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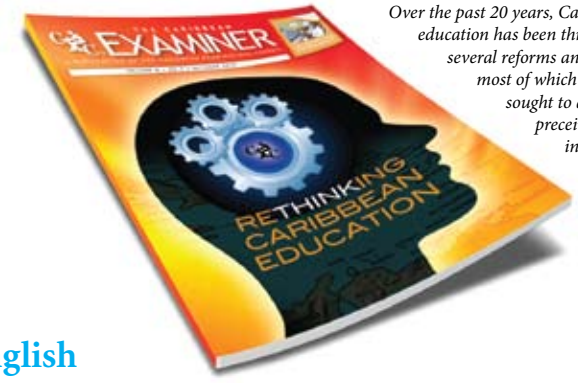

Over the past 20 years, Caribbean education has been through several reforms and changes, most of which have sought to address preceived deficit in the system

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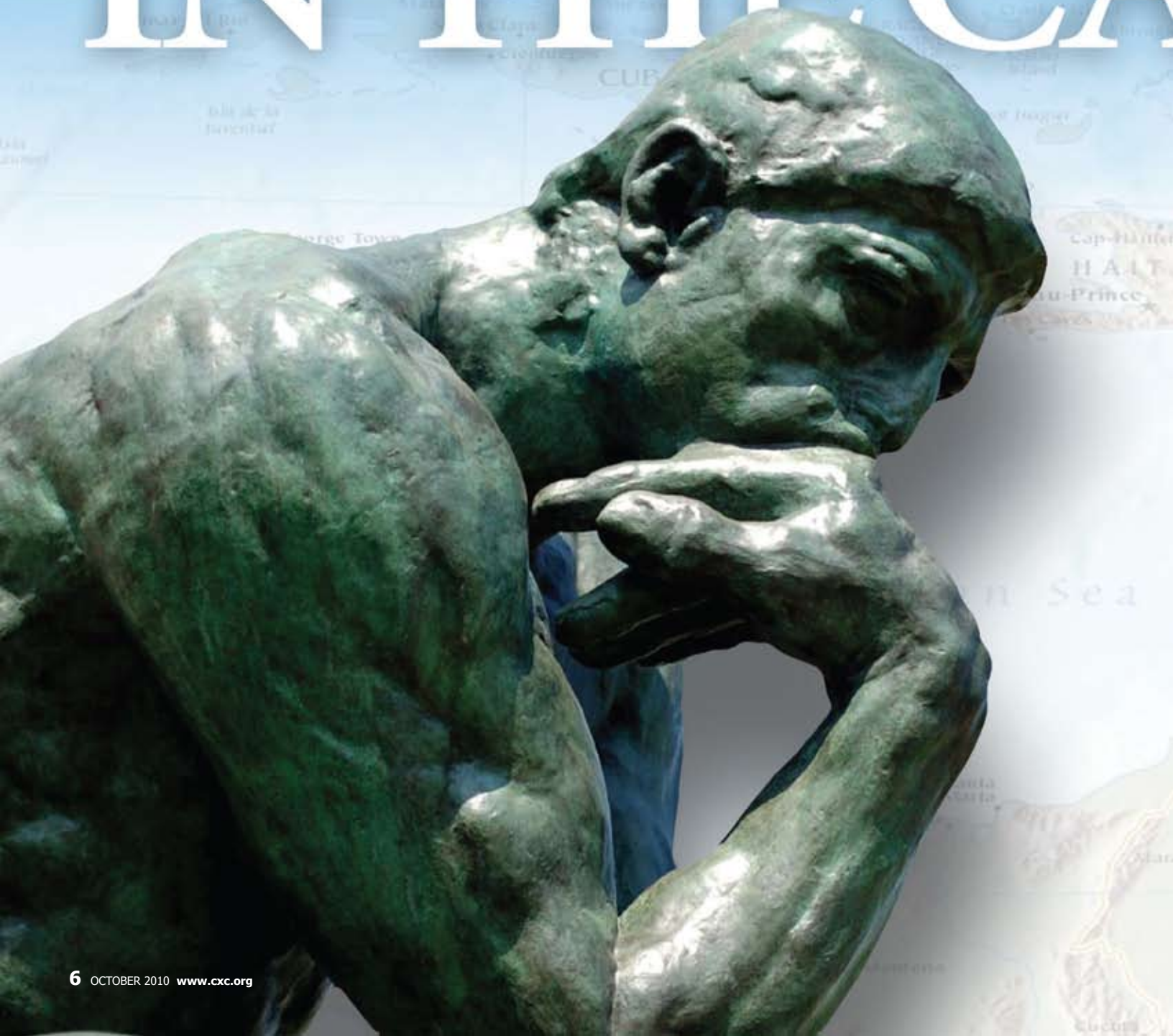

Education CARIBBEAN

At every stage of our national development, education provided the human resource scaffolding that facilitated the modernization thrust.

By Dr Didacus Jules

INTRODUCTION

Over the past 20 years, Caribbean education has been through several reforms and changes, most of which have sought to address perceived deficits or problems in the system. In very few cases have these efforts sought to fundamentally rethink the function of education in society and articulate the goals of education with the re-shaping of the post-independent Caribbean. Many of these reforms became projectized initiatives shaped in accordance with prevailing paradigms promoted by the multilaterals and donor agencies.

Historical background

The evolution of Caribbean education systems has followed a path of progressive expansion of access to increasingly higher levels of education from the advent of public education in the post-Moyne Commission period to the post-colonial era.

Taken in historical perspective, it can be argued that this linear progression represented an extension and modernization of the inherited educational paradigm (Bacchus; Miller; Jules). At every stage of our national development, education provided the human resource scaffolding that facilitated the modernization thrust. The diagram *(on the next page)* summarizes this argument.

In a very general historical sense, it was the attainment of universal primary education that facilitated the struggle towards Independence and the transition from plantation economy to more inclusive modes of production. In like manner, the move towards a service economy requires universal secondary education as the new educational standard that will guarantee the human resource capacity to successfully make this transition; and it is universal access to tertiary education that will facilitate our participation in the information economy.

This historical perspective is central to the arguments of this article. Education cannot be business as usual, and we must always, and in every historical epoch, continually interrogate the purposes of education. We need to periodically ask WHAT IS EDUCATION FOR? and what do we expect education to achieve at each crucial stage?

The answers to these questions will help us ensure that our education systems in the region are actually producing the quality of persons with the competencies required to put us on a path of sustainable development in a ruthlessly competitive global arena. It was VS Naipaul who reminded us that "The world is what it is. Men who are nothing; who aspire to be nothing, will always be nothing" (Bend in the River). Above everything else, it is education that will make us something and which will provide the wind beneath the wings of our ambition.

International trends in education and the globalization process

The unfortunate reality is that the post-colonial project in education has never fundamentally questioned the colonial inheritance. We have accepted and expanded education systems whose organizing principles and structural frameworks have assumed that a principal function of education is to sort and classify people.

A good example of this is the achievement of universal secondary education. Access to secondary education was previously predicated on very selective criteria which were performance outcome-based but co-related to available space

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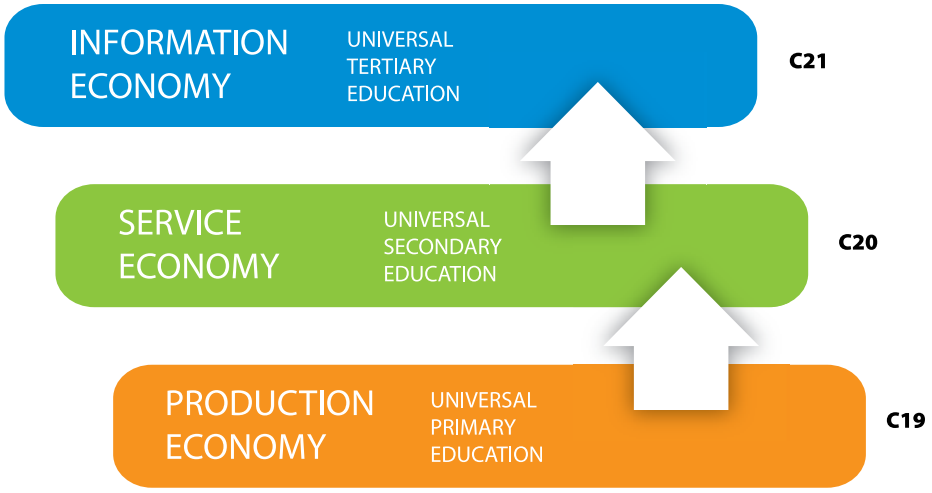


in secondary schools. The common entrance examinations effectively sorted students so that the highest scoring students were given the privilege of access. With universal secondary education, access is theoretically granted to every child but we have not revisited the working of the secondary education system to ensure that the "one size fits all" is changed to one of multiple pathways to success catering for the far more variegated input into our secondary schools. The issue of quality and standards also needs to be taken into account – in some countries, access is guaranteed for all but on attainment of appropriate standards with remediation and support available to help students reach these standards.

Ironically, a major driver of educational progress in the Caribbean in the past 20 years has been international trends in education that have been pushed and promulgated by the intellectual financial complex (World Bank, UNESCO, and major donor agencies).

WHY WE NEED TO REDEFINE EDUCATION

There are five main reasons why we need to redefine education in the Caribbean:

1. Tinkering with the system no longer works; we need a new vehicle of human empowerment and social transformation
2. The implications of the internationalization of education in a globalized world
3. The rapid obsolescence of knowledge in the information revolution
4. Our education systems are no longer working
5. Education is too rapidly becoming a panacea for all problems

Tinkering with the system

There is a point at which tinkering with an education system can no longer work. Education systems are eco-systems within which changes made to one dimension, carry implications for other dimensions that necessitate corresponding adjustments if the system is to function effectively and efficiently. For a change in curriculum to have the desired impact and result, textbooks must mirror those changes, teachers must be oriented to them, instructional methods must accommodate, assessment and examination modes must test accordingly… even classrooms might need to be retrofitted to provide more conducive environments for new and different learning.

We are at a historical juncture in the Caribbean when we must take careful stock of where we are, where we seek to go and how we intend to get there. So much has happened internationally in the global economy, in society and in technology and so much has happened on the regional front as well that necessitates deep reflection on our options and our possibilities.

Taking these challenges into account, the Caribbean today needs an education system which is an effective vehicle of human empowerment and social transformation. To create this, we must first ask ourselves, "What must education achieve in the contemporary Caribbean?"

Tinkering with our present education systems has not worked. A couple hundred millions of donor and tax payer dollars have been spent in the last 20 years on projects of all kinds in curriculum development, education administration reform, primary school improvement, secondary education reform and more, but the system is yet to show levels of improvement commensurate with these investments. Additionally, this does not take into account the even greater sums spent on physical infrastructural expansion and enhancements. It is not that many of these projects have intrinsically failed; it is more that we have failed to create the synergies and apply the lessons of many of these projects to drive systemic transformation. A perfect example of this is the recent USAID funded project – Caribbean Centres of Excellence for Teacher Training (CETT) which set new standards for the teaching and learning of reading at primary level in eight Caribbean countries. Despite the amazing results obtained, there are still challenges in having the CETT methodology universally adopted across the primary education system even in the pilot countries. We are failing to apply and universalize the lessons of projects that have worked well. When we do seek to incorporate them, we do not take sufficient account of the systemic ramifications that need to be addressed in order to guarantee successful implementation. Equally importantly, we fail also to digest the lessons of those initiatives that have not worked and so miss opportunities for understanding the factors which contributed to that result.

Besides the inherent limitations of tinkering with reform is the need to base reform on meta-perspectives of the changes required. Attention to quality in secondary education will not yield the anticipated dividends if we don't fix primary education; and primary education is stymied in the absence of attention to early childhood development - (note one speaks of early childhood **development** and not simply of Early Childhood *Education* because early stage development is a much wider construct than just education, involving nutritional status issues, child and maternal health etc).

Implications of the internationalization of education in a globalized world

The most immediate consequence of the internationalization of education is its emergence as a major industry. Privatization and the inclusion of education as a tradeable commodity in the WTO negotiations have contributed to intense global competition for market space especially in the tertiary education sector.

The table *(on page 9)* illustrates the value of education services in the British economy in 2004 as estimated by the British Council. The value added by examination and professional bodies totalled £151 million comprising fees paid to awarding bodies for exams taken abroad by overseas students whether in the UK or abroad (Johnes 2004).

Rethinking Education in the Caribbean

The financial strength of this educational industry is indicative of its educational reach. Intense competition among universities in the OECD countries in particular has created a western intellectual hegemony that is able to determine trends and dictate the paradigm. Challenges have been mounted by some of the Asian Tigers including countries like Singapore, Dubai, and Malaysia involving considerable investment in trying to establish global centers of intellectual excellence.

The essence of the internationalization process is that it leaves little room for small states in particular to fashion an educational paradigm that is significantly divergent from the dominant global one. The rapid spread of international schools which now cater for primary level education predicated on OECD models are testimony to this reality. Increasingly notions of national curricula are yielding way to "foreign" or international curricula that literally prepares a student even from the primary stage "for export" (packaged as seamless entry) into tertiary education institutions located in OECD centers. This is in direct contradiction to the effort by many nation states to utilize curriculum at primary and secondary levels to help shape nationalist identification and build citizenship.

Obsolesence of knowledge and the information revolution

A third reason is the impact of the information revolution and the increasing pace of the obsolescence of knowledge. Information and computer technologies have completely changed the game for education. Research and access to information is now instantaneous and the technologies have facilitated the hybridization of knowledge to an unprecedented extent. As a result it has been estimated that by 2020 the knowledge base could be changing every two hours! Whatever the exact pace of change, it is sufficiently rapid to mean that traditional syllabuses and curricula will no longer serve as adequate registers of received knowledge.

A major implication of this paradigm shift is that the age old question of what is to be taught will shift to what are the competencies that are required to certify mastery in any particular knowledge domain. Content will give way to competence; analytical skills will supercede memorization; and interdisciplinarity will reinforce key competencies.

Our education systems are no longer working

Because we have not approached reform in a truly systemic manner, the knock effect of problems in one sub-sector creates other problems in another – inattention to early childhood development is impacting performance in primary; the deficits in primary education translate into weak performance at secondary and the absence of core competencies required for excelling at tertiary education.

Ironically Caribbean governments spend a much larger percentage of public money on education than many developed countries, and education in most Caribbean countries educational expenditure as a percentage of GDP is higher or on par with many OECD countries, but performance is not commensurate to that investment.

At the secondary education level, the number of students obtaining acceptable grades in five or more subjects is less than one quarter of the cohort sitting the exam (and an even smaller percentage of the age cohort).

In the 2009 CSEC examinations, only 21% of the candidates sitting received acceptable grades in five or more subjects; 52% of them either did not pass any subjects or received acceptable grades in one subject only. Attention to quality and performance is the most urgent of the imperatives facing us particularly at secondary level.

To compound the difficulty, to most of our young people – digital natives consigned to analog schools – school is simply boring and learning has no excitement. Chalk and talk no longer is able to keep the attention or focus the concentration of students whose personal lifestyles are increasingly multi-sensory, multi-tasking, short attention span dynamics.

Our teacher preparation processes have not kept pace with these challenges and in too many countries an insufficient proportion of the teaching service is neither trained nor prepared to successfully deliver instruction to the new generation student in distinctly different conditions such as we face today. The teaching service needs to be re-energized.

As a result of the weakness of teacher preparation, our modes of instruction urgently need to be modernized. Isolated examples can be found all across the region of enthusiastic teachers using innovative pedagogies to stimulate and challenge their students. Some of these examples use whatever is available in their community and environment to make learning fun; field trips for history, environmental science; household materials in science; student seminars with professionals in business and the world of work; job attachments in a range of areas. Some use simple ICT: PowerPoint-aided lectures; YouTube videos; Internet web sites to enhance teaching and engage students.

Education has and is now widely seen as the panacea for all social problems

The fifth reason why we need to redefine our education systems is that education is now widely assumed to be the panacea for all social problems. The escalating demands for adding all kinds of subjects to the curriculum have almost

VALUE OF BRITISH EDUCATIONAL SERVICES
THE TOTAL VALUE OF EDUCATION AND TRAINING EXPORTS TO THE UK ECONOMY IS NEARLY £28 BILLION
THE TOTAL DIRECT VALUE OF EDUCATION AND TRAINING EXPORTS TO THE UK ECONOMY IS OVER £12.5 BILLION
THE TOTAL VALUE TO THE UK ECONOMY OF INTERNATIONAL STUDENTS IN THE HE SECTOR IS OVER £5.6 BILLION
THE TOTAL VALUE OF TRANSACTIONAL HE TO THE UK ECONOMY IS NEARLY £200 MILLION
THE TOTAL VALUE TO THE UK ECONOMY OF INTERNATIONAL STUDENTS IN THE INDEPENDENT SCHOOLS SECTOR IS NEARLY £315 MILLION
THE TOTAL VALUE OF INTERNATIONAL STUDENTS TO THE UK ECONOMY IS NEARLY £8.5 BILLION

CXC NEWS

reached a point of curriculum overload. It has become a simplistic formula in public policy circles that for every problem we must shape an educational infusion to administer to the schools! So in the face of the drug threat, let us teach drug education; with the spectre of HIV-AIDS, let's do HIV sensitization in schools. There is no question that education has an indisputable and major role to play in social transformation and that it must be relevant to the challenges of every era, but we cannot expect that it can solve all problems. The school cannot be the symbolic and substitute arena of action for every socio-economic problem while we do nothing in other spheres of public policy to fundamentally address the issue. Put simply, no amount of drug education in schools will succeed if the law enforcement agencies allow drug dealing with impunity on our streets and drug dealers are allowed to accumulate and flout their wealth.

The transfer of responsibility (one can better say the abdication of responsibility) from other public and civic agencies and the family to the schools is placing unreasonable demand on teachers. How can teachers be held absolutely accountable for educational outcomes when they are unable to focus on their core responsibilities and must instead become surrogate welfare officers, substitute parents, maintain order and discipline against an encroaching tide of criminality that has permeated the entire society?

