970 to provide a secondary education to the majority of students who were previously denied this opportunity. The majority of schools in this sector are two-tiered. The first tier is the junior secondary sector (Forms 1–3), which was mostly offered on a shift basis (this is gradually being phased out) to the 11–14 age group. The second tier is the senior comprehensive, which comprises two years (Forms 4-5). Some of the schools in this sector are composite schools, offering 5 years of schooling (Forms 1-5).

The curriculum offered in the schools of this alternative sector is quite varied, comprising of some academic subjects, but with an emphasis on technical and vocational subjects. The schools are very large, which result in some management problems, and the sector tends to be plagued by chronic underachievement and some degree of stigma because of the perceived low status of the schools. Many of the students attending these schools are low achievers from low socio-economic backgrounds, and many leave school without certification. A significant number of the schools in this sector are characterized by higher than average levels of aggression, violence, and delinquency, and the students tend to experience high levels of frustration because they find that the curriculum lacks relevance to their lives. The clientele for the programmes offered by SERVOL is mainly likely to be dropouts from this sector.

SERVOL (Service Volunteered for All) was born in the aftermath of the 1970 “Black Power Revolution,” also known variously as the “1970 Revolution,” the “Black Power Uprising” and the “February Revolution.” A number of events between 1968 and 1970 culminated in this revolution: the passing of an Industrial Stabilization Act had fomented

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<sup>6</sup> Servol (Service Volunteered for All) defines itself as an organization of weak, frail, ordinary imperfect yet hope-filled and committed people seeking to help weak, frail, ordinary, imperfect, hope-drained people become agents of attitudinal and social change in a journey which leads to total human development. It does so through respectful intervention in the lives of others and seeks to empower individuals and communities to develop as role models for the nation. More information on line: <http://community.wow.net/servol/>

<sup>7</sup> The Adolescent Development Programme (A.D.P.) is designed to prepare adolescents for training in marketable skills by allowing them to understand themselves and to open themselves up to caring, sharing and loving. They are also given basic knowledge of their country and in many cases basic skills of reading, writing and counting. More information on line: <http://community.wow.net/servol/>

labour unrest; there was growing unemployment, especially among young people; many felt that the black government of Dr. Eric Williams had not done enough to help the majority of poor people of African and Indian descent; and there was widespread interest in the Civil Rights movement and the growth of militant groups like the Black Panthers in the USA. The imprisonment of some Trinidad and Tobago students in Canada, coupled with public disillusionment with the Government was the catalyst for the first major demonstration in February 1970, in which thousands of young people took to the streets, led by the National Joint Action Committee (NJAC)—a coalition of some 26 groups and organizations, including youth groups, trade unions, and student, sporting, and cultural organizations. A large number of these youth represented the disaffected poor of the towns and cities. This massive demonstration was followed by many other marches and protests behind the slogan of “Black Power,” with the most urgent demands relating to the need to get rid of racial discrimination in the society in general and in employment in particular. The marches reached a peak in April 1970 and the Government declared a state of emergency on April 21 and imprisoned the main leaders of the movement. Members of the Defence Force staged a mutiny in response but, with the help of the US Government, the Government was able to retain control of the country and repress the movement.

Many of the young people who took part in these demonstrations came from the Laventille area—a depressed urban community bordering the capital of Trinidad, Port of Spain. Following the events of the Black Power Revolution, Fr. Gerard Pantin, a Roman Catholic priest and teacher at a leading denominational boys’ secondary school in Port of Spain, decided to go into the Laventille area to find out how they could help the residents with the various problems they faced. Out of this approach, Servol (Service Volunteered for All) was born and has been working since to make a difference in the lives of marginalized youth, through its skills training and ADP programmes.

#### What are its origins and why did it emerge

SERVOL was founded in 1970 to help disadvantaged children and young people from marginalized areas of Trinidad and Tobago. By 1995, it had trained over 50,000 adolescents and provided them with marketable skills. However, as the country moved into the technology era, SERVOL realized that unless the young people who came to their programmes were computer literate, they would find it difficult to find employment and would remain in low-wage occupations, with little hope of upward mobility. The Hi-Tech programme was therefore developed as an enhancement of the existing skills training programme, with the intention of providing technological skills to SERVOL graduates, thus making them more marketable or assisting them to become efficient and effective entrepreneurs.

