Preparing Youth for the Labor Market

Evidence provided in Chapter 2 confirms that the level of schooling strongly influences one’s opportunities in the labor market. The governments of the OECS have made a strong push towards universal secondary education to better prepare youth for the future. Access to education is an important first step. However, does the formal education system teach students the kinds of skills that lead to productive employment in the labor market? This chapter discusses whether the basic, vocational, professional, and behavioral skills imparted in school match those demanded by employers. First, this chapter analyzes whether there is a general disconnect between the education system and the labor market in the Eastern Caribbean. Second, the chapter examines the relevance of the secondary education currently offered. Third, the report investigates whether school leavers lack specific skills for today’s work world, especially key behavioral competencies like teamwork, proactiveness and reliability, and technical competencies like ICT skills. Lastly, the availability and preparation of specialized and highly skilled workers are analyzed. Box 1 defines the skills concepts used in this report.

### Box 1 Definitions of Skills Concepts

**Skills** are abilities, usually learned, to perform actions. “Skills” is generally interchangeable with “Competencies”, although skills occasionally refer to only (acquired) vocational skills, while competencies are sometimes understood in a broader sense to include innate abilities. “Skills” is different from “Knowledge”, which is information of which someone is aware. The types of skills discussed in this report include:

- **Thinking skills**, such as critical and creative thinking.
- **Life skills** also called behavioral and soft skills, which include perseverance, self-discipline, teamwork, the ability to negotiate conflict, and manage risks.
- **Basic skills** denotes the set of minimal abilities needed for further learning, work, and life, including numeracy and literacy and basic levels of behavioral skills such as perseverance, self-discipline, and self-confidence.
- **Post-basic skills** include thinking skills and higher order behavioral skills (decision-making skills, the ability to negotiate, and specific knowledge applied to real life situations).
- **Vocational skills** are a mix of specific knowledge and skills to perform jobs that rely on clearly defined tasks. Vocational skills are often obtained via training.
- **Professional skills** are a mix of specific knowledge and skills to perform a profession that involves non-routine, context-specific, and complex tasks. Professional skills often require use of post-basic skills and are normally imparted in post-secondary education.

Source: Adapted from (World Bank, 2006) and (Webster’s, 1985)

I. A General Disconnect between the Education Sector and the Labor Market

There seems to be a general disconnect between education and the world of work in the Eastern Caribbean. In a Caribbean survey of 130 well-established companies, of which 105 were from the OECS, the majority of business representatives stated, “There has never been a strong nexus between the two bodies [education and business]. The relationship between education and business is disjointed.” (CKLN, 2006) A workgroup under the Caribbean Forum for Development, consisting of representatives from the labor unions, private sector, education system, and government, analyzed the connections between the labor market and the education and training systems. The group concluded that a review of secondary and post-secondary training activities was urgently needed, particularly in respect of technical and vocational education, as the training did not seem to be synchronized with labor market trends. According to Salling-Olesen (2006) (see Background Paper I), formal education in the Eastern Caribbean is seen more as a way to gain social elevation, which in particular seems to be the case for higher education. Education is used as a screening device for
white collar positions in civil service and trading without regard for the effectiveness of the screening for actual jobs in the productive sector. The over-emphasis on academia leads to an education system that does not necessarily impart skills related to the labor market (CDB, 2006; also see CARICOM, 2006; OAS, 2006; CAIC, 2006; and SLHTA, 2005). This results in a paradoxical situation where educated workers are trained for careers weakly related to the productive and exporting industries of the region (Salling-Olesen, 2006). Further, it may have contributed to a perception of vocational skills as inferior, as discussed below. This disconnect is not uncommon in developing countries. Box 2 offers a potential historical and economic explanation. The following two chapters of this report will bring additional evidence to this disconnect between the education system and the labor market as it relates to outcomes, programs, and policies for youth transitioning from education to the work world and to on-the-job training. Any initiatives to improve the match or reduce the disconnect between education and labor demand will require profound changes.

Box 2 Did the Disconnect between Education and Labor Market Needs Arise from Past Endowment and Policies?