WHAT NEEDS TO BE DONE

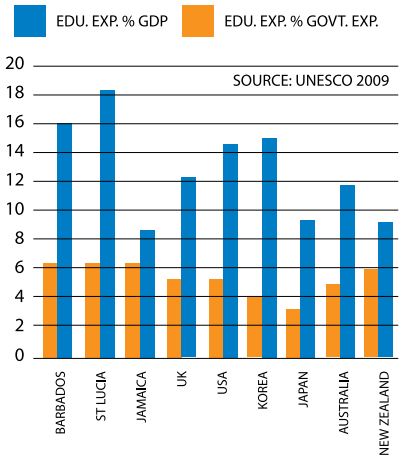
These challenges appear daunting but at CXC we believe that the solutions are simple. The scope of what needs to be done is immense but it can be manageable if we take a systematic and systemic approach. There are four pillars that are foundational to the solution:

1. Agree on a philosophy of education in the contemporary Caribbean
2. Establish a seamless education systems
3. Make learning fun
4. Attune our assessment to key competencies and global competitiveness

A philosophy of education in the contemporary Caribbean

Articulating the philosophy of education is an essential first step which establishes the vision and purpose of education. Accepting that education is central to any national development strategy and taking account of the unprecedented changes that have taken place in the world over the past decade in particular and the grave challenges, as well as opportunities posed to developing countries, we must start with basic principles.

COMPARATIVE EXPENDITURE ON EDUCATION



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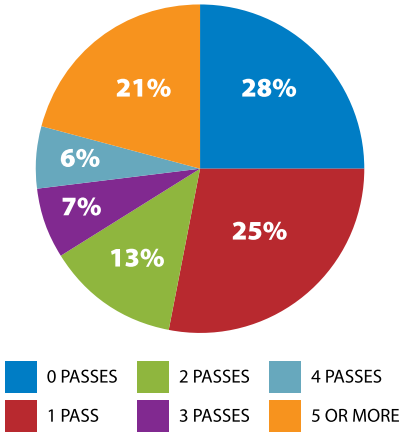

PHILOSOPHICAL UNDERPINNINGS

The CARICOM Ideal Person

- Love Life
- Emotional Intelligent
- Environmentally Sensitive
- Democratically Engaged
- Culturally grounded and Historically conscious
- Multiple Literacies
- Gender and Diversity respectful
- Entrepreneurially Capable

The articulation of that philosophy of education must ensure that there is consistency between the regional and the national. These two agendas are not inconsistent because the regional must provide the architectural framework within which we can productively establish our particularities.

At CXC we have been promoting two essential principles to inform this philosophy: the Statement of the Ideal Caribbean Person and the UNESCO Imperatives for Learning in the 21st Century.

The Ideal CARICOM Person was adopted as far back as July 1997 by Caribbean Heads of Government but has not been aggressively promulgated.

While the Statement of the Ideal Caribbean Person describes the type of person that our education system ought to produce (in language that is far too obtruse!), the UNESCO Imperatives for Learning specifies the abilities that ought to be developed. Each of the four imperatives carries very clear implications for curriculum and the competencies that need to be cultivated.

Establish a seamless education system

As has been argued earlier, educational quality cannot be resolved by focusing on only specific stages. Educational quality is not a compartmentalized thing - it requires consistent effort across every level of the system. Attention to quality at each level is like the passing of a quality baton in a lengthy relay race – only when it is successfully passed can we expect exemplary performance in the succeeding level.

In order to realize this, our education system needs to be reshaped as a seamless system in which opportunity is open to all with varying pathways to success according to interests, capability and development pace. The paradigm of Education for All promoted at the international level by UNESCO and adopted by the multilaterals with significant input from civil society internationally has created a positive environment for the realization of this solution. The notion of access to education from the cradle to the grave has now moved into the policy mainstream. A seamless education system is one in which there is an adequate articulation of levels and the rationalization of the competencies and outcomes expected of every stage. Unlike the inherited post-colonial paradigm, it does not naturally assume wastage as one moves up the educational ladder but facilitates continuous learning through different pathways. It is interesting to note the many anecdotal cases of Caribbean persons with incomplete schooling whose future appeared to have been constrained in the region but who, on migration to the

Rethinking Education in the Caribbean

United States, have progressively and successfully improved their education and qualifications because of the opportunities available in the multiple pathways of the US system.

Make learning fun

A major challenge is to engage young people in education in ways that they find exciting and which inculcates a strong desire to learn, to think critically and to improve themselves. We can only achieve this if we are ultimately able – at every level of the education system – to make learning fun.

To make learning fun requires a simultaneous reinvention of curriculum and the encouragement of new pedagogies of engagement and discovery. In every knowledge domain, our curriculum must embrace familiar Caribbean reality as a launching pad for discovery and for questioning in order to help our students to both understand and to transform that reality. The focus on Caribbean realities must not, however, represent an introspection that excludes an understanding of the global and the international – in this regard, we must be guided by the slogan of "thinking local and acting global". Caribbean people are among the most migrant populations in the world and this dimension of our reality necessitates that our education be world class and globally acceptable.

This requires greater levels of inventiveness and stronger competencies of our teachers whose own professional formation must be changed to empower them to utilize these new approaches.

The current technologies of play which are so addictive to young people – Nintendo Wii, the Internet, mobile phones, Gameboy etc – must all be turned to educational advantage. The power of ICT can exponentially improve the pace and quality of learning and facilitate students taking greater responsibility for their learning.

Assessment attuned to competencies and to global competitiveness

As the value of education increases in a highly competitive world, qualifications and certification become even more high stakes. Hanson (1994) asserted that "the individual in contemporary society is not so much described by tests as constructed by them".

If we say that the purpose of Caribbean education is to produce the Ideal Caribbean Person and that this person should have the ability to learn, to be, to do and to live together, then our assessment processes must reflect these competencies and attributes. Assessment can no longer simply be a test of academic ability or retention of knowledge; it must attest that the candidate demonstrates the knowledge, skills and competencies reflective of the total person.

Within CXC we have begun the process of reviewing the suite of examinations that we offer, their articulation with each other and how they fit within the Caribbean Qualifications Framework. We are also benchmarking all of our products – from syllabuses to examinations – against international best practices to ensure our own global competitiveness and we are seeking to develop international partnerships that will help us leapfrog into that next level.

CONCLUSION

At this juncture in history, the human race is facing almost unmanageable problems, many of which are the consequence of our own greed and insensitivity to nature. The threats are environmental (from climate change to sea rise, to increased natural catastrophe), political (escalated conflict, sharpened intolerance), social (drug abuse, health pandemics, social disintegration), economic (virtual meltdown of the world economic system, deepening poverty, unemployment) and so on. In virtually every sphere, the problems beset us. And in the midst of all of this, the fragile archipelago of Our Caribbean sits like a fleet of fragile boats buffeted by the international storm and incapacitated by its own limitations. There are many things that need to be fixed and fixed urgently but the preparation of the next generation is one of those responsibilities and challenges that cannot be postponed. And this ultimately is the urgency and the necessity of reinventing education.

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"In order to realize this, our education system needs to be reshaped as a seamless system in which opportunity is open to all with varying pathways to success according to interests, capability and development pace."

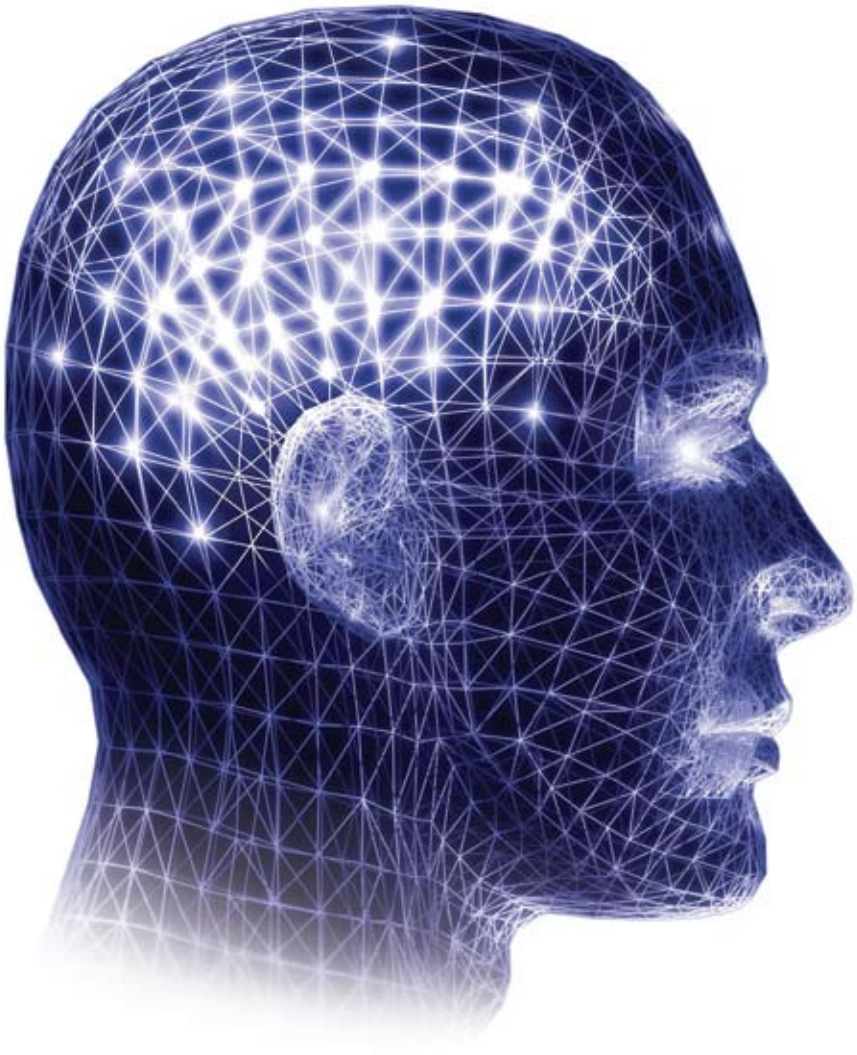
Dr Didacus Jules is the Registrar of the Caribbean Examinations Council. He was the Permanent Secretary in the Ministry of Education in Grenada and St Lucia at various times in his career. Dr Jules also serves on several high-level education committees in the region.

ART & EDUCATION

CREATIVITY AND THE IMAGINATION IN EDUCATION

In Defense of Plagiarism or the Challenge of Creativity

By Rawle Gibbons



This submission follows on an intervention I made during a CXC assembly at Grading exercises in August 2010. The question was, 'what role does creativity play in CXC's proposal for educational reform in the region?'. I was told that the planners had a great deal of difficulty defining creativity and how it could be measured academically. My thesis here is quite straightforward: if creativity cannot fit into standard academic criteria, then those criteria must be re-shaped to fit creativity. Education reform, in other words, should itself be regarded as a creative exercise, employing the courage, critical thinking and flexibility needed to construct change. At the same time, I understand that even with the willingness to do so, planners may be stumped not knowing precisely what to look for and identify as creativity. How does this quality appear in fields as diverse as arts, science, sports, mathematics, languages and business? This is the question this paper engages.

CREATIVITY: we may define as a human capacity to bring something into being. Nature's procreation, including humans, is the creative work of forces divine. The rest happens through man. It is how man through thought and action brings what would not otherwise be, into the world. I want to be clear from the outset that our focus here is not on the arts themselves, but on the expression of this capacity as an underlying principle and teaching/learning component in all academic disciplines at all levels of education.

Creativity appears illusive because it manifests itself in so many different ways in human activity. Creative processes include, inter alia, imagining, interpreting, synthesizing (bringing together), innovativeness (making new/adding to), making, self-locating, risk-taking, resourcefulness, problem-solving, affective involvement, as well as aesthetic expression.

What does creativity contribute to human activity? At the risk of repeating the self-evident, we should emphasize that clearly creativity is the source of human development, from the creation of tools to hunt or till, the invention of the wheel, to communication technology that has changed contemporary lifestyles so rapidly. As a result of creative activity, new ideas and new ways of looking at things emerge. While creativity is part of the common human DNA as it were, individuals particularly gifted in this respect may achieve acclaim and fortune through their endeavours. So too, communities. Creativity has been critical to the resistance and survival of Caribbean peoples at home and abroad. The Jamaican saying: *"Tun hand, mek fashion,"* for instance, illustrates how resourcefulness is so much part of the mind-set of regular Caribbean folk.

There are certain premises that accompany the engagement with creativity in any field. First

Creativity and the Imagination in Education

is that experience, by its very nature, is holistic. Our schools are essentially artificial learning environments. With almost half a century of political independence on the board, we still haven't won the match to align education and training with the demands of indigenous development. We unquestioningly accept that the best way to impart knowledge is to break it up into small bits (subjects), ignoring any implicit relationship among them or any relevance to the world of either student or teacher. In this model, unsupportable distinctions are made between feeling and knowing, with greater value attached somehow to the cognitive over the affective dimension of knowledge within the same learner. The 'education' we provide is about the acquisition of information/knowledge; skills are inconsequential; attitudes, somebody else's responsibility. Creativity, on the other hand, allows us to fill the interstices, re-connect things as they are in reality, so that new meanings and perceptions can be made.

In creative learning, moreover, the experience is always multi-dimensional, spiralling outward rather than linear or directed at objectives related to any single dimension. The outcomes of the creative experience, on occasion, may be utterly unpredictable, and this too, must be integrated as learning.

Next, creativity in the class-room is learner-focussed. It brings into the equation the stimulation and responses of the partners-in-learning (teacher and student), placing emphasis on process before product. The idea is not, in other words, to *"pass the exam or die trying"*. I used the term 'self-location' above to suggest this placement of self within the learning journey. The learner's journey through the experience becomes part of the teaching text itself. In this way, both partners contribute meaningfully to the process.

Implied in the above is that value is placed on building, through the medium of the discipline, individual confidence. In this way the student becomes free to question, explore and innovate. What the learner usually learns in our schools is that knowledge is to be acquired, not necessarily made; that knowledge belongs to other people to whom we are forever indebted; that to be 'the brightest and the best' has to do with one's capacity for retention and avoidance of 'detention' (readiness to conform). Creativity presents a challenge to such assumptions by accepting difference, even opposition, as part of the creative engagement. I always use the example of the birth of the Trinidad steelband as an instance to remind teachers of the potential significance of defiance and rebellion. Had those lads (14 – 18yrs old) not gone against all the rules and strictures of family, school, church, the law, even of accepted conventions of 'music', how much would have been lost to the country and the world?

This example also highlights the negative relationship between formal education and traditional areas of knowledge and ways of knowing. An enduring legacy of our colonial history is the conviction that culturally, schools must serve as correctional institutions: one's language is condemned, traditional belief systems ridiculed as primitive, family and community pasts repressed as narratives of personal shame. How in such an environment can a learner function with confidence? Creativity, in drawing on the total self, allows for the expression and validation of personal contexts in situations designed to privilege and protect this freedom.

HOW MEASURED

Measurement in any field involves identifying standards against which results are compared in order to distinguish levels of attainment. One needs therefore, a) something to measure (activity set); b) something to measure against (criteria/ learning objectives); c) something to measure with (instrument for selection and differentiation).

A. Criteria/Learning Objectives

These can be described in ways that can run across all curriculum areas and vary in complexity according to level of study.

Example:

LEVEL 1

Students are expected during course of study/on completion to:

- *Participate in class activities;*
- *Share own opinions and feelings in class activities;*
- *Initiate activities.*

LEVEL 2

- *Make links between discipline and other areas of experience;*
- *Make links between discipline and other disciplines;*
- *Express directly or through metaphors feelings about discipline.*

LEVEL 3

- *Independently work through challenges presented;*
- *Overcome obstacles, failures, criticism;*
- *Bring interest and conviction to tasks.*

LEVEL 4

- *Critically appraise own work and that of others;*
- *Critically question aspects of discipline;*
- *Explore alternative solutions to problems presented.*

LEVEL 5

- *Develop alternative solutions to problems presented;*
- *Construct problems in the discipline;*
- *Convert solutions to practical application.*

B. Activity Set

Each discipline would then create suitable activities to test the above criteria. Some would appear to suggest themselves (appraising work); others may be specifically set for testing creativity alone, but most activities can be devised to test objectives in other domains at the same time. Activities could include: group discussions and debates, using students' individual and group skills, challenge games, applying discipline to school and community concerns, field research projects, exhibitions, imaginative scenarios, inter-school fora.

C. Measurement Instruments

The principal test for a creative idea rests in its effective application: how well/completely it resolves a problem. Testing creativity requires then, that a) activity be moved from the abstract to the applied frame. Applied in an academic exercise may still be 'theoretical', but worked through to an effective conclusion. b) Next, how do you distinguish within sets of activity, i.e. how is more and what less applied? This can be accomplished by reference to additional creative processes from the list above. For instance, the application of a particular activity in a set is not only effective, it may also be novel/ imaginative/ synthesizing. In this way, there are both qualitative and quantitative considerations for further judgement to be made. This conveys distinction of degree. In developing the criteria/ rubrics for assessment, there is need to define these processes, which can easily be done.

There is also the need in approaching the curriculum for any discipline, to place value on the role of creativity and quantify its worth in relation to other curriculum components. Once it is understood that creativity is not the monopoly of the arts, but a defining feature of human intelligence, it should be evident that its absence from your subject reduces capacities inherent in both teacher and student to use the subject to excite/stimulate holistic growth. This implies as well, that onus is on the teacher to set assignments in ways that challenge and test among other objectives, creativity. This would include subjects such as Mathematics and Science that may not be thought of necessarily as 'creative'. The

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While creativity is part of the common human DNA as it were, individuals particularly gifted in this respect may also achieve acclaim and fortune through their endeavours.

pervasive distortion between 'soft' (affective?) and science (empirical?) subjects is challenged by the common denominator of creativity now demanded by our contemporary world.

The challenge of creativity in the classroom is only secondarily a matter of 'measurement'. The primary issue is one of culture-change rather than curriculum: how do we shift teachers from imparting knowledge by rote and rewarding students for their re-gurgitation of statements, as against engaging in an holistic experience using their 'subject' as merely a door, the key to which is creativity? It should not be deduced from the foregoing that arts teachers are exempt from these considerations. Arts teachers are not necessarily at all creative in their pedagogies. While we complain about the blatant plagiarism by many students today, our system honours and accredits plagiarism in its more sophisticated forms practised by lecturers and teachers at all levels. Many of us parrot or paraphrase other people's work and opinions as our own. We've all collided with academic papers so clogged with quotations that the writer's voice is itself written off. Of course, when used, sources need to be acknowledged, but the root of the issue is the avoidance of thought, the ever-present seduction of ready solutions. We contend here that in building on our own inheritance of creative thinking and practice, we can find the solutions to this problem.