#### Rationale and theoretical framework underlying the programme

The SERVOL Hi-Tech centres were established to provide additional, critical skills to the graduates of SERVOL’s “lower skills” centres, namely computer literacy. With the rapid pace of technological development in the country and the region, SERVOL realized that unless the young people who came to their programmes were computer literate, they would forever remain “hewers of wood and drawers of water.” Computer literacy skills were therefore deemed necessary for finding and winning employment in Trinidad and Tobago’s rapidly developing economic environment. This programme fits into the overall SERVOL philosophy of empowerment. It seeks to empower marginalized young people to participate as productive citizens in a modern technology-driven society.

## General and specific objectives

The project aimed to:

- Develop three hi-tech centres in Trinidad to offer courses in computer literacy, advanced information technology, computer repairs, digital electronics, and programmable control logic;
- Equip the centres with electronics and computer equipment, including standard, commercially available software and consumable materials;
- Design, develop, and implement a flexible curriculum, which responds to labour market needs in the sub-sectors of electronics and information/computer processing, and deliver this curriculum to 1,200 adolescents per year; and
- Utilize the programme as a model to be used by institutions throughout the Caribbean region in equipping disadvantaged youth with information technology/computer skills.

## Structure of the programme: Stages, processes, strategies, and activities

The programme is decentralized into three zones: North, Central/East, and South. Each zone has an administration consisting of the following members:

- Executive Coordinator: carries out the functions of the School Supervisor in the formal school system, with responsibility for all the centres in the zone. Reports directly to the Head of Servol
- Assistant Executive Coordinator: handles all the administrative work for the central executive and liaises with the Board members of the various zones to ensure that they are operating the centres as stipulated by Servol. Reports to the Executive Coordinator
- Instructors: similar to the teachers in the formal school system. They interact with the trainees on a daily basis and tutor them in the various skill areas. If a trainee shows signs of having problems with reading, they would inform the Training Team, who would then assess the trainee and start tutoring that trainee using the programme developed by the Adult Literacy Tutors Association (ALTA)<sup>8</sup>
- Job Training Officer: responsible for finding employment for all or most of Servol's trainees upon graduation. A tracking system has been designed to track all trainees who are employed for a period of 18 months after leaving Servol
- Counsellor/Travelling Counsellor: one part of the Healing Team (the other part being the Art Analyst). Reaches out to and guides troubled or problem trainees. The coordinators and instructors in the zone will communicate with the counsellor if trainees display signs that indicate that they are in need of help. Upon consultation, the counsellor will go into the centres and counsel each trainee separately and report findings to the Executive Coordinator and the Head of Servol

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<sup>8</sup> For more information: <http://www.alta-tt.org/>

- Art Analyst, one part of the Healing Team (the other being the Counsellor): examines art work to determine the mood or character displayed from the drawing. As a consequence of the analysis, may recommend a trainee for counselling
- Secretary: performs all the typing and filing for the personnel at the centres, and may sometimes do some bookkeeping because of responsibility for handling the centre's petty cash and collection of school fees

The courses provided include:

- Computer Literacy: The modules cover Introduction to Computers, Disk Operating System, Windows XP, Microsoft Word 2003, Microsoft Excel 2003, Microsoft Access 2003, Internet/E-mail
- Electronics: (1) Level 1 modules (Basic): Occupational Health and Safety Practices; Use, Care and Operation of Test Instruments; Fundamentals of Electricity and Electrical Components; Electrical Machines and Batteries; Semiconductor Principles; (2) Level 2 modules (Radio): Signal Transmission Reception; Audio Sources and Classes of Amplifiers; Power Amplifiers and Transducers; (3) Level 3 modules (Television): Television Systems; Video Sources and Accessories
- Digital Electronics: The modules cover Analog and Digital Circuits, Semi-Conductor Devices in Digital Circuits, Logic Circuits; Integrated Circuits; Flip-flops; Conversion in Electronic Technology; Use and Care of Precision Instruments
- Computer Repairs: The modules cover Core Hardware and Core Software

In addition, the programme offers enhancement sessions to help prepare students for the world of work, and a job training programme where all students enter the workplace for a period of six months.

SERVOL uses three types of assessments to evaluate students' performance at the centres: (1) the Cambridge Skills & Career Awards in Information Technology (CIT), (2) the national Examination Council (NEC) examinations, and (3) internal examinations.