| Box 2 |
|------------------|------------------|
| Historically, economic development in the Eastern Caribbean has not relied on education and skills teaching, but rather on the use of natural resources. In particular, the economy relied extensively in the past on sugar and banana agriculture. The exploration of natural resources for many years counted on a monopoly or trade-protection (World Bank, 2005a and 2005b). Drawing upon better studied cases, summarized below, it is conceivable that the natural endowment, historical context, and economic policies of the Eastern Caribbean created an economic model where: (i) demand for skills and technology from the dominating economic sectors was lower than it would have been under a competitive and open trade policy and (ii) education functioned more as a luxury and signaling mechanism than as an essential input into economic development. Therefore, the education system was never linked closely with the main economic sectors. Confirmation of this hypothesis would require primary data collection on education and economic sectors that goes beyond the scope of this report. Nevertheless, three in-depth case studies from other parts of the world lend some support to this economic historical explanation of the link between education and labor demand: |
| (i) **Latin America**: Maloney (2006) examines the historical reasons behind the lackluster development of skills and technology in Latin America. Based on past production of university and technological institutes, he finds evidence that the primary objective of higher education institutions in Latin America, developed under the colonial rule, was education for the sake of education and culture. The economy was based on simple exploration of natural resources and economic rents which demanded a relatively low level of skills and technology. Consequently, there was never a strong economic need for close linkages between education and the productive sector until late in the 20th century; |
| (ii) **Sweden**: Blomström and Kokko (2006) trace the inter-play between Sweden’s education sector and economic development. They find that strong competition from neighboring countries in exploration of minerals and in agriculture, along with migration, provided a strong demand for new skills and technology to enhance labor productivity. Technical schools and universities were therefore created to supply this demand. A vibrant nexus between the education institutions and the productive sectors emerged; |
| (iii) **The US**: Goldin and Katz (1998) studied the economic circumstances surrounding the massification of secondary education in the US during the 1920s and 1930s. They found that the westward expansion of the US resulted in abundant land and scarcity of labor. This combination created a strong stimulus for skills and technology to farm the abundant land and supply goods to the rural population. Consequently, public policies sought to expand education institutions to supply the growing economy with skills and technology for the agricultural and manufacturing sectors. |

Lack of labor market information contributes to the gap between the education sector and the labor market. Few of the colleges, school officials, or Ministries of Education can base education policy on regular reporting of labor demand and labor shortages. For example, there is no report or statistics on the number of vacancies of craftsmen in the OECS. It is difficult for the Ministry of Education and schools to respond to a need that remains unexpressed. Likewise, students and families do not receive guidance to select careers in high demand. Notwithstanding, a formal report or labor market needs assessment would have limitations. It could not substitute completely for direct communication between employers and educators, nor could it convey the subtleties and dynamic aspects of labor demand. Therefore, educators and employers need to regularly discuss the
skills needs of main industries in skills councils and at governing boards of education and training institutions. The government could facilitate and even require institutions to do so (discussed further later in this chapter). Besides exchanging emerging skills needs at the institutional level, communication and joint strategies are called for at the sectorial and local level. The United Kingdom (UK) Learning and Skills Councils are probably the best example of a model that could be adapted in the Eastern Caribbean because: (i) the Eastern Caribbean education system has, for historical reasons, many similarities to the UK system; (ii) the model has been evaluated extensively and it works; and (iii) it can be implemented relatively easily in steps (see Box 3).

Box 3 How UK Learning and Skills Councils Coordinate Demand and Supply of Skills at the Local Level

| The UK Government has instituted two types of skill councils to ensure better coordination between demand and supply of skills:
| • **At the local level**, each Learning and Skills Council (LSC) has representatives from employers, learning providers, and community groups. For example, the Board of the local LSC in Kent and Medway, in southeast England, consists of a bank director, a business proprietor, the director of a real estate company, one union member, four local government representatives, and four members from education and training institutions. In 2006, the local LSC oversaw the development of 12 sector studies of skills needs for Kent and Medway, which included ICT, health and social care, hospitality, the financial and business sector, retail, construction, and the land-based and food sector, among others. With this local analysis and interaction, employers and education and training providers can ensure that supply of skills matches demand. This reduces unemployment and increases the value of training and firm competitiveness.
| • **At the sectoral level**, there are 25 Sector Skills Councils. Each council is an employer-led, independent organization that covers a specific sector across the UK. The four key goals are: (i) to reduce skills gaps and shortages; (ii) improve productivity, business and public service performance; (iii) increase opportunities to boost the skills and productivity of everyone in the sector's workforce; and (iv) improve learning supply including apprenticeships, higher education and National Occupational Standards. The sector councils provide employers with a forum to express the skills and productivity needs that are pertinent to their sector.