The inclusion of creativity as a curriculum component is by no means a concession to the arts; it is a necessity if we wish to deal with at least two major issues facing education today. The first is the importance of aligning education, at all levels, with the demands of the 21st century workplace. Why this is so is really not different from why it has always been so - in spite of prevailing education policies, practices and customs. For any given set of skills under the pressure of a competitive situation, it is the application of creativity that provides the edge. Today there are more 'qualified' individuals than positions available in many fields advertised in the media. The creative thinker in any field simply stands a better chance. Second and even more important, is the sheer wastage of human capacity we perpetuate under the guise of 'schooling'. A more efficient, purposeful education system itself becomes the basis for even beginning to envision how we 'unlock the potential of the region' (UWI's Mission). If we wish to move education and training beyond producing technicians who can do, but don't think and managers who neither do nor think, a good place for all to start is with creativity.

Rawle Gibbons *is a playwright, teacher and director. He is also former Head, Centre for Creative and Festival Arts, UWI, St. Augustine, Trinidad and Tobago and a CXC resource person.*

The Importance of Visual Arts Education in Schools

By Lisa Francis

Visual Arts as a subject on the school's curriculum has always been an issue of continuous debate in developing societies. For one reason or another, its relevance to the education process is always questioned. Opposing views have held that Visual Arts education is only for those students who are talented and are not academically inclined; yet it has not justified its place on the timetable, and is of little value to the learning process and the development of a child.

The supporting philosophy, however, recognizes the importance of Visual Arts education. As then President-Elect of America, Barack Obama stated on his campaign website: "In addition to giving our children the science and math skills they need to compete in the new global context, we should also encourage the ability to think creatively that comes from a meaningful arts education."**(www.Barackobama.com)**. "The study of the arts has the potential l for providing other benefits traditionally associated with arts….arts have been linked to students' increased critical and creative thinking skills, self-esteem, willingness to take risks, and ability to work with others" (Jacobs, 1999, p. 4). Harvard Project Researchers Ellen Winner and Lois Hetland remarked, "The best hope for the arts in our school is to justify them by what they can do that other subjects can't do as well."

Why Visual Arts?

Children today are growing up in a highly visual world, surrounded by the images of television, videos, advertising display, and other media, which are very much different from a generation or two ago. Visual literacy therefore, is just as important as the core skills of literacy and numeracy and apart from equipping today's children with the visual skills necessary for interpreting, understanding and making sense of this "Visual hurricane," Visual literacy is an essential skill that is necessary for learning in all areas of the curriculum.

Art is a universal language and a central part of the human experience-It records history

Throughout history, people have recorded their struggles, their dreams and their lives in works of art such as pictures drawn on cave walls, paintings, etchings, pottery, sculptures and leather craft. These pieces of art provide us with a historical record that enables us to retrace humankind's experiences, religion, beliefs and achievements. Art is a universal language that has stretched over generations and cultures and communicates to all nations. Often, the best

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The works of CSEC students on display at the annual CSEC Visual Arts exhibition in Grenada

record we have of the past is the art that has been left behind. Art expression has been one of the first means by which man communicated with each other and it is still used to record, explain, interpret, predict, gain awareness and express those things cultures find important.

Cognitive Development

Exposure to arts education correlates to a child's brain development. According to a 1998 study entitled *Young Children and the Arts: Making Creative Connections*, arts education facilitates better memory and symbolic communication in students. Furthermore, arts education can play a central role in the development of a child's language, cognitive and motor skills. Elliot Eisner reiterated the case for the value of the arts at the 2008, Aspen summit.

"With the arts, children learn to see," said Eisner, Professor Emeritus of Child Education at Stanford University. "We want our children to have basic skills. But they also will need sophisticated cognition, and they can learn that through the visual arts."

What are the forms of cognition students can develop through the visual arts? Lois Hetland and Ellen Winner discovered the answer while studying five visual arts classrooms in two Boston-area schools for a year:

"What we found in our analysis should worry parents and teachers facing cutbacks in school arts programmes," they concluded in their book, *Studio Thinking*. "While students in art classes learn techniques specific to art, such as how to draw, mix paint or centre a pot, they're also taught a remarkable array of mental habits not emphasized elsewhere in schools. These habits include observing, envisioning, innovating and reflecting. Though far more difficult to quantify on a test than reading comprehension or math computation, each has a high value as a learning tool, both in school and elsewhere."

The Visual Arts help children develop vital higher level skills.

To thrive and succeed in today's world, children need to know more than how to read, write and do mathematics. They need higher level skills, such as the ability to reason and use their language and mathematical skills to solve problems. Research indicates that students who receive high quality arts education develop these higher level skills. They are more creative, more self disciplined, more tolerant, better able to think critically, solve problems and communicate, than students who have little or no arts education. Studies have also shown that students who are exposed to any of the art forms of creative expressions, on average achieve higher scores in standardized tests. Some other findings suggest that students engaged in an arts programmes in school are much more unlikely to drop out of school compared to those who are not involved in any kind of arts.

A survey of primary and junior teachers and administrators conducted for the Ontario Ministry of Education found that arts programmess help students learn in the general programmes of studies through improving perception, awareness, concentration, uniqueness of thought style, problem-solving, confidence and self-worth, and motivation.

A group of 615 elementary school students in Ohio participated in a two-year evaluation of SPECTRA+, an arts education programmes that gives students one hour of arts instruction daily.

Based on standardized tests, SPECTRA+ students demonstrated gains in creativity, self-esteem, some aspects of math and reading, and arts appreciation, which children in control groups did not achieve.

In another study, 500 students in grades four to nine (from 65 classes in 11 schools), who participated in an artist-in-residence programmes sponsored by the Music Center of Los Angeles County, reported improvements in higher-order thinking, communication and socialization skills. The marks on their report cards also improved.

Higher level skills are essential to success in the workplace.

To function in a world where the amount of information available doubles in months and people will change jobs many times during their working years, students need a broader set of skills. Employers are looking for people who are creative and who are able to think critically, solve problems, communicate well, conceptualize, make decisions and learn to reason and continue to learn.

Warren Goldring, Chairman and CEO of AGF Management, noted that arts training will provide the ability to think logically and that's the commodity that is in shortest supply in business.

Paul Chellgren, President and CEO of

"The Arts draw on different kinds of intelligences and this helps students assimilate other subject matter easily. Research shows that children who receive art education will often see marked improvements in their other studies."

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Ashland Inc. explained that in today's world there are two sets of basics. "The first– reading, writing and math – is simply the prerequisite for a second, more complex, equally vital collection of higher level skills required to function well in today's world. These basics include the ability to allocate resources; to work successfully with others; to find, analyze and communicate information; to operate increasingly, complex systems of seemingly unrelated parts; and, finally, to use technology. The arts provide an unparalleled opportunity to teach these higher level basics."

Arts education helps students to learn other subjects.

People learn in different ways. They respond differently to various types of learning materials and approaches. The Arts draw on different kinds of intelligences and this helps students assimilate other subject matter easily. Research shows that children who receive art education will often see marked improvements in their other studies. Students taught through the arts also tend to be more motivated and have a more positive attitude towards learning. Additionally, art can be effectively used to enrich classroom learning of core subjects. Teachers can convey mathematic concepts such as geometry (shape), symmetry, scale and fractions all through drawing, painting and sculpting exercises. Art viewing experiences can enhance language acquisition and literacy skills through the development of symbolic processing and expansive thought patterns. Teachers can also use the arts to convey and explore many other subjects.

A study of the 1995 Scholastic Assessment Test (SAT), the college entrance examination used across the United States, showed that students who studied the arts for more than four years scored 59 points higher on the verbal part of the test and 44 points higher on the math portion than students with no coursework or experience in the arts.

Elementary school students who received an academic programmes integrated with visual and performing arts scored significantly higher on standardized language tests and had higher report card grades in language arts, math, reading and social studies than other students, according to the report, *Making a Case for Arts Education*.

The arts give students the opportunity to transfer skills among subjects and apply what they learn in real-life situation

Assessment methods developed in the arts provide useful models for measuring outcomes in other subjects. The arts use rigorous assessment methods such as portfolios, performance assessments, journals, observations and rating scales to assess student's achievement and encourage continuous improvement. The goal is not simple to pass the test, but to learn more, achieve certain standards and continually do better. Teachers can use these same art assessment tools to measure and encourage achievements in other disciplines and to assess students' ability to apply what they have learned. For example;

- *Mathematics teachers use performance assessment to see if students can solve complex problems and also explain how they found the answer.*
- *Science teachers use authentic assessment, observations and checklists to assess how students design and conduct an experiment.*
- *Primary school teachers use portfolios to assess students' progress and to demonstrate to parents the children's strengths and development.*
- *Language Arts teachers use portfolios and journals to assess students' ability to apply newly learned words to their writing.*
- *Social Studies teachers use performance assessments to judge whether students have understood materials presented and can participate effectively in group discussion or presentations.*

Art, Children and Society: the ability to integrate into a society, community and culture is a vital part of childhood development. Art education can help make this goal a reality by engaging the child in viewing and analytical activities that promote understanding their own and other peoples' history and community.

The National Arts Standards focus on how the arts can benefit both the students and society. Participating in arts education activities may assist children to understand how others think and how other societies function. This may help to eliminate problems such as racism, sexism and other forms of hatred.

Life Skills: Arts education can help students develop the skills they need to succeed in life. Involvement in art classes helps children learn to solve problems, take on responsibility, develop their imagination and build self-confidence and self-discipline. It also instills in children perseverance, critical analysis skills and creative

The Importance of Visual Arts Education in Schools

A teacher from St Joseph's Convent Grenada points out something to students at the Visual Arts exhibition

skills. The processes taught through the study of arts, help to develop tolerance for coping with uncertainties present in the everyday affairs of human existence.

The Visual arts also provide learners with non-academic benefits such as promoting self-esteem, motivation, aesthetic awareness, cultural exposure, creativity, improved emotional expression, as well as social harmony and appreciation of diversity.

Visual Arts as a Career

The Visual Arts provide significant opportunities for self-employment, particularly within the Caribbean tourism industry. Given the fragile nature of the region's economies, there is urgent need to further develop our understanding of sustainable skill development and artist entrepreneurship. These are some of the possible art-related career choices that are available to students:

GRAPHIC DESIGN - *computer graphics designer, graphic designer, billboard designer display designer, promotion designer, music/DVD cover designer, web site designer*

FASHION - *fabric/textile designer, fashion designer, fashion illustrator*

ADVERTISING - *advertising creative director, layout artist, digital advertising photographer, copywriter*

ANIMATION – *animator, audiovisual designer, game designer, flash web page designer, motion picture animator, special effects animator.*

I would like to emphasize that children need visual arts education. The arts can help them succeed in school and develop the skills they will need when they leave school. An investment in Visual Arts education is an investment in the future.

Visual Arts should therefore be implemented throughout the Caribbean school system, within the curriculum and as positive alternatives outside of the school environment. However, there is a need to also improve and enhance the quality of arts education presently delivered in the region, by providing professional training for artists and art teachers.

Another essential need is for the provision of resources and learning material necessary for the effective delivery of the Arts: space, media, tools, books to be made available to all Caribbean schools and libraries.

Without the contribution of institutions seeking to support the development of arts education, such as governments, universities, international organizations and professional bodies, it will be difficult to respond to the challenges facing arts education in the region.

***Lisa Francis** is the Arts Director in the Ministry of Education and Human Resource Development in Grenada, a former Visual Arts teacher and an artist.*

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ART & EDUCATION

OFFICIAL OPENING: Mrs Elizabeth Henry-Greendidge, Permanent Secretary in the Ministry of Education and Human Resource Development in Grenada cuts the ribbon to officially open the exhibition. She is flanked by Mr Horace Persaud (L), CXC Local Registrar, Grenada and Mrs Andrea Philip(R), Deputy Chief Education Officer in the ministry.

SPICE ART

Known as the Isle of Spice of the Caribbean, Grenada was the host of this year's CXC CSEC Visual Arts Exhibition, from 19 to 23 April.

Several aspects of this year's event spiced up the exhibition. First, was the venue - the exhibition was elevated to a Test Match venue- the National Cricket Stadium in St Georges. This mixture of art and cricket worked well for both cricket and the exhibition. The week of the exhibition, West Indies A team was playing Zimbabwe A at the same venue and both events were beneficiaries of each other. Visitors to the exhibition stayed and looked at cricket and cricket lovers came and viewed the exhibition.

Another spicy feature of the exhibition was the number of students attending the exhibition;; both primary and secondary school students. Without a doubt, this was the most primary school students ever, to view a CXC Visual Arts exhibition. Their faces lit up when they entered the exhibition and their curiosity level went sky-high. The questions they asked about the pieces were way beyond their years.

The Art teachers who assisted in mounting the exhibition and acted as curators during the exhibition also brought their own spice to bear on the event. Their enthusiasm, their knowledge of art, their wit and most of all there absolute dedication to art was unquestionable. They are the trainers of future spice artists and they brought their classes, schools even, *en masse* to view the works on display.

Publicity

The exhibition was also the most publicised in the host country. Everyone in Grenada must have heard about the exhibition at the National Stadium! The Public Relations division in the Ministry of Education started the ball rolling with interviews with Art Director in the Ministry Mrs Lisa Francis. Mrs Francis and two Art teachers were also guests on the Government Information Service television programme. The week before the exhibition, Cleveland Sam, Assistant Registrar-Public Information at CXC gave an interview to Wee FM. Also in that week, Mr Sam was interviewed by Grenada Broadcast and GIS television.

During the week of the exhibition, the entire opening ceremony was re-broadcast on television several times and both Mr Sam and Mrs Andrea Philip, the Deputy Chief Education Officer appeared on live television and radio shows.

Art is excellence

Mrs Andrea Philip, Deputy Chief Education Officer in the Ministry of Education and Human Resource Development described the exhibition as an excellent show of creative expression and the best of the students in the Caribbean.

"At times when we think about excellence at the secondary school level, we tend to think

Spice Art

about the pure academic subjects," Philip, who is responsible for Curriculum Department in Grenada stated. "We think about Maths, English, Science and Social Studies."

The educator said there appears to be a totem pole of important subjects and that Art is at the bottom. She said this perception needs to change as Art is a subject of value and something that could lead into a career path.

"I am pleased that Grenada has made place for this Visual Art exhibition because we do honour creative expression and the holistic development of students," she said while speaking at the opening ceremony for the exhibition. "The exposure to the exhibition will open our eyes to the possibility of creativity among our student population."

Mrs Philip's comments were supported by data provided by Mrs Elizabeth Henry-Greenidge, Permanent Secretary in the Ministry of Education and Human Resource Development as she delivered the feature address at the opening ceremony.

"The Ministry of Education has supported Visual Arts in schools over the years," The Permanent Secretary noted. Currently 15 of the 19 secondary schools in Grenada offer Visual Arts at the CSEC Level.

"I am sure that in the not too distant future more students will be offering Art as a subject of choice at the CSEC level," she said.

Mrs Henry-Greenidge explained that Arts Education plays a significant role in learning and added that research has shown that there is a distinct relationship between the arts and cognition and each art form promotes unique ways of learning.

"When we talk about Arts Education we include music, dance, drama and the visual arts," she said. "The Ministry is also encouraging other aspects of the arts such as the performing arts (music and dance) as part of the refocusing of the schools' curriculum."

Mrs Henry-Greenidge revealed that during the week of the exhibition Grenada was also hosting a workshop in the area of dance for the CXC CSEC Theatre Arts subject. As a result, she expects that in the not-too-distant future, students from Grenada will be offering dance as a subject of choice at the CSEC level.

"It is important that we cater for the interests of our students, especially if we are serious about tourism and entertainment; these are fields that can provide a lot of opportunities for our young adults," she stated.

With scissors in hand and the words, "I now declare this CSEC Visual Arts exhibition officially open," Mrs Henry-Greenidge cut the ribbon leading to the exhibition hall.

Mrs Andrea Philip makes a point to Mrs Lisa Francis about one of the pieces on display

These young students are captivated by the 3-dimensional works on display

This piece in the Imaginative Composition section of the exhibition has the attention of these male students

EXAMINATION MODEL

CXC Procedures Pass JAMAICA UNREST TEST

"I am satisfied," Minister Holness

It is not every day that Caribbean students have to write an examination while gunshots are being fired in ear shot; or they are told to lie flat on their belly in the examination room. But this was the unfortunate reality for some candidates who wrote CXC's Caribbean Advanced Proficiency Examination (CAPE) and Caribbean Secondary Education Certificate (CSEC) examinations during the period 24 to 28 May.

During this period, civil unrest was taking place in West Kingston, and portions of Kingston and St Andrew were under a State of Emergency. There were calls for the Ministry of Education and CXC to cancel the examinations, however, the Overseas Examinations Commission, CXC's representative in Jamaica and CXC continued the examinations as time tabled.

The CXC Local Registrar, in the Overseas Examinations Commission, in consultation with CXC, made arrangements for candidates in the affected areas to write their examinations at other centres. Questions were then raised about how CXC would deal with candidates who missed a paper in one of the examinations.

Subsequent to the administration of the examinations, the Local Registrar submitted a report to CXC indicating that candidates from 13 centres were severely affected by the circumstances and requested that the Council take this into account in grading them. The Council also took into account other candidates whose performance might have been affected adversely by any circumstance.

CXC responded emphatically; and the Ministry of Education and principals of affected schools were satisfied with the Council's response and procedures outlined for dealing with affected candidates.

"We take the position that what CXC did was equitable and appropriate," Honourable Andrew Holness, Minister of Education in Jamaica stated to the media on 16 August, 2010 as the Ministry and CXC presented the results for Jamaica and explained the procedures used in dealing with affected candidates. "I am satisfied that CXC went to the individual candidate script level to ensure students received a fair grade," the Minister added.

Just what did CXC do? The Council's special consideration mechanism kicked in. With over 30 years of administering examinations, the Council has well-established assessment procedures for dealing with candidates, whose performance in its examinations was very likely to have been adversely affected by events such as natural disasters or social disturbances or who have individually experienced any circumstances before or during the examinations which might have adversely affected his or her performance.