The programme seeks to achieve its objectives through three major strategies:

1. The Education and Training Component: This component is comprised of two programmes: the Adolescent Development Training Programme (ADTP) and the Job Skills Training Programme (JSTP).
  - The ADTP provides a skills complement to the job training and self-employment training. It focuses on developing productive attitudes; social, financial, and communication skills; occupational literacy and numeracy; and self-development and business skills. This training last for three and a half months and is compulsory for all trainees
  - The JSTP addresses the technical training aspects, and is aimed at developing and delivering curricula and course syllabi based on labour market needs in the following content areas: Computer Literacy, Computerized Book-keeping, Introduction to Programme and Software Development, Data Entry, Electronics Trouble Shooting and Repair, Computer-Assisted Design (CAD), Desktop

Publishing, Introduction to Network Maintenance, On-line Data Retrieval, and Inventory Management and Ordering. The computing elective is 3 months for trainees doing computer literacy only, and six months for those doing computer repairs. The electronics elective is 9 months.

2. The Post-Training Assistance Component: This component is an extension of the JSTP. It seeks to provide work experience placements for trainees who want to enter the job market; to promote self-employment initiatives; and to provide scholarships for graduates from the programme to pursue advanced/more specialized training provided by other institutions.
3. The Programme Management Strengthening Component: This component aims at providing SERVOL with organizational supports to enable it to better manage its programmes.

### Balance of the programme

#### *Strengths*

- The administrators of the programme believe that the trainees' exposure to the Hi-tech computer programme adds values to the skills they acquire in their respective skills programme and the ADP.
- There is a high degree of professionalism, dedication to work, competence, caring, and forward thinking among the coordinators, assistant coordinators in the programme.
- There is a high level of motivation among the trainees because of SERVOL's caring attitude, the design of the programme, the incorporation of the ADP, and the awarding of scholarships to institutes of higher learning. Consequently, the drop-out rate is fairly low.
- Financial resources are available to sustain the programme.
- Training facilities are spacious, airy, and well ventilated, with comfortable furniture.
- The management team provides valuable supervision, with continuous evaluation of the instructors to ensure that appropriate standards are maintained.
- The programme has a built-in work experience placement (on-the-job) training component, which contributes to graduates of the programme achieving a high rate of success compared to comparable national programmes.
- The inclusion of the ADTP component is a valuable addition to the programme since it builds key emotional and attitudinal competencies in trainees, a necessary requirement for this target group.
- The programme has a strong relationship with private sector partners, who assist with job placement and in the ongoing upgrade of the programme.

## *Weaknesses*

- The modern work environment is intensively technology driven, with a resultant demand for highly skilled tradespersons and technicians in both the public and private sectors. The Computer programme offers basic computing training, which does not really provide the skills required to function effectively in such an environment. It is felt that the programme needs to keep pace with the demand for technology in the workplace by including more technology-related modules in the computing elective. Bookkeeping and Accounting contribute about 100 contact hours to this elective, which is seen as adding little value to the trainees' technological base. Instead, trainees might gain more through further structured training that links their knowledge to the various applications to specific subject areas, for example, accounting software and basic accounting skills.
- The Electronics programme does not provide a good enough grounding in basic electronics to enable graduates of the programme to function effectively in the work environment. At the Hi-Tech centres, training is provided on highly sophisticated equipment which is not available at most of the job sites at which the trainee is likely to seek employment. This means that trainees generally lack both the theoretical and practical skills required in the field, and may have to be retrained by the employers.
- There are concerns about the readiness of the trainees accepted for the hi-tech training, especially those coming from the SERVOL Life Centres, with respect to their levels of numeracy and literacy. It is believed that students should come fully prepared to handle the hi-tech subjects, so that they should master literacy and numeracy before they enter the Hi-Tech centres. Because of this lack of readiness, in many instances, trainees have to miss some of their skills training classes in order to attend literacy classes. Especially in electronics, there is need for a numeracy capability since this skill area demands the use of calculations and equations. Given the literacy and numeracy shortcomings of the trainees, there may be need for additional preparation to enable trainees to reach the required levels before beginning the Hi-tech training.
- It is felt that the time allocated for the programme is too short to adequately prepare trainees for the world of work. In some instances, some of the components of the programmes could not be completed in the time available. In the case of the Computer programme, the 3-month duration is inadequate for the training required, so that many trainees may leave the programme without being properly trained and would therefore not be ready for the job market. It has been suggested that the tuition period be followed by a practical workshop to develop practical skills before allowing trainees to proceed to job training.
- The programme needs to be certified/ accredited by a recognized examination body. This is critical to the long-term sustainability of the programme but, additionally, it would have a positive impact on the morale of graduates trying to find employment and/or matriculate to higher levels of learning.