Both types of councils are continuously evaluated both qualitatively and quantitatively (see Policy Research Institute 2006, LSC 2006a, LSC 2006b, BMG 2007, and SSDA 2005).
Source: www.lsc.gov.uk and www.ssda.org.uk

II. The Relevance of Secondary Education

Universal secondary education in the OECS is a bold step that will be handsomely rewarded in the future, as long as quality education is ensured and the curriculum is relevant. In the education community, there is consensus that competencies learned in secondary education lay the foundation for productive work and lead to lifelong learning. Without this foundation, a person faces difficulties gaining and maintaining a job that requires ongoing learning to adapt to new technologies, new products and new organizational forms. Hence, in today’s world it is crucial that all young people receive the opportunity to complete secondary education. The OECS countries are taking bold steps to create additional spaces in secondary schools for all graduates of primary education. At least two governments in the OECS - St. Kitts and Nevis and St. Vincent and the Grenadines - have succeeded in providing universal access to secondary education. Nevertheless, this policy has presented many challenges to teachers and school administrators who have had to adapt to ensure sufficient classroom space, available qualified teachers, and different teaching methods to accommodate all pupils, including those that are less prepared or experience learning difficulties. In this regard, efforts are being made to improve the quality of primary education to ensure that all students are sufficiently prepared for secondary school when they transition from one level to the next.

Attendance is not enough; learning to read, write and calculate is required for success. The most important basic competencies are the mastery of the 3 Rs: Reading, writing and arithmetic.
Literacy and numeracy are the gateways to future learning and are linked to better labor market outcomes. For example, a higher score on the math Caribbean Secondary Education Certificate (CSEC) exam was statistically significantly correlated with a higher wage among secondary school graduates from St. Vincent and the Grenadines in 2002. The finding suggests that each point on a five point scale increases the monthly salary by ECS$80 (see Background Paper III). Results on the math exam also were linked with the time required to find employment after the exam, although the findings were not statistically significant. Better math performers found jobs more quickly; each point of the exam scale correlated to one month less of search time to find a job. It is of concern, therefore, that many students moving from primary to secondary school have not sufficiently mastered the 3 Rs. Poor literacy and numeracy skills lead to poor performance at the secondary level, and well-known statistics for the Caribbean Examination Council (CXC) exams show an average pass rate of only 48 percent for those OECS students who sat the CXCs in 2003 in General Proficiency in English A and Math (see Figure 1). OECS Ministries of Education face an enormous challenge in ensuring that all school leavers gain acceptable literacy and numeracy levels. Most of the countries have launched national literacy and numeracy campaigns to tackle this challenge, and under the OECS Education Development Projects (OEDP), literacy and numeracy policies have been established, coordinators have been assigned to schools, training has been developed, and resources have been purchased. Textbook rental schemes also ensure that poor students have access to books.

Finally, some MOEs have set student achievement targets and are using the CXC exam results and other means to measure the impact of these activities and progress towards meeting their goals. The report will not go further into the quality, delivery and measurement of the 3Rs and education in general, since it requires an independent and in-depth analysis due to the complexity of the educational, institutional and political economy aspects of teaching. Such an analysis lies outside the scope of this report. Instead, the report focuses on the desired outcomes of teaching for the new global economy.

**Figure 1 CXC Pass rates, 2003**

![CXC Pass rates, 2003](chart)

Source: CXC 2003
Note: General Proficiency examinations

The success of universal secondary education will be determined by its relevance to labor market demands. In many developing countries, the secondary education curriculum remains abstract and alien to social and economic needs. It relates to an education introduced decades ago that has not fundamentally changed, though education has changed substantially in high-income countries. Low relevance of education contributes to unemployment of graduates and low productivity. Further, it leads to higher dropout and failure rates among students (World Bank, 2005b). The OECS Ministries of Education and the OECS Education Reform Unit (OERU) are involved in ongoing curriculum reform, but no formal studies have been carried out to determine labor market needs. The reform efforts could benefit from inclusion of voices from the private
sector. In particular, employers should play a key role in determining relevance of education for the labor market.\(^1\)

The positive impact of a curriculum reform will only be fully achieved if it is accompanied by concurrent changes to CXC-administered exams. In the OECS, the number of CXC exam passes matters greatly. A graduate’s passes are used extensively as a screening device for entry to community colleges and the University of the West Indies (UWI), among others. Further, most job announcements in the region refer to a desired number of CXC passes. As long as this holds true, teachers and students will continue to devote marginal attention to competencies that are not assessed by the CXC exams or another certification mechanism. Hence, in the OECS, as in the rest of the Anglophone Caribbean, the success of any curriculum reform depends on concurrent enhancement to the relevance of the CXC exam (OERU, 1999). It should be noted that the CXC has recognized the need to update exams and introduce additional certificates and has recently introduced an alternative secondary level certificate which is further described below.