Dr Gordon Harewood, Senior Assistant Registrar, Examination Development and Production Division at CXC, explained that these procedures include statistical validation

Dr Didacus Jules, Registrar of CXC presents a copy of the Jamaica results to Mrs Audrey Seawell, Permanent Secretary, Ministry of Education, Jamaica

which allows CXC to undertake a comparative analysis of a candidate's performance using several pieces of data. The data include a review of the candidate's performance on all components of the examination already completed, that is, if the candidate completed Paper 1 or Paper 2; the School Based Assessment or Internal Assessment submitted by the candidate, and the teacher's expected grade of the candidate, commonly known as the teacher's Order of Merit.

Dr Harewood outlined further, that a thorough five-step approach is used. The first step involves an examination of the subject performance nationally. The second is a review of the performance of the subject at the centre to which the candidate is attached. Thirdly, an analysis of the teacher's predicted grade for the candidate in that subject is carried out. This analysis includes reviewing the teacher's record of predicted grades and how they compare with the actual grades of candidates in previous years. If the teacher is consistantly accurate, no change is made;; however, if the teacher tends to be too generous or too severe, then the standard error of measurement is applied to moderate the candidate's grade. The next step is to look at the candidate's performance in the subject on all papers completed. And finally, the candidate's performance on other unaffected subjects is also analysed.

"The focus of the comparative analysis was to ascertain whether the performance of the candidates at the **affected centres in the 2010 examinations** was consistent with the performance expected," Dr Harewood explained. He said the objective was to focus on compensatory action wherever performance fell below expectation and therefore, a**ll the information available was used to treat each candidate with fairness without compromising the quality of the certificate** .

During the affected period, six subjects for the Caribbean Secondary Education Certificate (CSEC) examination were administered and 12 subjects for the Caribbean Advanced Proficiency Examination (CAPE). The CSEC subjects were Biology, Geography, Office Administration, Principles of Business, Religious Education and Social Studies; the CAPE subjects affected were Applied Mathematics, Biology, Chemistry, Economics, Electrical and Electronic Technology, Environmental Science, Law, Literatures in English, Management of Business, Physics, Pure Mathematics and Spanish.

Three hundred and fifty-one CAPE candidates of the 12,315 or 2.8 per cent of the Jamaica CAPE population were affected. For CSEC, 1,877 candidates of 77,924 or 2.4 per cent of the population were affected.

Minister Holness noted that, "while relative to the entire Jamaica candidate population, the numbers are small, it is important that each candidate is assured that he or she is treated fairly."

The Council reassured the Ministry of Education, parents, schools, candidates and the Jamaican public that each candidate who wrote its examinations during the events in West Kingston was awarded a grade by the procedures of special assessment which took account of that candidates' circumstances.

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EXAMINATION MODEL

CXC Examinations Model

Using multiple choice items, essay questions, and teacher assessment as instruments for assuring comparability, curriculum fidelity, and equity in CXC regional examinations

by Dr Desmond Broomes

Curriculum as practised by CXC may be modelled (Figure 1) as the interactions among **objectives** of the course, **content** of the course, and **teaching methods** considered by curriculum experts to be optimal and validated by teachers in their classrooms.

The scope and nature of the interactions are as shown in Figure 1 where the areas of interest are shaded and are defined as objectives x content, objectives x teaching methods, content x teaching methods, and objectives x content x teaching methods. For example, objectives x content (O ⊂ C) is about objectives which combine a careful interplay of subject content and skills; and, at the same time, evoke formative assessment processes through which this interplay becomes clear and capable of being communicated to students by their teachers.

The model requires formative and summative approaches to assessment to hold centre stage in curriculum development, implementation and evaluation.

Every examination board needs to have clearly defined and well-documented procedures for constructing examinations whether the examination components are **multiple choice test items** or **essay questions and problems** or **projects and portfolios**.

CXC produces examinations officially recognised by theEnglish-speaking Caribbean, to serve the educational purpose of the Caribbean region.

The assessment model used by CXC may be defined by Figure 2.

One major feature of the model shows the use of **external** and **internal** assessments, to ensure that the assessment of the subject is **reliably** and **validly** done.

A study of the procedures associated with establishing content validity within and across these three papers, Paper 1, Paper 2 and Paper 3, should provide answers to the following three (3) questions:

To what extent:

1. does the content of the examination papers sample the content of the curriculum?
2. is there congruence between the test items (and questions) and the teaching objectives of the course?
3. does performance on the examination predict future performance in the workplace, the market place, the playing field, and future classrooms?

PAPER 01: ITS ROLE IN THE ASSESSMENT PACKAGE

Paper 01 is typically a paper of multiple-choice items. It requires the student to answer sixty (60) test items. The paper contains a good sample of the content of the course which has been defined explicitly in the syllabus through an interactive process that uses subject experts, experienced teachers, teacher educators and national subject committees.

A **Table of Specifications** (Figure 3) usually ensures that, by stratifying the content and objectives of the course along two dimensions, and levels of thinking along a third dimension, the sample is representative and sufficient.

Under these procedures, CXC examiners can safely make the inference that the results obtained from any assessment are equally applicable to any other assessments which make use of different samples of test items. And further, to ensure that the inferences drawn by

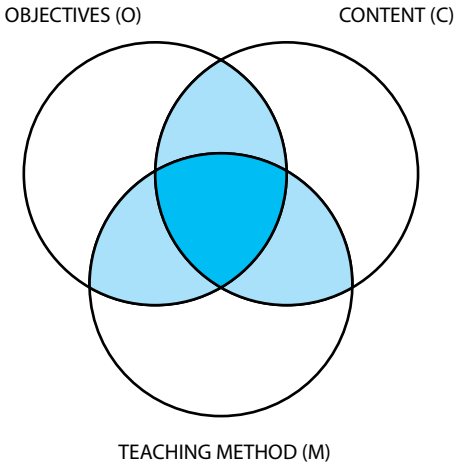

Figure 1.
Interactions among objectives, content, and teaching methods

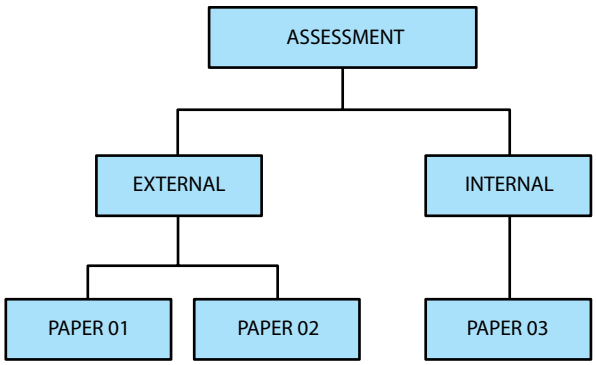

Figure 2.
CXC Assessment model

CXC Examinations Model

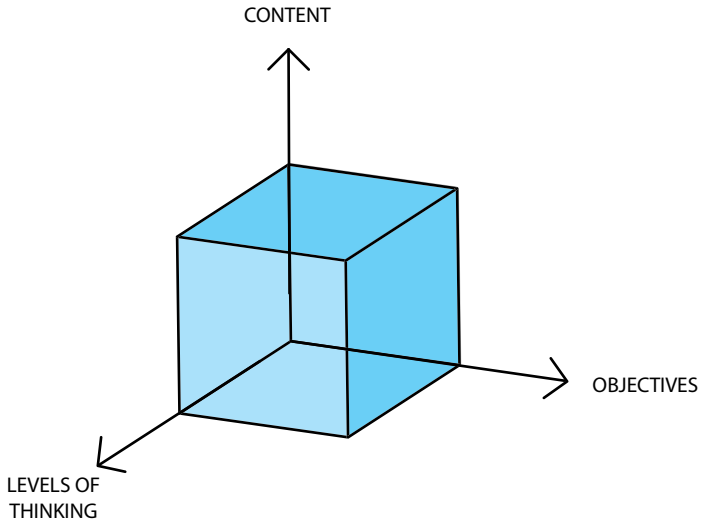

Figure 3.
Table of specifications – Three Dimensions

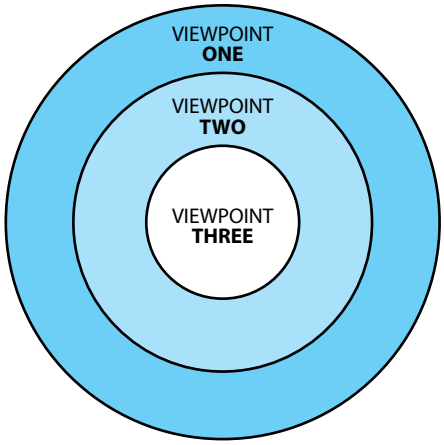

Figure 4.
Viewpoint One ⊂ Viewpoint Two ⊂ Viewpoint Three

the examiners are stable and robust, the construct validity of each item (used in any of the samples) has been tested and refined through a cycle of test development.

The soundness of the cycle assures the confident examiner, that the test scores produced from Paper 01 consistently provide unbiased estimates of the candidates standing within some well-defined domain and also that the scores do discriminate optimally at certain thresholds or grade boundaries.

PAPER 02: ITS ROLE IN THE ASSESSMENT PACKAGE

Paper 02 is an essay paper; it typically requires the student to answer 4 or 5 or 6 essay questions.

The essay is expected to be a structured or an open-ended question in which the students each have wide freedom to answer the question selecting relevant content and determining the style of response in their own way.

If the candidates' responses to the sample of 4 or 5 or 6 questions of a particular Paper 02 are to be used by examiners to make inferences about their responses to any other sample of questions, then one obvious but incorrect solution to samples for a Paper 02 is that the questions in Paper 02 should sample the widest range of content, knowledge and skills defined in the syllabus. Such a solution is fraught with difficulties. And above all, such a solution tends to destroy the usefulness of the essay questions.

The problem of appropriate content sampling is a critical issue that has been addressed by CXC from subject to subject, from year to year and from session to session.

By definition, the essay question – structured and open-ended – does not **explicitly** define the content and the organisation of the response required from the candidate. What is being tested is the candidates' ability to sample the content of the course, to recognise the sections of the course which are relevant and appropriate, and to organise these selections within the limits set down by the questions and redefined in their own way by each candidate. Thus the objects of interest in Paper 02 are essentially cognitive skills that may be arranged in some hierarchical manner based on the judgment of experienced educators.

To sum up and to focus the reader's thoughts: the assessment scheme of CXC was designed to provide answers to the following large question:

*To what extent do the **activities and thinking** which students are required to engage during their CXC examinations match the activities in which they were engaged during their teaching-learning sessions and are expected to engage, at a future date, in the workplace, the market place and other classrooms?*

The way the universe of multiple-choice items was conceptualised and the sampling procedures (two-dimensional Table of Specifications) used to select the sample of items that constitutes the Paper 01 for any subject or year or sessions are critical. These two procedures assure the content and construct validity of candidates' scores on the CXC Paper 01.

Similarly, the way the universe of essay questions was conceptualised and the sampling procedure (three-dimensional Table of Specifications) used to select the sample of questions that constitutes the Paper 02 for any subject in a given year, are critical. These two procedures go **a long way to** assure the construct and content validity of scores on the CXC Paper 02.

PAPER 03: ITS ROLE IN THE ASSESSMENT PACKAGE

Paper 03 is usually a project, or an investigation or a portfolio. CXC and teachers and students call it school-based assessment (in CSEC) and Internal Assessment (in CAPE).

School-based assessment or Internal assessment provides a dynamic vehicle which is being used by teachers (who prepare secondary school students for CXC examinations in all Caribbean territories) to **link** the certification of their students with the formative evaluation of their own teaching methods. The link is described as dynamic in that it redefines the nature of assessment and locates assessment at the centre of the teaching-learning process.

Among teachers who prepare students for CXC examinations there exist at least three dominant views of school-based assessment or internal assessment (Broomes, 1997). Viewpoint One is salient. It states that internal assessment provides information about the same skills and abilities as are tested in examination papers, Paper 01 and Paper 02. However, the internal assessment is conducted over a period of 12 – 24 months and so it has the potential to offset the **unreliability** associated with a particular test consisting of a particular sample of items (or questions) and administered on a particular day.

Hence the use of internal and external assessment as complementary components of the

CXC Examinations Model

CXC assessment model serves to minimise the reliability-validity tension that normally resides in any regional examinations conducted across schools and across countries.

On the surface, internal assessment seems to refer to what teachers do as they assess students' performance in course work, practical work, field work, projects, research reports, and, at times, essays and multiple choice questions. In all these activities, the teacher seems to be the best person to conduct the assessment and to award appropriate scores to the student for the work done. However, internal assessment is much more than teachers conducting assessments in ways as specified by CXC manuals. It is about the single most important features that characterizes CXC examinations; it is about **validity**. It is a prime data source for answering the large question of the article (see page 5).

To what extent are the cognitive structures required by students for successful performance on CXC examinations similar in nature, scope and organisation to these structures developed practised and refined during the teaching-learning activities in classrooms and also to those needed for satisfactory future performance as citizens, as workers and as lifelong learners?

Internal assessment enables **formative assessment** to emerge and take place within the classroom. CXC examiners, in their pursuit of reliable measures, have tended to put down in great detail, what are the assessment tasks, when they are to be administered, how they are to be assessed, and how the assessment is to be recorded. These detailed instructions to teacher and students are designed to ensure that the assessment procedures are transparent and trustworthy.

Broomes (1997) also discovered two other viewpoints. Viewpoint Two was that internal assessment provided information about skills and abilities which cannot be adequately tested externally or can only be tested with great difficulty.

Viewpoint Three stated that internal assessment enabled the teacher and the student to design a curriculum that meets the needs of each individual student and to assess each student's achievement on specially selected tasks.

Broomes (1997, p154) concluded that internal assessment was appropriately modelled as the intersection of three viewpoints.

In 2006, a preferred synthesis should be that Viewpoint Three is embedded in Viewpoint Two which in turn is embedded in View point One. Figure 4 illustrates.

In July 1996, Broomes probed ninety-six (96) Chief Examiners and Assistant Chief Examiners who managed seventeen CXC subjects in order to find answers to the question:

What should examiners know about the problems of conducting SBA in schools so that the assignments could be defined in more useful ways?

Analysing their view and comments, the author extracted "Fifty things examiners say about school-based assessment" under 4 headings:

Teaching training and orientation (13 items)
Services and support services (13 items
Nature and Scope of SBA assignments (17 items)
Student orientation (7 items)

Ten years later, February 2006, the author asked a sample of teachers to comment on the currency and usefulness of the fifty statements. They identified sixteen (16) of them as of most worth.

> Every examination board needs to have clearly defined and well-documented procedures for constructing examinations whether the examination components are **multiple choice test items** or **essay questions and problems** or **projects and portfolios**.

Teacher Training and Orientation

1. (2) Teacher training should focus not only on planning, monitoring and assessing the students' assignments but also on managing and conducting their assessment,
2. (4) Teacher training should include developing tests to assess particular skills.
3. (12) All teachers should be exposed to CXC marking/assessing process as it is a great learning experience.

Resource and support services

4. (18) Feedback forms should indicate the strengths and weaknesses of the students and of the teaching.
5. (19) All teachers should have a manual of CXC SBA with full details of marking and expected responses to questions.
6. (20) SBA sample packs should be updated regularly.

Nature and scope of SBA assignment

7. (28) SBA exercises should be geared to allow students to acquire practical skills.
8. (29) SBA assignments should allow students to develop analytical skills.
9. (30) SBA assignments should encourage students to develop communication skills.
10. (36) SBA assignments should comprise realistic topics.
11. (37) Assignments given for SBA should reflect how practitioners of a given discipline behave.
12. (40) SBA assignments should play a central role in the assessment of student's performance.

Student Orientation

13. (46) All students should have easy access to the CXC syllabus.
14. (47) All students should have available to them the relevant assessment criteria.
15. (48) Students should be aware of the marking scheme to be used in the assessment as numbered in Broomes (1997).

CONCLUSION

This article engaged three purposes;

1) It set down, in readable terms, some technical words that teachers and those interested in the assessment of secondary school students may find useful as they discuss the nature, construction and effectiveness of techniques currently employed by CXC in its examinations.

2) It identified and sought to lay bare the anatomy of certain problems associated with assessment across schools and across countries in order to arouse the curiosity and research intuition of classroom teachers.

3) It challenged school administrators, teachers and students to assume active participation in the assessment of students.

Dr Desmond Broomes is one of the leading measurement experts in the Caribbean. He is a former UWI lecturer and special consultant to CXC on measurement and evaluation matters.

REFERENCE

Broomes, Desmond (1997). Practices, Problems and Potential of School-Based Assessment. Barbados, Caribbean Examinations Council.

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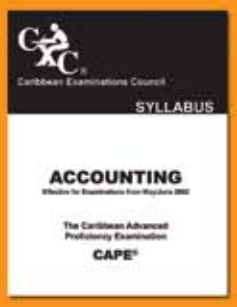

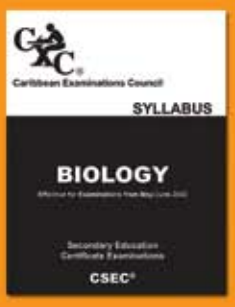

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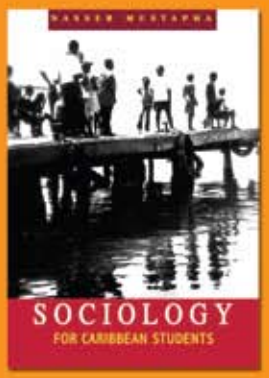

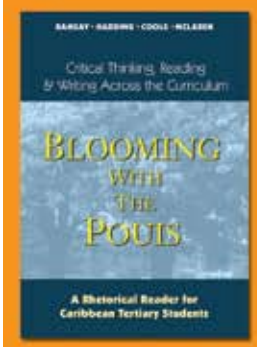

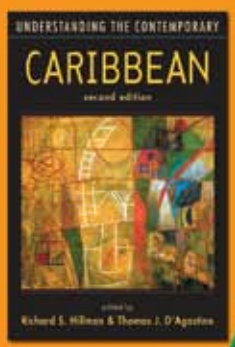

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CXC NEWS

Meeting Digital Students IN A DIGITAL AGE

CXC Improves Cyberspace Presence

by Cleveland Sam

QUESTION
Where is the best place to meet people?