## *Risks*

- There is concern that exposure to the Hi-tech programmes, particularly the computer programmes, raises expectations on the part of the trainees that the programmes are unable to fulfil in the available time frame, the aptitude of the

students, the software packages in use, and the requirements of the labour market.

- Trainees from the Computer programme appear to be resentful when recruited into work environments that are not computer driven and they are asked to perform what they consider as menial tasks. However, their training programme does not prepare them for immediate absorption into high-level technological environments.

### Future projections

Evaluations of the programme have made recommendations for the future development of the programme, among which are the following.

- The Electronics programme should be extended to ensure that trainees acquire the basics of electronics theory and are capable of performing elementary numerical operations, and that they are exposed to in-house practicums before proceeding to on-the-job training.
- Expansion and upgrading of the computer hardware.
- Development of an in-depth skills-based computer programme to meet the demands of trainees interested in pursuing a career in computer skills.
- Introduction of a course in basic language skills to enhance the learning capacity of the Hi-tech trainees and to assist them in communicating effectively.
- Revision of the Electronics and Computer Literacy curricula.

## ***Caribbean Centre of Excellence for Teacher Training (CCETT)***

The programme is characterized by its extensive use of feedback of information to improve the skills of literacy teachers and the literacy proficiency of students. The reading instruction is data-driven as reading assessments are both summative and formative in nature. In other words, reading assessments are treated not only as final results but also as diagnostic and, therefore, used to inform teachers about the specific aspects of the teaching and learning of reading that require attention. Consequently, the approaches to the teaching of reading are specially created to meet the needs of the individual classes. CCETT, in fact, emphasizes differentiated reading instruction.

CCETT classes are also known for their transformed classrooms. Their print-rich environment, reading corners with exciting books for children, extensive reading aloud sessions, activity centres, use of technology such as listening labs, and their creative and imaginative approaches to the teaching of reading are highly conducive to the teaching and learning of reading. Additionally, there is on-going site training of teachers by reading specialists which improves teachers' effectiveness by upgrading their knowledge as well as encouraging high levels of commitment. The establishment of literacy faculties at most of these schools furthers the upgrading of teachers as they share best practices and collaboratively engage in problem solving and in creating strategies to improve their students' literacy.

There are five connected components:

- Diagnostic tools to assess student performance
- Teaching and learning materials focused on addressing key reading problems
- Teacher training to improve teachers' pedagogical skills, including training to use the tools and materials
- Action research to enhance the teaching
- Information and communications technology to support the other 4 components by linking institutions and sharing best practices

### Educational and social context

The schools are specially selected for the programme. Situated in marginalized communities, these are disadvantaged schools with few resources and as generally follows low –performing schools. Most of the students are from homes with single, unemployed or under-employed parents with low incomes. School feeding programmes usually have to be put in place in order to assist these students.

### What are its origins and why did it emerge

The Caribbean Centre of Excellence for Teacher Training was established in 2002. It is one of three centres to be established in Latin America and the Caribbean under a Summit of the Americas Initiative. Based on the concern for low reading levels in the region, these centres were established to provide innovative leadership to strengthen reading instruction in the early primary grades (1 to 3).

## Rationale and theoretical/philosophical framework underlying the programme

The philosophy underpinning this programme is that all children need to learn to read at an early age. If children are able to read at Grade 3 level, they are likely to continue improving their reading and to become good learners and good citizens.