ANSWER
Wherever they congregate.

The young and the young at heart among us may even add, *"duh, like that is so obvious."* And where do the young and young at heart congregate? Not at the village market; not at the community centre and not at the play park either. They meet in cyberspace; on the social networks - Facebook, Twitter, YouTube, MySpace, Hype web sites and blogs.

WWW.CXC.ORG

The good news is that CXC is meeting young people there too. On 10 May, with two taps on the URL www.cxc.org by Ondre Harper of Harrison College and Leslie-Anne Greenidge of St Michael School, the Council launched its new and improved third generation web site with more interactivity. But more than that, seven days later, on 17 May, the Council signalled its seriousness about its presence in cyberspace, when Jamaican Simone Pasmore joined the staff as CXC's first full-time Webmaster.

Dr Didacus Jules, Registrar of CXC often comments that, "one of the challenges for education in the Caribbean is that we are teaching digital children in an analogue classroom."

He believes that with CXC's multiple presence in cyberspace, CXC has moved one step closer to bridging the digital divide which exists between the education system and young learners.

Speaking at the web site launch, Dr Jules explained that today's web user is a digital native with expectations of multisensory, multimodal interactions. As such, the new website features videos - linked to CXC's YouTube channel, slideshows of students' artwork in the virtual art gallery, a media centre, a CXC store, the Registrar's Blog, forum and e-polling among other features.

"It represents a major leap forward in our drive to make CXC an IT-intelligent organization. By this I mean an organization that utilizes and leverages information and computer technology to work more efficiently, deliver better and faster service to its clientele and provide the means for its clientele to self-fulfil their needs."

While the site improves tremendously on its predecessor's visual appearance, Dr Jules noted

CXC the website is PERFECT! You heard me, PERFECT! Its smooth interface, clean lines and smooth faster loading...it's just perfect. I am pleased CXC! Keep up the good work and continue to reflect us in a positive educated light. WOW! I am so pleased that I feel like crying. I am filled with pride!" **From Tommy Gooden on CXC Facebook page**

Meeting Digital Students in a Digital Age

Students, teachers and CXC staff attending the launch of the new CXC website

that the site is much more than good looks and fast loads.

"This website will be in a permanent state of evolution as we intend to continually improve, upgrade and enhance its features," the elated Registrar explained. "As you post questions, our database of Frequently Asked Questions (FAQs) will grow and we will eventually be able to provide answers on everything you ever wanted to ask about CXC."

Dr Jules added that the look and feel of the site heralds the new substantive CXC. A CXC that is more service-oriented and more committed to maintaining and raising standards while improving performance and more receptive and responsive to the needs of the Caribbean public that it serves.

SOCIAL NETWORKING SITES

But the new cutting edge web site is one of the pillars in the CXC cyberspace architecture. With the fulltime webmaster on staff, CXC now has significant presence on the social networking sites Facebook, Twitter and YouTube.

These sites have placed the Council at the heart of where the conversation is taking place among one of its most important constituents– students. As a result, CXC is better able to respond to the needs of this target audience in a timely manner. Issues and concerns raised by users of the sites are addressed within a 24-hour period. The civil unrest in Jamaica in May was a good test of how powerful a tool, Facebook is for gauging feedback. Numerous candidates vented their feelings about having to write examinations during the unrest and what it could do to their performance.

The first week in August also saw a great surge in activity on the Facebook site and on the forum on **www.cxc.org**. Most users had one question: "When are results coming out?"

On CXC's Twitter site, visitors can follow what is happening with CXC in real time; what events are taking place, where and who are the main actors.

Referring to CXC's social networking presence, Dr Jules said, "The synergy of these three channels of communication and service will enable us to extend the reach of CXC and market our examinations and services in ways that we never thought possible and at virtually no cost to the organisation."

LIVE STREAMING

On 23 June, the Council raised the bar on its use of social media networks to reach its audiences. The Council in conjunction with the National Council of Parent Teacher Associations hosted the second of two town hall meetings at the Alexandra School in St Peter, Barbados. The meeting was streamed live on the Internet using the social media site U-Stream. This initial broadcast was very encouraging as the response from viewers was positive. The Council will be using this medium to broadcast future events, thus bringing its events at the mouse click of its stakeholders.

BENEFITS TO STAKEHOLDERS

Speaking at the launch of the website on behalf of stakeholders, Mr Winston Crichlow, President of the Barbados Association of Principals of Public Secondary Schools, said with the new website and other computer technologies, CXC has transformed the way it does business.

"Communicating with teachers and schools has now become easier and more efficient," the Principal of Harrison College said. "Previously, in the paper-based system, a great deal of time was wasted in schools having to send personnel to CXC Headquarters in order to obtain SBA assessment forms, Order of Merit forms, manuals for principals and syllabuses. These items can now be downloaded online saving valuable time and resources."

Mr Crichlow, who sits on the School Examinations Committee and the Final Awards Committee of CXC, noted that in addition, schools are now able to keep up-to-date and informed as they have access to a CXC online calendar of events including deadlines for the submission of various assessment records, current fee structures, grading schemes and examination timetables.

"To my mind, an innovative gem has been the Online Registration System of students for examinations," Mr Crichlow told the audience at the launch. "Understandably, this new registration system has had a few teething problems, but it has proven to be vastly superior to the earlier paper-based system."

The school administrator noted that as schools in the Caribbean grapple with the challenges of improving achievement levels in CXC examinations, "the new website certainly adds an exciting experience for all stakeholders."

The exciting experience which he referred to on the new website includes access to past paper booklets, availability of Schools Reports, the soon-to-be-available of 24-hour online tuition in conjunction with Notesmaster, and links to CXC social networking sites such as Face book, Twitter and YouTube.

CXC NEWS

EXCERPTS FROM THE FEATURE ADDRESS

Delivered by Mr Winston Crichlow at the Launch of CXC's New Website

Anyone familiar with the range of online services offered by CXC must be impressed by and proud of the innovations which CXC continues to make in response to the needs of educators, parents and students as it seeks to fulfill its mission to provide the region with efficient and cost-effective educational services.

As schools in Barbados, and in the Caribbean by extension, grapple with the many challenges of improving their levels of achievement in their CSEC, CAPE, CCSLC and CVQ examinations, the Caribbean Examinations Council's new website certainly adds an exciting experience for all stakeholders.

Speaking from my position as President of a major stakeholder organisation, the Barbados Association of Principals of Public Secondary Schools (BAPPSS), the Principal of a secondary school, and as a Member of the Council, I believe that I am ideally placed to speak on some of the benefits of this online system.

BENEFITS TO STUDENTS AND PARENTS

In the limited time allotted to me to comment on the benefits of the new website and taking into consideration the comprehensive nature of the many services CXC offers, I choose to focus on a few of the benefits to (i) students and parents and (ii) teachers and schools. Firstly, from the perspective of students and parents, some of the important benefits of the new website include

- *having access to syllabuses, study guides and grading schemes – this is certainly invaluable to students in their exam preparation*
- *obtaining help with exam preparation 24 hours a day via online tutorials*
- *seeing reports of exam results – this will aid students in avoiding the pitfalls associated with the kinds of mistakes made by other students; it also highlights the difficult areas of the various syllabi which would require careful study*
- *obtaining guidance in the construction of their CAPE Internal Assessments or CSEC SBA assignments*

Caribbean students are, like students all over the world, desirous of being successful in their examinations. In Barbados, even talented students seek to supplement their regular lessons in school with instruction after school hours. This cohort of students represents a source of income for an examining body with the foresight to design an examination preparation online system at a reasonable cost.

BENEFITS TO EDUCATORS

With the use of the computer technology, CXC has transformed its way of doing business with its stakeholders. Communicating with teachers and schools has now become easier and more efficient. Previously, in the paper based system, a great deal of time was wasted in schools having to send personnel to CXC Headquarters in order to obtain SBA assessment forms, order of merit forms, manuals for principals and syllabuses. These items can now be downloaded online saving valuable time and resources.

Additionally, schools are kept up-to-date and informed with access to a calendar of CXC events including deadlines for the submission of various assessment records, current fee structures, grading schemes and examination timetables.

To my mind, an innovative gem has been the Online Registration System (ORS) for examinations. Understandably, this new registration system has had a few teething problems but it has proven to be vastly superior to the earlier paper-based system. The onus now rests with schools to devise systems to deal with the registration process more efficiently with a view of eliminating registration errors which can attract unnecessary costs.

BAPPSS CONCERNS

My colleagues in BAPPSS however, have expressed the view that CXC needs to provide schools with the opportunity to either include or take off students from the registration register, at the time of the submission of amendments without any cost to the school. In support of their position, the Principals have observed that CXC has been able to save a great deal of the costs for the clerical work associated with the entry of data in the previous paper-based system. CXC should not now be penalizing schools for errors made when using the Online Registration System.

BENEFITS TO EDUCATORS CONTINUED

For better or for worse, it is accepted that instruction in schools in the Caribbean region is examination-driven and that schools are continually seeking ways to improve their levels of achievement in examinations.

From research, it has been noted that the factors affecting student achievement can be classified under three broad headings namely, school-level factors, student-level factors and teacher-level factors.

However, research clearly establishes that the most important element in student achievement is the teacher-level factors. These factors are those that fall primarily under the control of individual teachers and therefore are a function of the decisions made by individual teachers. They consist of specific instructional strategies, classroom management techniques, and classroom curriculum design. Obviously, an individual teacher is influenced by the decisions the school makes, but all researchers seem to agree that the impact of decisions made by the individual teacher is far greater than the decisions made at the school level or the student level.

Specifically, research has shown that teacher subject-matter knowledge was directly related to student achievement and that subject-matter knowledge was therefore a pre-requisite for effective teaching and hence examination success. The findings clearly imply that the more a teacher knows about a subject, the better that teacher will be in influencing learning. The implication of this assertion is that if a teacher's content knowledge is flawed then the students' level of achievement will be severely compromised.

In light of the above, the direct benefits of CXC's online programme to educators, especially when coupled with all of the other online services offered by CXC, become evident. Schools that are licensed to access the online CSEC programme are better positioned to ensure that their teachers are provided with a means of checking their understanding of each subject's syllabus content with their own knowledge.

What is uncertain is the extent to which schools and teachers are aware of the CXC online services, the extent to which they make use of reports on examination results or of the other invaluable services. What is certain is that a strategy must be devised to encourage teachers to utilize as many sources of information as possible. This will add to their pedagogical skills and their professional development.

Winston Crichlow is the Principal of Harrison College in Barbados, and the President of the Barbados Association of Principals of Public Secondary Schools.

CXC NEWS

UNIVERSITY OF NEW ENGLAND Publishes CAPE Equivalency Chart

The University of New England (UNE) is the latest US school to publish an equivalency chart for CXC's Caribbean Advanced Proficiency Examination (CAPE) qualification. The chart, which was published in August, lists 26 CAPE Units for which UNE offers transfer credits.

Pure Mathematics Unit 1 commands the most credits for any single Unit. UNE will offer seven credits for Pure Mathematics Unit 1. Candidates presenting this Unit will receive three credits for UNE's Pre- Calculus and four credits for Calculus 1.

Each of the natural science Units, Biology Unit 1 and Unit 2, Chemistry Unit 1 and Unit 2, Physics Unit 1 and Unit 2 and Pure Mathematics Unit 2 will receive four credits. All other Units will receive three credits each.

The four credits offered for the natural sciences take into account the laboratory work which candidates would have covered in the Units.

The decision to award transfer credits for CAPE qualification was prompted by the performance of exiting students at UNE.

"The decision to award transfer credits for CAPE qualification was prompted by the performance of exiting students at UNE."

"Having a student enrolled at the University of New England from Trinidad and Tobago, and seeing how well prepared that student was, gave cause to take a good look at the educational system," noted Mr Bob Pecchia, Associate Director of Admissions at UNE.

UNE then undertook a full review of the CAPE syllabuses for all the various Units and made the decision to award college credits to those students who performed well on the examinations.

Mr Pecchia said this is similar to the way credits are awarded for the College Board Advanced Placement Exams, and High-Level International Baccalaureate courses.

"The University of New England has had professors conducting research in the Caribbean for years, and followed a suggestion to take a close look at the Caribbean students," explained Mr Pecchia. "We found not just good students, but many outstanding students," he added. "Students who are preparing very hard to pursue a university degree."

Currently, UNE has students from Jamaica and Trinidad and Tobago.

The Caribbean Advanced Proficiency Exam minimum score standard for each examination, and its UNE equivalent course, is individually determined by the Department in which the course is offered

CAPE EXAM TITLE	ACCEPTED SCORE	COURSE EQUIVALENT	CREDIT EARNED
Accounting Unit I	1 or 2	BUAC 201	3
Biology Unit I	1 or 2	BIO 106	4
Biology Unit II	1 or 2	BIO 105	4
Caribbean Studies	1 or 2	HIS 199	3
Chemistry Unit	1 or 2	CHE 110	4
Chemistry Unit II	1 or 2	CHE 111	4
Communication Studies Unit I	1 or 2	ENG 110	4
Economics Unit I	1 or 2	BUEC 203	3
Economics Unit II	1 or 2	BUEC 204	3
Environmental Science Unit I	1 or 2	ENV 104	3
Environmental Science Unit II	1 or 2	ENV 104	3
French Unit I	1 or 2	FRE 101	3
Geography Unit I	1 or 2	ELE 199 - Elective	3
Information Technology Unit I	1 or 2	CITM 100	3
Information Technology Unit II	1 or 2	CITM 102	3
Law Unit II	1 or 2	BUMG 325	3
Literatures in English Unit I	1 or 2	ENG 199	3
Literatures in English Unit II	1 or 2	ENG 198	3
Management of Business Unit I	1 or 2	BUMG 200 or 302	3
Management of Business Unit II	1 or 2	BUMG 312	3
Pure Mathematics Unit I	1 or 2	MAT 180 and 190	7
Pure Mathematics Unit II	1 or 2	MAT 195	4
Physics Unit I	1 or 2	PHY 110	4
Physics Unit II	1 or 2	PHY 111	4
Sociology Unit I	1 or 2	SOC 150	3
Sociology Unit II	1 or 2	SOC 170	3

To view the UNE CAPE equivalency chart visit ***http://www.une.edu/registrar/catalog/1011/undergrad/admissions.cfm#cape***

CXC NEWS

CXC Fills New Posts

Every world-class organization needs world-class staff and CXC is no different. As CXC moves towards becoming a globally competitive organization, the Council is also recruiting new staff in strategic positions to propel it to world-class status.

Over the last six months, the Council has recruited several Caribbean and international professionals to fill newly-created positions and some existing ones.

With a new sophisticated presence in cyberspace, in May, the Council hired its first full-time webmaster in the person of **Simone Pasmore** from Jamaica.

Joining the staff in June and July were two other Jamaicans; **Ms La-Raine Carpenter**, who joined the Examination Development and Production Division (EDPD) as Editor and **Dr Carol Granston** who took up the newly-created post of Senior Assistant Registrar in the Syllabus and Curriculum Development (SCD) Unit, based at the Western Zone Office in Jamaica.

Barbadian **Dr Grace-Anne Jackman** and **Ghanaian Dr John Andor** both joined the Examination Development and Production Division (EDPD) in September as Measurement Officers.

The *Caribbean Examiner* brings you a brief profile of the new members of team CXC.

(L–R) Simone Pasmore, Heather Sobers, La-Raine Carpenter & Dr Carol Granston

Simone Pasmore

Webmaster- Registrar's Office

Simone, a Jamaican national joined the Council on 18 May, 2010 as webmaster based in the Registrar's Office. Simone is a highly energized and enthusiastic individual who brings a wealth of knowledge in software engineering. She was educated at Florida Atlantic University where she gained a Bachelor and Masters in Computer Science.

Simone has worked in marketing for over ten years and has combined her software background with this experience to produce several marketing campaigns during that time. Simone previously worked for Singular Wireless/AT and T.

"My experience at CXC has been a very engaging experience thus far," she told the *Caribbean Examiner* magazine.

The launch of the Council's intranet she listed as her most rewarding accomplishment to date. "It gives all my colleagues an opportunity to share and collaborate through one central portal," she explained.

Ms La-Raine Carpenter

Editor (EDPD)

Ms La-Raine Carpenter joined the staff of the Caribbean Examinations Council as Editor in the Examinations Development and Production Division, with effect from 14 June, 2010.

Though now joining the Council as a full-time member of staff, Ms Carpenter if no stranger to CXC, as she served as Assistant Examiner in CAPE Literatures in English for three years.

She holds a Master of Education in Language Education and a Bachelor of Arts in English with First Class Honours from the University of the West Indies, Mona Campus, Jamaica. Ms Carpenter brings to CXC experiences gained from her affiliation with the Caribbean's leading publishing houses, including Ian Randle Publishers, where she has been responsible for various aspects of the editorial process including editing/proofreading manuscripts and assessing the suitability of manuscripts for publications.

CXC Fills New Posts

Dr Grace-Anne Jackman

Assistant Registrar,
Measurement Officer (EDPD)

Dr Grace-Anne Jackman joined the Caribbean Examinations Council in the position of Assistant Registrar, Measurement and Evaluation Officer in the Examinations Development and Production Division (EDPD) with effect from 1 September, 2010.

Among Dr Jackman's credentials are a Doctorate in Philosophy in Research and Evaluation Methodology from the University of Florida; a Master of Science in Marketing Research from the University of Georgia, a Master of Science in Statistics from the University of Oxford and a Bachelor of Science in Mathematics and Computer Science from the University of the West Indies, Cave Hill.

In her professional experience as a marketing research consultant, Dr Jackman has worked on several regional projects with Systems Consulting Limited in Barbados and has managed an international corporate research programme while employed with IBM in New York.

Dr Jackman has presented her research at the annual American Educational Research Association (AERA) conference and her most recent paper, "Estimating Latent Variable Interactions with the Unconstrained Approach: A Comparison of Methods to Form Product Indicators for Large, Unequal Numbers of Items" has been accepted for publication by the *Journal of Structural Equation Modeling*.

Her research interests are in the areas of Structural Equation Modeling and Item Response Theory.

Dr John Andor

Assistant Registrar,
Measurement Officer (EDPD)

Dr John Andor joined the staff of the Council in the post of Assistant Registrar, Measurement Officer in the Examinations Development and Production Division, with effect from 13 September, 2010.

A national of Ghana, West Africa, he is a professional member of national and international professional associations such as; the International Association of Educational Associates, (IAEA), the Chartered Management Institute -UK(CMI), the Association of Business Executives (ABE) and the European Association for Research in Learning and Instruction (EARLI) where he has co-presented research papers.

He possesses a PhD in Educational Assessment and Research from the University of Manchester, MEd in Educational Measurement and Evaluation from the International Centre for Educational Evaluation (ICEE), University of Ibadan, Nigeria and a BSc (Hons) in Business Administration from the University of Ghana.

Dr Andor brings to CXC a wealth of knowledge and experience in the area of Measurement.

He held the position of Principal Assistant Registrar at the West African Examinations Council (WAEC), Ghana before relocating to the United Kingdom. He has developed tests in business subjects with the Royal Society of Arts Examination Board and has been involved in international assessments with EDEXCEL and worked in other capacities such as an examiner.

Dr Carol Granston

Senior Assistant Registrar,
Syllabus and Curriculum
Development (SCD)

Dr Carol Granston joined the staff of the Council as Senior Assistant Registrar, Syllabus and Curriculum Development based at the Western Zone Office, Jamaica, with effect from 5 July, 2010.

Dr Granston possesses a Doctorate of Philosophy in Curriculum and Instruction with an emphasis in Instructional Design and Technology from the University of South Florida; a Master of Science in Educational and Training Systems Design from University of Twente, The Netherlands; a Bachelor of Education (with Honours) in Language Education (English) from the University of the West Indies, Mona, Jamaica.

Dr Granston recently concluded her tenure as an Educational Technology Specialist at UWI's Mona Campus's Instructional Development Unit (IDU).

Her professional experience includes various consultancies as course writer with UWI Open Campus, e-Learning Specialist with the Caribbean Knowledge and Learning Network (CKLN) and Educational Technology Specialist with CKLN and e-Learning Jamaica Limited.

Dr Granston is the author of a number of published works, including chapters in books, and journal articles. Her latest work *Information and Communication Technology (ICT) in Jamaica's Primary Schools: An Examination of Teachers' Uses of ICT in the Primary Education Support Project (PESP) Schools* has been accepted for publication.

EXAMINATIONS

Improved CSEC English Results in 2010

Performance in both English A (Language) and English B (Literature) for the Caribbean Secondary Education Certificate (CSEC) improved significantly in the May/June 2010 sitting.

Sixty-six per cent of the subject entries submitted for English A achieved Grades I to III in 2010 compared with 56 per cent in 2009, 45 per cent in 2008 and 49 per cent in 2007. Performance at the Grade I level also improved with 18 per cent of entries gaining Grade I compared with 12 per cent in 2009. The examining committee attributed this year's performance to the ability of candidates to better manage the Summary, Narrative and Argumentative Writing sections on the English A paper.

For English B, 76 per cent of the entries achieved Grades I to III this year, compared with 58 per cent in 2009 and 48 per cent in 2008. The percentage of candidates who achieved Grade I increased from 14 per cent in 2009 to 32 per cent this year. Two factors accounted for the significant improvement. The first is that performance on Profile 1-Drama, saw improvement. The second factor is that teachers benefited from the training workshops conducted on the English B syllabus throughout the region by CXC. The examining committee is of the view that this year's improved results are direct dividends of the training.

The performance in English underlines a general improvement in performance this year. Overall, 69 per cent of subject entries achieved Grades I to III, the acceptable grades at CSEC. This compared with 66 per cent of acceptable grades in 2009 and 62 per cent in 2008.

Of the 34 CSEC subjects offered, performance improved in 14 subjects, declined in 14 subjects and remained the same in six subjects.

MATHEMATICS

While the English performance this year was something to shout about, performance on Mathematics remained the same as last year with 41 per cent of candidates achieving Grades I to III. The format of the examination was changed with the new syllabus. Rather than choosing two out of six questions, candidates were limited to two out of three optional questions on Paper 02.

There was a slight improvement in the core of the compulsory section of Paper 02, however, in the optional section, performance declined.

The Examining Committee also reported that a large percentage of candidates did not select question 10 which tested Geometry, Trigonometry and Measurement. Only 20 percent of the 100,084 candidates selected this question. This topic also recorded the lowest scores in the compulsory section.

BUSINESS STUDIES

In the Business Studies subjects, there were mixed results. Principles of Accounts saw improved performance; Principles of Business and Electronic Document Preparation and Management remained steady, while performance in Economics and Office Administration declined.

Sixty-four percent of entries for Principles of Accounts achieved acceptable grades, compared with 61 per cent in 2009. Notwithstanding the improvement, the examining committee cites Company Accounts as one of the weak areas on this examination.

For Electronic Document Preparation and Management (EDPM), 90 per cent of the entries achieved Grades I to III, the same as in 2009. The Examining Committee has strongly recommended that teaching for this subject should not be confined to the classroom. "Students should get exposure to the real-life work environment through field trips and site visits," the Measurement Officer reported to the Final Awards Committee.

Improved CSEC English Results in 2010

Seventy-nine per cent of entries achieved acceptable grades in Principles of Business, while in 2009, 80 per cent achieved similar grades.

Performance in Office Administration declined by three per cent when compared with that of 2009. This year, 78 per cent of entries achieved Grades I to III, while in 2009, 81 per cent achieved these grades.

Economics saw a marginal decline in performance this year. Sixty-two per cent of entries achieved Grades I to III, down from 64 per cent in 2009. "Candidates are still challenged by quantitative and analytical questions," the examining committee noted. It added that there is also a lack of understanding of some key economic concepts which prevents candidates from gaining maximum marks on certain questions.

Caribbean History had a seven per cent increase in performance this year, with 65 per cent of entries achieving Grades I to III, compared with 58 per cent last year. Geography saw improvements similar to Caribbean History, with 66 per cent of entries achieving acceptable grades this year, compared with 59 per cent in 2009.

The examining committee for Geography noted that candidates continue to exhibit poor Map Reading skills and also lack understanding of basic geographical concepts. The committee has recommended that Geography be introduced at the lower secondary school to equip students with a good foundation for the subject.

TECHVOC

Of the Technical and Vocational Education subjects, Technical Drawing, Food and Nutrition and Clothing and Textiles all saw improved performance this year. Eighty-three per cent of entries for Clothing and Textiles achieved Grades I to III compared with 80 per cent last year.

Food and Nutrition recorded a five per cent improvement this year. Ninety-two per cent of entries achieved acceptable grades, compared with 87 per cent last year. For Technical Drawing, the margin of improvement was two per cent, with 77 per cent of entries achieving Grades I to III, compared with 75 per cent of entries achieving similar grades in 2009.

EXPRESSIVE ARTS

In the Expressive Arts cluster of subjects, Physical Education and Sport and Music showed improved performance; Theatre Arts remained the same and performance declined in Visual Arts.

Physical Education and Sport was the best performing subject overall with 97 per cent of entries achieving Grades I to III this year, which was a slight increase over 2009 when 96 per cent of entries achieved those grades.

Music had one of the most significant improvements in performance of all subjects this year. Last year, 54 per cent of entries achieved Grades I to III, while this year it increased to 72 per cent.

SCIENCES

Performance declined in most of the sciences including two of the three natural sciences. Agricultural Science (Single Award) was the only science which saw improvement in performance this year. Ninety-one of the entries for Agricultural Science (SA) achieved Grades I to III this year compared with 87 per cent in 2009. Performance on Agricultural Science (Double Award) declined slightly, from 90 per cent of acceptable grades in 2009 to 88 per cent this year.

> "Of the 34 CSEC subjects offered, performance improved in 14 subjects, declined in 14 subjects and remained the same in six subjects."

Biology has remained steady over the last two years, with 75 per cent of entries achieving acceptable grades in both 2009 and 2010. Though performance in Chemistry and Physics remained high, they both experienced declining performance this year when compared with last year. For Physics, the percentage of entries achieving acceptable grades dipped from 77 last year to 75 this year; however, there was an increase in the percentage of candidates achieving Grade I. Twenty-one per cent of candidates achieved Grade I this year compared with 16 per cent in 2009.

In Chemistry, the percentage of acceptable grades fell from 78 last year to 69 this year. Once again, Organic Chemistry was cited as one of the major weaknesses of candidates. The Council is working in conjunction with the Chemistry Department at the University of the West Indies, Mona Campus, to devise a solution for this perennial problem. Another area of concern is the Chemistry of Cooking.

INFORMATION TECHNOLOGY

The new single Information Technology syllabus was tested for the first time in the 2010 May/June examination. Prior to this year, there were two Information Technology syllabuses and two examinations, one at Technical Proficiency and one at General Proficiency. Beginning this year, there was one examination at the General Proficiency level and the single syllabus was introduced to schools in September 2008. Some 25, 716 candidates registered for Information Technology this year.

Overall performance on the new examination was encouraging with 83 per cent of the entries achieving acceptable grades. The recurring challenges of Programming and Database Management were once again cited as weaknesses of candidates. In addition, the Examining Committee has recommended that teachers pay more attention to the areas of Problem Solving, Programming, Database Management and Binary Arithmetic.

GROWTH IN ENTRIES

Candidate entries for Mathematics and English A both passed the 100,000 mark this year. English A was the largest subject with 100,461 entries this year compared with 94,327 entries in 2009. Mathematics followed closely with 100,084 entries this year compared with 91,351 entries in 2009.

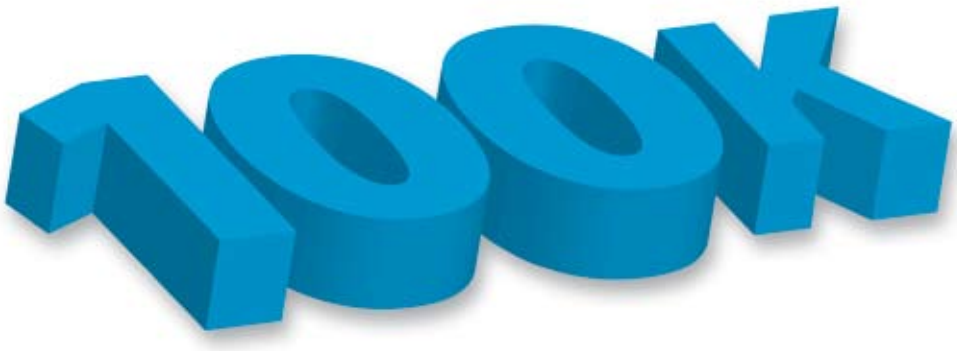
Both subjects were always the two largest at CSEC; however, one factor which accounted for the even stronger growth this year was the discontinuation of the Basic Proficiency examination in all subjects. Last year was the final year Basic Proficiency was offered in Mathematics and 2008 was the last time Basic Proficiency was offered in English A.

Social Studies broke through the 50,000 entries barrier this year, with 52,968 entries compared with 48,569 in 2009. Human and Social Biology saw significant growth in numbers as well, crossing the 30,000 mark this year. There were 31,546 entries this year compared with 26,515 in 2009.

Overall, the number of candidates taking the May/June 2010 CSEC examination increased by almost 10,000. This year 153,447 candidates registered for the examination, compared with 143,489 candidates in 2009.

EXAMINATIONS

CAPE Unit Entries Pass



Growth

In its 13th sitting, the Caribbean Advanced Proficiency Examination (CAPE) has reached a significant milestone in its continued growth. For the first time, the number of Unit entries surpassed the 100, 000 mark. Some 101, 643 Unit entries were submitted this year compared with 93, 648 in 2009. When CAPE was introduced in 1998, only 985 Unit entries were submitted by 797 candidates.

Communication Studies, one of the two core subjects, continues to be the largest subject at CAPE. This year 13, 797 candidates registered for the subject compared with 12, 637 last year. Caribbean Studies, the other core subject also recorded an increase, with 10, 259 candidates registered this year compared with 9, 546 in 2009.

The number of entries for Physics Unit 1 doubled this year. Six thousand and thirty-two entries were submitted this year compared with 2, 970 last year.

Sociology Unit 1, passed the 5, 000 mark this year, with 5, 163 entries compared with 4, 602 last year. Approaching the same milestone is Management of Business Unit 1, with 4, 968 entries this year.

The number of candidates writing CAPE also continues the steady growth pattern. This year, over 1500 more candidates registered for CAPE than in 2009. Some 25, 776 candidates registered for the examination, compared with 24, 194 candidates in 2009. Of those writing the examination, 62 per cent were female and 38 per cent male.

Steady Performance

The overall performance of candidates in the 2010 sitting of CAPE remained on par with the last two years, that is, approximately 89 per cent of entries achieving Grades I to V, the acceptable grades at CAPE.

In spite of this steady overall trend, several Units saw a decline in performance, while some Units, mainly Unit 2 of some subjects saw an improvement. Law Unit 2 saw the most improved performance overall. This year, 85 percent of entries for Law Unit 2 achieved Grades I to V, compared with 52 per cent last year. Performance in Unit 1 also improved with 75 per cent achieving acceptable grades, compared with 71 per cent last year.

2010 was the first examination based on the revised Law syllabus and the Examining Committee attributes the improved performance in part, to structural changes made to the Law programme. Teachers of the subject have also benefitted from training workshops which CXC conducted throughout the region last year.

Performance in Information Technology Unit 1 and Computer Science Unit 2 also saw significant improvements. For IT, there was a 10 per cent improvement in performance with 93 per cent of the entries achieving acceptable grades this year, compared with 83 per cent in 2009. For Computer Science Unit 2, the improvement was more significant. Ninety-one per cent of entries achieved Grades I to V this year, compared with 63 per cent last year, representing a 28 percent improvement.

Although IT saw improved performance overall, the Examining Committee reported that performance at the higher grade levels was weak. There were no Grade Is in either Unit I or Unit 2; and only three per cent of the entries achieved Grade II in Unit 2 and less than one percent achieved Grade II in Unit 1.

The Examining Committee noted that candidates were not performing well on higher order skills such as analysis, assessment, synthesis and evaluation. The Committee is also recommending that teachers use the prescribed and up-to-date texts listed in the syllabus.

Both Units of the two foreign languages, French and Spanish saw improved performance this year. In French Unit 1, almost 100 per cent of entries achieved Grades I to V, compared with 88 per cent in 2009. For Unit 2, performance improved from 82 per cent of acceptable grades last year to 86 per cent this year.

Performance in Spanish Unit 1 saw an 11 per cent increase, with 97 percent of entries achieving acceptable grades, compared with 86 per cent last year. In Unit 2, performance improved from 91 per cent of entries achieving acceptable grades in 2009 to 96 per cent this year.

The Examining Committee reported improved performance on all three modules in both Units of French and Spanish. In addition, there was a significant improvement in performance at the Grade II level in French Unit 1 (51%) and Spanish Unit 2 (28%).

Of the natural sciences, performance improved in three Units – Physics Units 1 and 2 and Chemistry Unit 2 and declined in both Units of Biology and Chemistry Unit 1.

The improved performance in Physics has been attributed to better performance on the section of the paper dealing with Digital Electronics as well as improved performance on the Multiple Choice Paper. Notwithstanding the improved performance, the Examining Committee noted that candidates are still challenged by the section of the examination dealing with Nuclear and Atomic Physics.

With respect to Chemistry Unit 2, performance at the higher end was the best for all of the natural sciences. Almost 30 per cent of the entries achieved Grade I in Chemistry Unit 2 and 20 per cent achieved Grade II.

For Biology, the Examining Committee attributed the decline in performance, to candidates not being sufficiently prepared in certain sections of the syllabus.

Performance on both Units of Art and Design remained consistently high with 100 per cent of candidates achieving acceptable grades on both Units.

Although performance on the two compulsory units, Caribbean Studies and Communication studies was very good, when compared with last year, there was a slight decline in performance on both Units. Caribbean Studies dipped from 98 per cent last year to 97 per cent this year and Communication Studies also saw a one per cent decline, from 96 per cent to 95 per cent of entries achieving acceptable grades.

The Council offered 46 CAPE Units at this year's sitting; 44 were 2-Unit courses and two were 1-Unit courses.

EXAMINATIONS

IMPROVED PERFORMANCE IN CCSLC

Regional overall performance in the Caribbean Certificate of Secondary Level Competence (CCSLC) improved this year when compared with last year and 2008. Overall, 63.7 per cent of the subject entries achieved an acceptable grade; that is Mastery or Competent. This compares with 54 per cent last year and 61 per cent in 2008.

There was also improvement at the highest level, that of Mastery. This year, 11.33 per cent of the entries achieved Mastery, compared with six per cent last year. Fifty-two per cent of the entries achieved the next level, which is Competent. This was also an improvement over 2009 when 47 per cent achieved this grade.

Performance improved in all subjects with the exception of French, which saw a three per cent decline. Spanish registered the most significant improvement over last year. This year, 66.77 per cent of entries achieved acceptable grades, compared with 48 per cent last year, an improvement of 18 per cent.

Twelve per cent of the entries achieved Mastery while 54 per cent achieved Competent.

English recorded a 13 per cent improvement in performance this year when compared with 2009. Seventy-two per cent of entries achieved acceptable grades compared with 59 per cent last year. This year 18 per cent achieved Mastery compared with seven per cent last year, while 53 per cent achieved the grade of Competent, compared with 52 per cent last year.

Integrated Science also recorded double-digit improvement this year. Sixty-six per cent of entries achieved acceptable grades, compared with 51 per cent last year. Eight per cent of the entries achieved Mastery while 58 per cent achieved Competent.

Social Studies recorded a 10 per cent improvement. Sixty-four per cent of entries achieved acceptable grades, compared with 54 per cent in 2009. This year, 7.92 per cent of candidates achieved Mastery, while 56 per cent achieved Competent.

Although there was an improvement in the performance in Mathematics, the percentage of candidates achieving acceptable grades remain relatively low at 53 per cent. Last year, 46 per cent achieved similar grades. Seven per cent of the entries achieved Mastery while 45 per cent achieved Competent.

SUBJECT ENTRIES

Both candidate and subject entries declined this year when compared with 2009. This year 53, 697 subject entries were submitted compared with 60, 396 last year. Mathematics is the largest subject with 15, 990 entries, followed by English and Social Studies with 15, 524 and 10, 825 entries respectively. French is the smallest with 390

CANDIDATES ENTRIES

Candidate entries fell slightly, from 21,563 in 2009 to 20,354 this year. Jamaica provided the most candidates, some 14,050. St Vincent and the Grenadines followed with 1,439; Dominica 1,339 and St Kitts and Nevis 1, 017.