## General and specific objectives

The programme aims to:

- Provide innovative leadership in inspiring, empowering and equipping teachers at Grades 1-3 of primary schools in their endeavour to teach reading
- Train teachers in the use of best practices in reading instructions
- Develop diagnostic tools to provide teachers with data for use in the development of reading intervention programmes to meet the needs of their students and assess reading achievement
- Provide in-service professional development in the teaching of reading to teachers, thus allowing them to keep abreast of the latest developments and best practices in reading instruction
- Ensure that all graduates from the teacher education programmes acquire the skills and knowledge to enable them to become competent teachers of reading

Supporting these goals are 3 other goals:

- To produce and/or purchase, for project schools, teaching and learning materials that are appropriate and culturally sensitive
- To design, develop, implement and evaluate special interventions to improve reading in project schools and disseminate strategies of proven success to wider school systems.
- To use information and communication technology to enhance and support all aspects of the operation

## Structure of the programme: Stages, processes, strategies, and activities

The programme is designed for the 14 Commonwealth Caribbean. There are 2 zones: one zone is that of the Eastern Caribbean and the other is that of the Western Caribbean. The headquarters or the central Project Implementation Unit (PIU) for the programme is located at the Joint Board of Teacher Education, The University of the West Indies, Mona, Kingston, Jamaica. A smaller PIU office is located at the UWI Cave Hill Campus in Barbados. The administration of the programme is effected through a Director, 2 Deputy Directors, a coordinator, 2 teacher trainers, 1 test and measurement specialist, 2 information and communications technology (ICT) specialists. The Directors are part time staff.

In each country in which CCETT is established, the selected schools are organized into clusters with countries having one or more clusters of schools. Jamaica, for example, has 6 clusters. Each cluster has a Cluster Administration Unit (CAU) which is linked to a teachers' college. So the 6 clusters in Jamaica are connected with 6 teachers'

colleges. Belize, Grenada, Guyana, St. Lucia, St. Vincent and the Grenadines have one cluster each. All these clusters report to a Cluster Administration Unit.

In Dominica and Trinidad and Tobago, however, this model has changed. Instead of the clusters of schools reporting to a CAU they report to the Ministry of Education. Because of funding arrangements the Ministries of Education in these countries play a more extensive role.

Each cluster is assigned a reading specialist, an ICT specialist, and is supported by the Project Implementation Unit.

Implementation in schools follows this pattern:

- Selection of schools and classes: Schools are selected based on their low-performance status and their marginality. Grades 1 to 3 classes in these schools are automatically selected.
- Orientation Sessions: After selection, schools undergo orientation sessions. These sessions are conducted in order to ensure that principals and teachers understand the nature of the programme and that they develop a commitment to the programme. Additionally, principals are trained to be instructional leaders so that they are enabled to offer guidance to their teachers in the programme. This is also accompanied by orientation sessions for the reading specialists and ICT specialists.
- Pre-tests for students: Pre-tests of students in the grades 1-3 are then conducted to find out students' reading levels and their reading dimensions. A profile of each student is created. The profile of the students is then used to determine the emphases in the reading programme for the classes. Moreover, teachers are trained to use the data, to attend to the class as a whole but also how to offer differentiated reading instruction. Such differentiated reading instruction includes gender differentiation.
- Material Provision: Each school is provided with material and books for a class library, listening labs and other instructional material as requested and as funds permit. Books are obtained mainly through donations from major publishing houses. Some books are purchased and some materials are generated.
- ICT network established: An ICT network is established to enable communication via the internet with the Cluster Implementation Unit, CIU, with colleagues across countries and the region. Data are also uploaded for the country implementation unit which is then sent on to the central office.
- School Visits: Regular visits by the reading specialists provide on-site training for teachers. The reading specialists also organize workshops for the schools and classes at the different grade levels. These specialists are also responsible for the reading assessment.
- Post Tests: Post tests are administered routinely. They are both summative and formative. They are used as final grades and used to analyze where and what intervention is needed in the programme.
- Meetings: Regular meetings of teachers, of principals respectively provide opportunities for review, for sharing best practices and for the designing of strategies to meet particular and solve problems.

## Balance of the programme

### *Strengths and achievements*

- Use of data to make decisions about reading instruction and to provide reading instruction
- The proximity of teachers to reading specialists. In all the countries where CCETT is established the Cluster Implementation Unit is situated within the locale of the school
- There is frequency of contact between teachers and specialists
- There are on-going site visits and training
- There is collaborative problem-solving. Teachers are empowered to find solutions and to devise new strategies for teaching reading. Having received this sound foundation, literacy teachers are expected to eventually perform independently of the programme themselves becoming resource persons for other teachers.
- Teachers performing at the level of excellence are recognized and awarded at an Awards Dinner for principals and teachers of excellence. Such recognition serves to motivate and inspire the teachers to strive for excellence.
- The success stories of teachers and teachers have encouraged other schools, locally and regionally, to become involved with the CCETT programme
- The level of performance of the schools has improved significantly. Parents are now beginning to see these schools as the schools of choice.
- For the first time, several students in these schools win top places in national assessments
- In most schools, students are now able to read at or above their grade level. Students deemed at risk are now reading at or above their grade level.