St Lucia submitted candidates for the first time for CCSLC, bringing to 12 the number of countries submitting candidates for this examination. Fifty-two per cent of the candidates were males and 48 per cent females.

CCSLC was first offered in 2007.

EXAMINATIONS

ZERO TOLERANCE for Cell Phone Use in CXC Exams

Would you rather have your examinations results cancelled or use your cellular phone in the examination room?

For the average person, this is a no brainer, but apparently not so for some candidates who took the 2010 May/June CAPE and CSEC examinations.

The Council's regulations speak clearly and loudly to the use of cellular phones in examinations rooms; however, several candidates appear unable to part company with the device for the duration of an examination.

"*Candidates must NOT take, or have in their possession, in the examination room any unauthorised material including books, notes or paper of any kind, mobile phones and other electronic devices other than watches worn on the wrist and calculators, whenever permitted,*" states Section 7 of the Regulations for the Conduct of the Council's Examinations.

In addition to the regulations, CXC produces posters which are placed on all examinations centres with the information about the conduct of the examinations. Further, the Council now prints the same warning on the back of candidates' time tables under the caption "*Notes for Guidance to Candidates.*" The section states in part, "CELLULAR TELEPHONES and other communication devices are also forbidden."

Notwithstanding these notices and the warning about the penalty for taking cell phones into the examination room, this year 23 candidates were reported to CXC for having their cell phones in the examination room.

ZERO TOLERANCE

The penalty for having a cellular phone in the examination room is disqualification of the candidate results for all examinations taken in that sitting. Initially, when the no-cell phone policy was introduced, candidates who were in breach had the result of the examination in which they were caught using the cell phone cancelled, but the problem became chronic and in 2008 a more severe penalty of disqualification was introduced.

During the August meeting of the Final Award Committee, the Council's committee which makes the final determination on cases of hardships and misconduct, the Examinations Administration and Security Division reported that "the use of cell phones is getting out-of-hand."

The Final Awards Committee instructed that a "*zero tolerance*" approach be applied with respect to the use of cell phones in the examinations.

Some of the breaches included candidates' phones ringing during the examination, phones vibrating in the examinations, texting during the examination, and candidates concealing the phone in their pockets.

Revised Syllabuses Incorporate 'IDEAL CARIBBEAN PERSON'

Six revised syllabuses and one new syllabus were distributed to schools this past August. One critical change to the revised syllabuses is the incorporation of the characteristics of the "Ideal Caribbean Person" as defined by *CARICOM's Caribbean Education Strategy (2000).*

The Ideal Caribbean Person has nine characteristics which are regarded as the ultimate desirable outcome of the education system. (*Use Ideal Caribbean Person Characteristics as side bar*)

The syllabuses which have been revised for the Caribbean Advanced Proficiency Examination (CAPE) are Communications Studies, Environmental Science and Literatures in English. For the Caribbean Secondary Education Certificate (CSEC), the syllabuses which have been revised are Religious Education and Theatre Arts, while Additional Mathematics is a new subject.

Mathematics and English have also been revised for Caribbean Certificate of Secondary Level Competence (CCSLC).

COMMUNICATION STUDIES

For Communication Studies, the revised syllabus includes a revision of the rationale of the syllabus to emphasise and state explicitly, the link between the syllabus and the creation of the Ideal Caribbean Person as defined in the CARICOM document, *The Caribbean Education Strategy (2000).*

There were also revision of the Specific Objectives and Content of the syllabus to indicate the breadth and depth to which the knowledge and skills in each Module should be covered.

The "Approaches to Teaching the Syllabus" section was expanded to provide needed guidance to administrators and teachers.

The requirements of the Internal Assessment have been reduced to make it more manageable for students and teachers. Under the reflection section, whereas candidates were required to create two pieces of original work, they are now required to create one and the word limit has been reduced from 1200 to 800 words. Rather than the sample reflecting two literary genres, it can now reflect one.

In doing the analysis, candidates are now required to address two of the following, registers, dialectical variations, attitudes to language and communication behaviours. In the previous syllabus they were required to analyse all four themes.

A new heading has been added to the Portfolio; it is General Introduction. It has a word limit of not more than 200 words and carries 12 marks. In the previous syllabus there was no introduction section.

The new syllabus provides a revised Marking Criteria to assist teachers in the assessment of the Internal Assessment assignment.

In Module 2, Language and Community, a new General Objective 1 has been added; it is students should be able to use the structures of Caribbean Standard English correctly and appropriately, as well as with a degree of elegance.

LITERATURES IN ENGLISH

In Literatures in English, changes include the revision of the rationale of the syllabus to emphasise and state explicitly the link between the syllabus and the creation of the Ideal Caribbean Person as defined in the Caribbean document, *The Caribbean Education Strategy (2000.)*

There is also a revision of the definition of the skills and abilities to be developed across the entire syllabus. Skills and abilities added include: familiarity with secondary sources; familiarity with the features of genres; familiarity with, and the proper use of the vocabulary specific to genres and an understanding of the relationship between form and content within genres.

The new syllabus includes a glossary of Literary Terms as an Appendix to the syllabus.

There is also more clarification of the requirements for the Internal Assessment assignment.

It specifies the four possible options for the Internal Assessment as candidates' interpretation of some aspects of a prescribed play or poem, or an extract from prose fiction, or a critical response to a review of a prescribed play or poem or prose extract, or a review of a live performance or a film adaptation of a prescribed text or a review of a prescribed text.

The recommendation of the prescribed texts and plays for the next cycle 2012 to 2017 is also included.

Among the General Objectives added are that candidates will develop sensitivity to the ways in which writers manipulate language, to convey meaning and develop an appreciation for the varying critical interpretations of works of literature.

ENVIRONMENTAL SCIENCE

The rationale and aims for Environmental Science were revised as part of the revamping of the syllabus. Under the aims, a new one was added, that is to increase an awareness of the importance of living in harmony with the environment.

The General Objectives were refined and there is clarification and elaboration of Specific Objectives and Explanatory Notes. There was also a revision and refining of the practical abilities to be assessed to reflect the practical nature of the syllabus.

Three practical abilities were added to the syllabus. These are that candidates are now expected to select techniques, designs, methodologies and instruments appropriate to different environmental situations, use quantitative techniques appropriately and develop appropriate models as possible solutions to specific environmental problems.

One of the major revisions was the refining of all the Modules in Unit 2 to ensure that the syllabus focused more on environmental issues.

New general objectives in Unit 2, Module 1-Agriculture and the Environment include, understand the concepts, types and role of agriculture in the Caribbean; understand the environmental impacts of and threats to agricultural systems to the Caribbean; have knowledge of environmentally sustainable practices in agricultural systems in the Caribbean.

It also has new specific objectives which include students being able to assess the impact of agriculture on the environment, explaining the features of sustainable agriculture, discuss threats to sustainable agriculture and evaluating environmentally sustainable practices in agricultural systems.

The Ideal Caribbean Person

Unit 2, Module 2 has new specific objectives, among them are to discuss the various methods of energy conservation and improving efficiency; outline the impact of various forms of energy on the environment;

Two of the Modules in Unit 2 have also been changed. Module 1 has been changed from Sustainable Agriculture to Agriculture and the Environment; Module 2 has been changed from Sustainable Energy Use to Energy and the Environment. Module 3, Pollution of the Environment remains the same.

Some changes have been made to the assessment structure of the examination. Paper 01 is now a multiple choice paper comprising 45 questions, 15 from each module rather than six short answer questions.

The new structure of the Paper 02 examination allows candidates to respond to six compulsory essay-type questions, instead of choosing six from nine extended response or essay questions.

In Module 1, Fundamental Ecological Principles, several of the suggested teaching and learning activities have changed and they have increased from eight to 10. Among the new activities students are required to do are, to define environmental science, formulate hypothesis, develop guiding statements and generate and interpret data, conduct study visits, identify species diversity and investigate environmental parameters in a natural aquatic environment.

CSEC

Theatre Arts

Theatre Arts was first introduced as a subject at CSEC in 2001 and the first examination offered in 2003. This is the first major revision of the syllabus. The revision includes a rewording of the Specific Objectives and Content of the syllabus to indicate the appropriate coverage of the breadth and depth of the knowledge and skills in both the core and options.

The three Options, Drama, Dance and Stage Craft have been reorganised to make the syllabus more manageable for teachers and students and more effectively what is being learnt in the arts.

The new syllabus now includes the *viva voce* in all three Options of Paper 02. In addition, marks across the three profile dimensions have been distributed. The three profiles in Theatre Arts are Appreciating and Analysing, Performing and Creating.

There are some minor changes to the School Based Assessment in the new syllabus. Both the critique and research paper are maintained, however, the length of the pieces has increased from between 400 to 500 words to 500 to 700 words.

For the research paper, the subject must be about a cultural or theatre practitioner.

Religious Education

The Religious Education was amended and now includes a core of four world religions and the study of six indigenous religions. The four world religions are Christianity, Hinduism, Islam and Judaism; while the indigenous religions are Rastafari, Revivalism, Vodun, Orisha, Spiritual Baptist and Santería.

The Core emphasizes the beliefs and practices of four world religions and the six indigenous ones. It will be tested on Paper 01, the multiple choice paper.

The option is the study of one of the four religions. Each option explores the meaning and purpose of life from the perspective of each religion and the application of its teaching and principles to the challenges and demands of Caribbean society.

The options will be tested on Paper 02, the essay paper.

The amended syllabus focuses on religious education, rather than religious instruction and emphasises the development of knowledge and insight that will enable students to clarify their beliefs and understand the belief system of others.

CCSLC

The syllabuses for the two compulsory subjects, English and Mathematics in the Caribbean Certificate of Secondary Level Competence (CCSLC) have been revised. With respect to English, the changes include a revision of the Specific Objectives, Suggested Teaching and Learning Activities and Formative Assessment tasks to indicate the breadth and depth to which the knowledge and skills in each Module should be covered.

There is also an alignment of the Specific Objectives, Context for Learning and Assessment in the layout of the syllabus to allow for maximum use by teachers. The Summative tasks have also been refined and critical thinking skills included in all Modules to allow equivalence in testing.

The Rationale and Aims of the Mathematics syllabus have been revised; so too are the General Objectives. Like the English, the Summative Assessment tasks for Mathematics have also been refined and revised.

One other significant change is that Sets has been added to all Modules of the syllabus to assist with critical thinking skills.

These revised syllabuses along with the new Additional Mathematics syllabus were sent to schools in August for teaching which commenced in September.

THE IDEAL CARIBBEAN PERSON

The Vision of the Ideal Caribbean Person adopted by the CARICOM Heads of Government at their 18th Summit, and to which all Caribbean Group for Cooperation and Development (CGED) member countries might subscribe, provides a useful lens through which to apprehend the ultimate desirable outcome of the education system. Such a person is described as being someone who:

- is imbued with a respect for human life since it is the foundation on which all other desired values must rest;
- is emotionally secure with a high level of self-confidence and self-esteem; sees ethnic, religious and other diversity as a source of potential strength and richness;
- is aware of the importance of living in harmony with the environment; has a strong appreciation of family and kinship values, community cohesion, and moral issues including responsibility for and accountability to self and community;
- has an informed respect for our cultural heritage;
- demonstrates multiple literacies, independent and critical thinking, questions the beliefs and practices of past and present and brings this to bear on the innovative application of science and technology to problem solving;
- demonstrates a positive work ethic;
- values and displays the creative imagination in its various manifestations and nurtures its development in the economic and entrepreneurial spheres in all other areas of life;
- has developed the capacity to create and take advantage of opportunities to control, improve, maintain and promote physical, mental, social and spiritual well-being and to contribute to the health and welfare of the community and country; and
- nourishes in him/herself and in others, the fullest development of each person's potential without gender stereotyping and embraces differences and similarities between females and males as a source of mutual strength.

The Caribbean Education Strategy (2000) is a collaborative effort of a specially appointed Caribbean Education Task Force (CTF), and technical specialists from the World Bank with contributions from Ministers and other representatives of Ministries of Education and regional and sub-regional bodies who participated at workshops and presentations to discuss issues related to the Strategy.

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FEATURES

TRINI STUDENT FLOURISHING AT THE UNIVERSITY OF NEW ENGLAND

By Bob Pecchia

Joselle O'Brien wanted to begin her college experience a year early. This was one of the many thoughts she had going through her mind at the start of her lower six year at St Joseph's Convent, Port of Spain, in September 2008. Joselle had worked hard in school as well as outside of school. She sought out extra academic support to enhance her already solid skills in English, Mathematics and Science. She spent many hours in preparation for the Scholastic Aptitude Test (SAT), attending a special class three to four times a week. Her parents, Ramon and Paula O'Brien, offered their full support, including hours of transporting Joselle to all of her after-school activities.

In October 2008 Joselle and her family attended a college fair at the International School of Port-of Spain. The event was organized by Education USA, and brought together a large number of universities from the United States, Canada, Trinidad and Tobago, as well as some of the neighboring islands. By participating in this event, Joselle was able to collect information about a variety of universities, and meet with admission representatives to discuss the opportunities available to students.

Joselle applied to a number of universities, and during the spring of 2009 she made her decision to attend the University of New England in Biddeford, Maine. She looked forward to the challenge of a totally new environment along with the demands that would be placed upon her in the classroom. Joselle has found the coastal location, and the change of seasons to her liking. She has also found the academics, experiences, and support at UNE to be a good match for her aspirations.

Joselle at the Clinical Performance Centre in New England

Joselle is now in her second year at the University of New England pursuing a double major in Medical Biology and Mathematics. She has found her academic preparation to be excellent. Her hard work paid dividends. She arrived having performed very well in the classroom at St Joseph's Convent, attaining solid scores on her SATs, and a record of all Grade Is in her Caribbean Advanced Proficiency Examination (CAPE). As a first-year student at UNE, she had the highest score on her Mathematics Placement Exam, which helped her secure a paid position as a peer tutor for Mathematics.

She wanted to take advantage of the smaller school atmosphere by getting to know her professors and becoming involved in a number of student organizations. Joselle sought out opportunities including interviewing for and receiving an internship with Southern Maine Medical Center in Biddeford, Maine.

"In developing a deeper understanding of my scope of studies within Medical Biology, I applied for the spring semester biological sciences internship performed at Southern Maine Medical Center (SMMC)," Joselle explained, "this internship required completion of 120 contact hours to attain three credits, which were split between the two positions to which I was assigned- Post-Anesthetic Care Unit (PACU) volunteer and Emergency room receptionist in the Medical Center (EDR)."

In both positions, she assisted the assigned nurses in the execution of their daily duties which included the receiving of patients and their families, transport and transfer of patients to other departments, and preparation of their required equipment and facilities.

She added that other experiences at SMCC will provide a better understanding of how the various health professionals work together. "The internship gave me the opportunity to work closely with medical professionals and patients of diverse backgrounds. On one occasion, I was able to shadow throughout a C-section and tubal ligation," she said with a sense of satisfaction on her face.

This spring Joselle applied for a position in the resident halls as a Resident Assistant. After a long interview and selection process, she was selected as a Resident Assistant for a first-year student resident hall. During the summer, Joselle had worked in the lab as a research assistant to one of the university's prominent biology professors. Their research was centered around observing the effects of steroid modulation on the sexual behavior of the female fruit fly (Drosophila Melanogaster). More specifically, she undertook a personal project investigating the effect of steroid modulation on the immunity of such fruit flies. After a productive and enjoyable summer in Maine, Joselle returned to Trinidad for a three-week break with her family and friends prior to the start of the fall semester.

Joselle is now back on campus for her second year of study at UNE. She looks forward to providing support and guidance to first-year students at the University of New England in her role as a Resident Hall Assistant, as well as continuing her research and studies, all of which will help her to attain her goal of pursuing medical school.

"As a first-year student at UNE, she had the highest score on her Mathematics Placement Exam, which helped her secure a paid position as a peer tutor for Mathematics."

FEATURES

CSEC Information Technology: THE JOURNEY TO ADULTHOOD

Caribbean Secondary Education Certificate (CSEC) Information Technology (CSEC IT) has come of age. The subject will mark the 21st year of its existence in 2011. How time flies. It seems like just yesterday that the subject was introduced. Back in 1991, computer labs were non-existent in most schools. Some schools, like my alma mater, Jamaica College, had a few Macintosh Classic personal computers manufactured by Apple Computer. These were introduced in October 1990, and were the first Apple Macintosh to sell for less than US$1,000. Fast forward twenty years and secondary schools across the Caribbean have a few things in common: computer labs, modern computers and students sitting CSEC IT. At its peak in 2009, almost 29,000 students registered for CSEC IT. The subject has come of age. Its features have changed over the years and as it enters adulthood, it has taken on a new look which will no doubt prepare it well for any challenge that may lie ahead.

By Howard Campbell

The candidacy passed the 20,000 mark in 2005, placing CSEC IT in the 'major league' as the sixth largest based on candidacy behind English A, Mathematics, Principles of Business, Principles of Accounts and Social Studies. Candidacy peaked in 2010 when 25, 716 candidates registered for the exam.

RESPONDING TO A NEED

In 1990, Jamaica's education sector endorsed the establishment of a body with a mandate to come up with strategies to meet Jamaica's technological needs in a systematic way. The Jamaica Computer Society, which was already in existence, took up the challenge and added an arm which it called the Jamaica Computer Society Education Foundation (JCSEF). The principal goal of this organization was to ensure that, by the year 2000, all graduates of Jamaican secondary schools, teachers' colleges and community colleges would have had access to technology-based education. This was viewed as an important part of their preparation for effective functioning in the competitive work environment. The JCSEF lobbied the Caribbean Examination Council (CXC) for the inclusion of Information Technology in its subject offerings. Information Technology was introduced as a CXC subject in 1991 and the first group of candidates was examined in June 1993.