### *Limitations*

- The ICT components are expensive and out of the reach of most countries. A model is, therefore, needed that will make less demand on ICT.
- The on-going technical support that is required is also costly.
- There is the need for a closer relation between the project and the university in which it is located in order to facilitate research and the generation of new ideas

### *Risks*

- There is the concern for sustainability of the programme. Countries may not be able to finance the programme from their national budget after USAID funding ceases.

## Future Projections

The long term goal is to 'cetterize' the whole school in which the programme operates, that is, to have the whole school follows the CCETT model. An additional goal is to introduce the programme into all the Commonwealth Caribbean countries.

### 3. Conclusions

The three presented programmes are implemented nationally by the State, with the support of international cooperation, and are related to the development of numeracy, literacy and digital literacy. In addition, all of them incorporate teacher training and the use of communication and information technologies, ICTs, as part of their implementation strategy. Due to these common criteria, it is possible to make some general reflections that relate to the three of them and to point out some future challenges based on their reading.

We live in a digital world in which it is necessary to handle ICTs to gain access to a better quality of life. These experiences show, on the one hand, the importance of incorporating these technologies to school and the classroom and, on the other hand, to develop skills related to the use of these technologies as means to develop other competencies such as literacy and numeracy. In addition, the incorporation of ICT aims to maintain the motivation of students, a topic of particular importance in the case of male children in the Caribbean.

However, the incorporation of technology is not an end in itself but a means to develop learning, and should be part of a comprehensive educational intervention to achieve the educational goals. These experiences are an example of the use of technology as a support for learning, and are part of a more comprehensive plan that incorporates other elements, such as teacher training. However, even if teacher training in the management of ICT is important, it should not be forgotten that teacher's pedagogical role is much broader. ICTs are a tool for the teaching, but teacher's main task remains to be orchestrating learning to give an adequate response to each of their students.

It is also very important to equip schools with some minimum technology infrastructure and connectivity. However, it is necessary that such technology supports the educational project of the school, complementing and not replacing it. Also, the school must have the option of choosing the characteristics of the technology it wants to incorporate. There are some technologies that are more expensive in its implementation and maintenance than others, so the school, and in the case of these experiences also the State, should be aware of what technology is the best according to their resources and needs.

In this sense, a first challenge is related to the sustainability of the experiences. At least two of them raise the dependence on the resources of international cooperation for its continuity as a weakness. The intervention of the international cooperation is always for a limited period time and this kind of project should therefore explicitly involve technology transference and sustainability strategies. A possible strategy is to establish partnerships with private sector, what these three experiences do. However, in this case it should also be ensured that the partnership consists in an alliance and not in a dependency relationship.

It is noteworthy that these programs have incorporated previous experiences that have yielded good results. It is always good to recognize previous experiences and build on what it has been learnt to move to a new stage. These programs are context sensitive, and incorporate the needs and realities of each country, particularly in the case of CCETT. Within this framework process monitoring and achievement assessment actions are particularly relevant. In this sense, these programs have a great potential to respond to the identified weaknesses through these processes. Sharing how they overcame the identified problems would be interesting for other similar experiences. The dissemination of that kind of information would also be important to keep the civil society informed and involve its participation to join forces to these initiatives.

Experiences like these raise questions that open the door for further research on topics such as:

- The accreditation of skills acquired in non-formal education, particularly in experiences seeking to generate job opportunities for students who drop out of school.
- It is especially relevant in the Caribbean to pay attention to the phenomenon of school dropout in male children. In relation to these experiences, it would be interesting to investigate to what extent the introduction of ICT technologies is a motivating factor for children, enhancing their learning and school retention.
- To develop more research and analysis around the teacher training processes associated with the cascade training model. It is particularly important as it has been widely used in recent years in the region.
- It would be interesting also to investigate how these training are reflected in the classroom, identifying good teaching practices in the use of ICTs.

These programs are a contribution to the improvement of learning in English-speaking Caribbean. Having a broader view on the concept of quality, incorporating the dimensions of relevance, pertinence, equity in addition to the ones of effectiveness and efficiency, can contribute to making these experience's intervention more comprehensive and inclusive.