GENERAL AND TECHNICAL PROFICIENCIES

Between 1993 and 2009, the CSEC IT examinations were administered at two proficiency levels: General and Technical Proficiency. The General Proficiency examination was designed to meet the needs of school leavers who wished to pursue tertiary education, while the Technical Proficiency was designed to meet the needs of school leavers who want to enter the world of work or pursue courses of study aimed at developing specialized technical and vocational skills. In 2008 the syllabus was redesigned to offer certification at the General Proficiency only. The current syllabus provides a coherent view of the significance of information technology in a socio-economic context. It places emphasis on application of knowledge and the use of the computer. The syllabus development team adopted this approach in recognition of the impact that changes in the availability of information can have on the educational process. The focus is on getting students to develop skills for life in an increasingly technological world, rather than on students absorbing a myriad of seemingly unrelated facts which may have only short term relevance.

RAPID GROWTH

During the period 1999-2003, the candidacy grew at an astounding rate of twenty-eight percent 28 per cent per annum [1] on average. This rate of growth over the next six years, whilst not as spectacular as the previous years, was still robust at an average of nine percent. The candidacy passed the 20,000 mark in 2005, placing CSEC IT in the 'major league' as the sixth largest based on candidacy behind English A, Mathematics, Principles of Business, Principles of Accounts and Social Studies. Candidacy peaked in 2010 when 25, 716 candidates registered for the exam.

MIXED RESULTS, 2000 TO 2010

Performance of candidates was the best ever in 2001. In that year, the pass rate at the General Proficiency was 89.12 per cent and at Technical Proficiency, 90.35 per cent. On the flip side, performance at the Technical Proficiency was at its worst during the May/June 2004 sitting. At that time, the pass rate was 50.74 per cent. The pass rate went up and down again over the ensuing 2-year period, causing stakeholders to sit up and take notice of what was happening. During the four-year period 2006 – 2009, the pass rate at the Technical Proficiency improved each year, peaking at 85.9 per cent in 2009. As fate would have it, the pass rate recorded a slight decline in the May/June 2010 exams. This decline

CSEC Information Technology

Teachers have embraced IT in schools and play a critical role in guiding students

was expected in some quarters as it is customary for the performance to decline when a syllabus is examined for the first time. *See Table 1.*

STELLAR CONTRIBUTION OF TEACHERS AND ACADEMICS

Teachers and academics have made immeasurable contributions as they took on new roles as syllabus developers, item writers, examiners and authors. On a personal level, my symbiotic relationship with CSEC IT has developed over the past twelve (12) years and mirrors the growth that has taken place in the professional lives of many of my colleagues. From a classroom teacher in a privately-run institution in 1999, roles such as item writer, examiner, tutor, and teacher-trainer have been added. The multiplicity of roles has provided me and others with a 360 degree, bird's eye view of the subject. It is this professional growth that has afforded classroom teachers to take on greater roles that has had more far reaching impact. An example that comes readily to mind is that of Gerard Phillip, a Trinidadian whom I met whilst marking CAPE Computer Science scripts in Trinidad in 2003. He has gone on to become an author and now serves as Assistant Registrar-Syllabus Development at CXC's Western Zone Office in Kingston and has, among his subject portfolio, CSEC Information Technology.

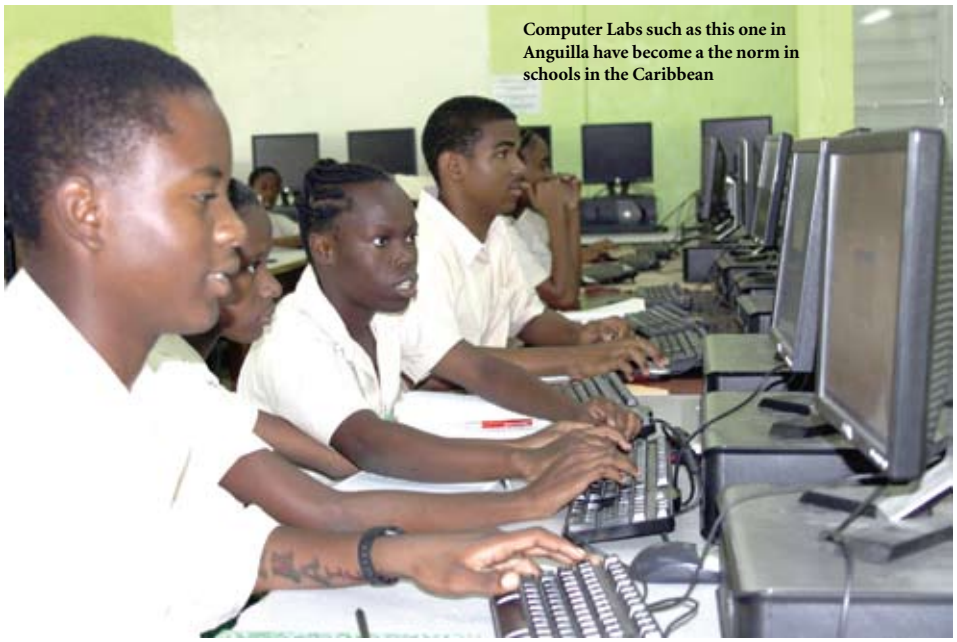
CSEC INFORMATION TECHNOLOGY (GENERAL & TECHNICAL PROFICIENCIES)
NUMBER OF CANDIDATES WRITING EXAMS AND PASS RATES (GRADES I – III)
MAY/JUNE EXAMINATIONS : 1998 – 2010

	GENERAL	PASS RATE %	TECHNICAL	PASS RATE %
1998	296	74.3	4,207	73.9
1999	303	81.8	5,840	80.4
2000	410	65.9	7,730	51.3
2001	432	89.1	9,185	90.4
2002	456	69.3	11,320	67.0
2003	467	67.7	14,295	62.6
2004	473	75.3	14,849	50.7
2005	640	79.2	17,272	66.7
2006	729	72.8	18,989	56.9
2007	857	76.3	19,975	75.4
2008	1,076	82.3	21,813	78.8
2009	972	87.5	23,654	85.9
2010*	21,416	83.0		

*SUBJECT OFFERED ONLY AT GENERAL PROFICIENCY FROM **MAY 2010**

CSEC Information Technology

The syllabus released in 2008 was the result of years of work undertaken by Mrs Alsian Brown-Perry Assistant Registrar-Sllabus Development Unit, and her team. During the period June to September 2008, hundreds of IT teachers in the participating CXC territories benefited from workshops hosted by CXC. I have fond memories of the workshops I facilitated in Anguilla and Dominica. The eight-minute flight from St. Maarten to Anguilla on a private aircraft, flying at 8,000 feet was breathtaking. I recall being on a flight from Kingston to Barbados, en route to Dominica during that time. The seat beside me which was left vacant by a passenger disembarking in Antigua was soon taken by no other than Gerard Phillip, another CXC resource person, on his way back from workshops in the British Virgin Islands. What a coincidence!



Computer Labs such as this one in Anguilla have become a the norm in schools in the Caribbean

FAR REACHING IMPACT

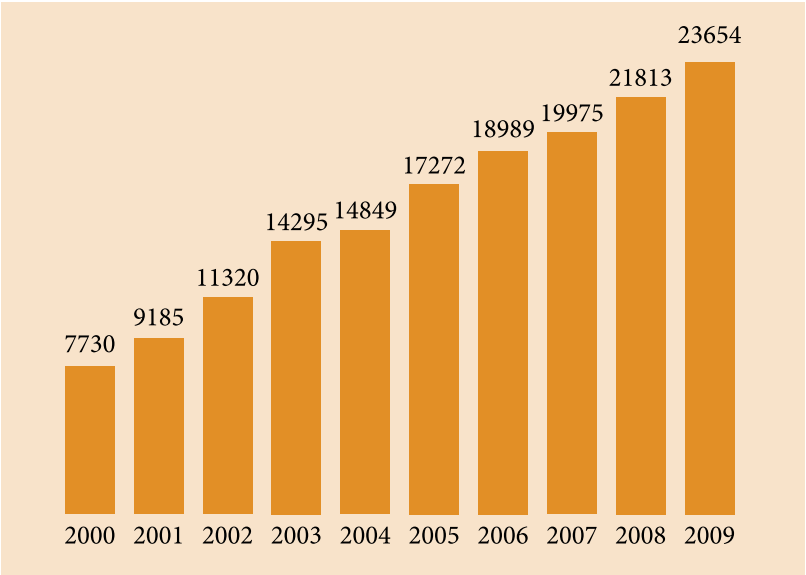
During its colourful journey, CSEC IT has impacted the lives of many individuals and institutions. Students have been equipped to take up roles in computer-related professions, some of which constitute the fastest growing occupations internationally. According to the U.S. Bureau of Labor Statistics, "Network systems and data communications analyst is the second fastest growing profession in the US and is likely to add 155,000 new jobs between 2008 and 2018." During the past decade, a similar number of students have written exams at both the General and Technical proficiencies. With an average pass rate of 69.5 per cent, over 107,000 Caribbean nationals have been equipped with the foundation necessary to access post-secondary training. With the requisite qualifications and experience, an increasing number of CSEC IT certificate holders can secure employment opportunities in the burgeoning IT marketplace.

THE CSEC IT ECONOMY

CSEC IT has now matured and is deemed as a compulsory subject in many secondary institutions. Education entrepreneurs have established training facilities that have afforded the out-of-school population the opportunity to sit CSEC IT among other subjects. Whilst some of our regional universities have commenced offering undergraduate degrees in Information Technology, others the world over, have been accepting our CSEC IT awardees with open arms to pursue courses in new media areas such as web design, animation and computer graphics. In commerce, CSEC IT has created economic opportunities for publishers, booksellers, computer manufacturers, vendors and technicians. At last count, there were seven textbooks written specifically for the new syllabus, all by major UK-based publishers. Caribbean publishers such as Nutcracker Books have also seized the opportunity to contribute to the development of the subject and have also produced supplementary materials.

As CSEC IT enters the realm of adulthood, one can be certain that the obstacles encountered along the journey have prepared it well and as such we can expect continued contribution to regional development.

GROWTH OF CSEC IT CANDIDATES WRITING



Howard Campbell is a consultant, teacher-trainer, author and publisher based in Kingston, Jamaica. He is a leading provider of resource materials and training to Information Technology community and is the author of Information Technology for CSEC Examinations, published by Macmillan Publishers. Email him at hc@teacher.com

FEATURES

Some Thoughts on CAPE Literatures in English

By Dr Carol Andrews-Redhead

The changes in the Cape Literatures in English Syllabus will provide many advantages. The greater emphasis on context and interpretation will provide a useful bridge between CAPE and University. Some emphasis is placed on critical theory (particularly Reader Response). In addition, historical study becomes even more important, and intellectual rigour is increased and emphasized. These areas of study can reduce the perception, by some, that literature rests on a superficial and even tokenistic approach to knowledge.

I believe that there are four areas which the CAPE syllabus stresses:

Firstly, People are *organisms not mechanisms.* The experience of literature – as life - is an *organic* thing. Although there is a marked difference between science and literature, they are not incompatible.

Secondly, the structures of literature rest on the belief as quoted in the *Literatures in English Syllabus,* that, "the study of literature promotes understanding of both the individual and mankind in general. *Nothing that is human is foreign to literature*" (Emphasis added).

Thirdly, the examination questions have become broader and more open-ended. They now include a range of features designed to encourage and cultivate both critical thinking and creative responses, thereby allowing for greater understanding of the processes of interpretation and/ or the significance of context. This point is evident, particularly in the type of internal assessments proposed, and has become even more obvious during the interesting discussions at the workshop in Trinidad and Tobago.

Fourthly, the internal assessment can engender much collaborative work among students as well as teachers, since the integration of many disciplines (Art, Music, Psychology, Geography, History) can facilitate a kind on 'interdisciplinarity' that can help students perform and learn better - and more efficiently. In addition such integration may also address the need for connecting the intellectual and the aesthetic. However, I am fully aware of the difficulties many teachers may encounter in pursuing the 'collaborative approach' with their students - as well as with their peers.

"I do wish to state that I enjoyed the workshop on **CAPE** in Trinidad and Tobago. Teachers who expressed their views – and there were many differing views –created the type of exciting environment that is important for continuous change, for efficient teaching and effective learning."

However, it may be true to say that the breadth and depth of curriculum may prove more difficult than at first imagined: It can prove to be a double-edged sword. Without evidence of hard data, I can only go on some discussions with teachers of CAPE who have stated that they believe that, the Literatures in English Examination has not *deepened* literary discussion among their students – although it may have *widened* it – especially with the inclusion of diverse books on a mutlticultural level. It is my belief though, that this "widening" can allow for the incorporation of more attention to Language and culture and in this way this 'literary discussion' can be deepened.

Furthermore, I do believe that awakening students' interests in contemporary issues and paying more attention to these students' increased interests in literature; in the dominance and interest in our postcolonial experience, the powerful presence of media, the importance of visual literacy in the twenty first century, can only make for more motivated and 'active learners'.

A quote from NATE (1990) in their document, *A Level English – Pressures for Change* may be useful here:

Teachers of English (and students) need to engage in the debate which … has been encouraged about the nature of literature; they need to recognize the importance of considering text's means of production, its historical and social context, literature's place in different cultures, the effects which our gender, race and class have on the meanings we make from a text, and the insights critical theory offers into plural readings of a text.

Finally, it is my opinion that modularisation brings flexibility and greater understanding of the historical periods of literature, although, if not handled carefully, can increase fragmented learning and add to assessment-driven attitudes to literature. A greater appeal to student-centred pedagogy, creativity, coursework and greater attention to multi-cultural literature as stated in this new syllabus, can increase enjoyment in reading and in critical response.

I do wish to end by quoting Robert Scholes (1985) who stated that philosophically, ideas about literature, as can also be discerned in the *Literatures in English Syllabus,* may eventually prove , that "… ultimately textual power is the power to change the world".

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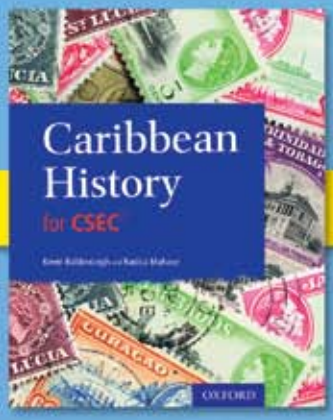

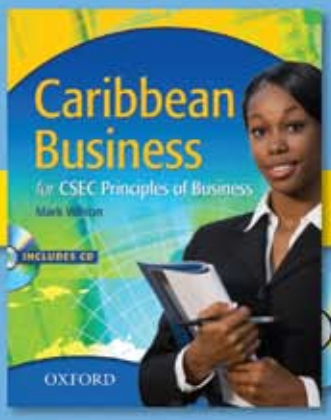

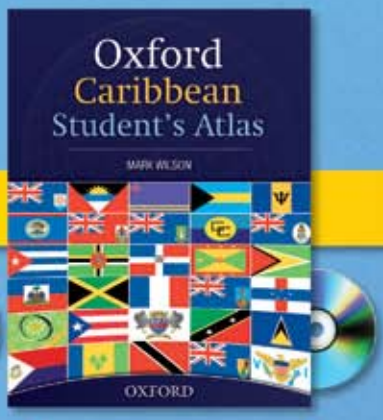

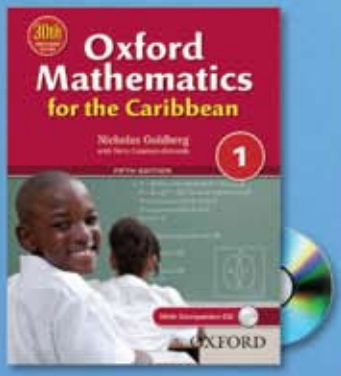

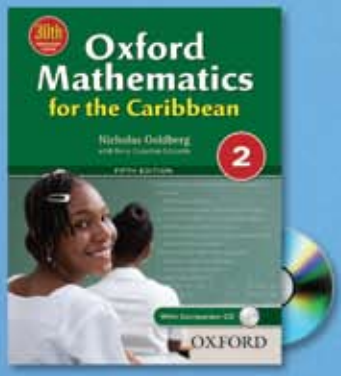

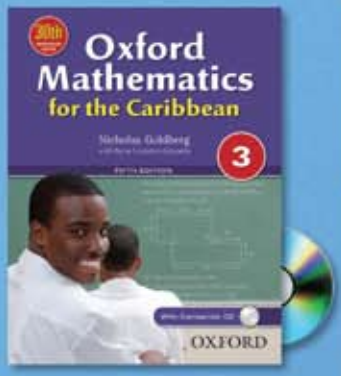

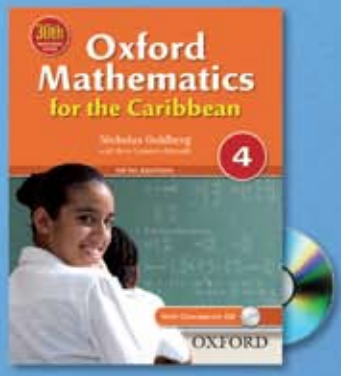

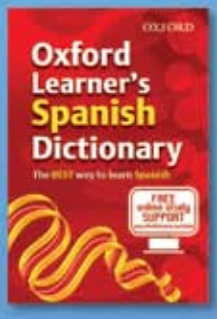

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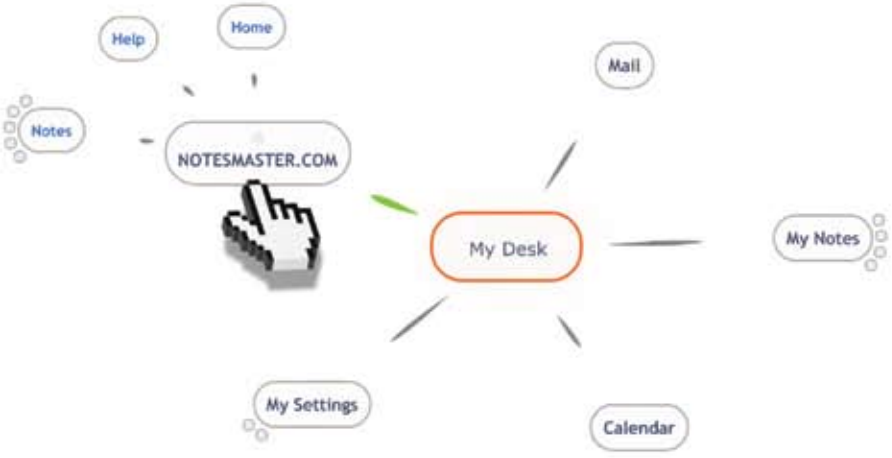

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