The CXC-administered Caribbean Secondary Education Certificate (CSEC) could be more aligned with the labor market needs. Relevance of education is difficult to objectively measure, because this requires a determination of how relevant education is to labor market needs, economic and cultural development, further education, social behavior, health behavior, among others. A key objective of OECS secondary education is relevance for the labor market and economic development (OECS Communique of Ministers of Education, 2005). A thorough assessment of the relevance of the CXC exams, syllabi, and indirect curriculum for the labor market is not available. However, the business community has concerns regarding the viability of subjects taught and the ability of the education system to prepare students to be productive in the job market. “Students need to be oriented as to what business is all about. Survival (economic) is related to changing curriculum quickly….” (CKLN, 2006). In a presentation at the Caribbean Forum for Lifelong Learning, the Caribbean Association of Industry and Commerce (CAIC) stated that, “…educators and policymakers understand the need to educate graduates for employability, but obsolete information is used to develop curricula and to deliver training and assess programs.” (CAIC in OECS Secretariat, 2006) Former pupils also question the relevance. For instance, in a focus group of St. Lucian youth, “…several were of the view that the education system and the irrelevance of the curriculum have contributed to their inability to get a job, to move out of poverty, and to function effectively in community life.” (CDB, 2006) Further, in an analytical background paper to this report, the author examined the Eastern Caribbean education system from a lifelong learning perspective and found that it, “…seems to be mainly informed by academic standards of higher education.” (see Background Paper I).

The perceived low level of relevance of secondary education could stem from an overly strict focus on academic preparation for tertiary education. While adequate preparation for post-secondary education is important, it remains highly pertinent only to those who continue with studies at that level, estimated to be between 20 and 55 percent.\(^2\) Further, unless post-secondary education

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\(^1\) A workgroup on Skill Development under the Caribbean Forum for Development (CFD) also recommends that, “…a more fundamental and comprehensive curriculum response to changing Caribbean production patterns might be needed, and this should be the subject of ongoing dialogue with policy makers, educators, employers and trade unions with a view to devising an education and curriculum strategy that could meet the new needs.” (CFD, 2006).

\(^2\) The importance of the role of the CXC exam as an entry exam to tertiary education is proportional to the share of students transitioning from secondary to post-secondary education. Two information sources were used to estimate this transition rate: (i) average gross completion of secondary education in the OECS was 55 percent in 2001 (latest year with available comparable data), and gross enrolment into post-secondary education in the OECS was 11 percent (World Bank, 2005a-f and World Bank, 2003c). This suggests a relatively low average transition rate from secondary to post-secondary education of 20 percent (World Bank, 2005); and (ii) the survey of CXC graduates from St. Vincent and the Grenadines, in which 55 percent (214 graduates out of 391) continued education at the post-secondary level (A-level, technical, nursing college, or tertiary education)
expansion keeps pace with the expansion of secondary education opportunities from 2004 to 2006, the transition rate from secondary to post-secondary education will decline. For those who do not continue with further studies, the relevance of their secondary studies to the labor market is more important. As suggested by the focus group in St. Lucia, the low relevance could be one reason why more than 70 percent of people aged 17 to 30 in St. Lucia have no education credentials despite having attended more than eight years of school. This situation has a negative impact on job prospects, future learning, and youths' self esteem (CDB, 2006).

The governance structure of the CXC council is geared towards academia. The CXC council sets the agenda in the classrooms across the English-speaking Caribbean. Its exams and syllabi drive the actions of the ministries, schools, teachers and pupils. For the 2006 to 2008 period, all 42 members of the CXC council are educators from regional universities, national ministries of education or the teaching profession. The heavy representation of educators on the Board could contribute to the strong academic orientation of the CXC exams. The composition of the Board was appropriate when the CXC was created in 1972, because the CSEC was designed as an entry exam for tertiary education. The CSEC exam is still primarily thought of in this regard and is less oriented towards labor market needs. Yet, with the introduction of the new Caribbean Certificate of Secondary Level Competence (CCSLC) exam, the Caribbean Vocational Qualifications, and a possible adult secondary education equivalence exam, the main objective of the CXC is no longer preparedness for tertiary education, but preparedness for life. In light of this shift, a broader spectrum of society, including employers, should be given a voice and represented on the council.

Despite limitations of the CXC exams, the Caribbean Examination Council offers an important regional scope and has been responsive to emerging needs in its decision to develop a new more labor market-oriented certificate. Development and application of exams and other assessment activities carry substantial fixed costs. Therefore, there are significant savings for all 14 territories by collaborating to develop assessment tools. Since the CXC provides common assessment tools, it is essential that the governments of the English-speaking Caribbean ensure that the CXC is efficient and responds to the needs of its client members, especially as the use of learning assessments is likely to increase in the future. As previously mentioned, the CXC is answering to emerging needs and demands. The CCSLC was developed in response to the influx of students with a wider range of abilities, this as a result of universal secondary education policies across the region. The CCSLC measures a core set of desired skills, knowledge, values and attitudes in: (i) English and Mathematics and (ii) three additional subjects to be chosen from one of six groups, including CXC subjects, TVET, creative and expressive arts, and locally-certified enrichment programs. The CCSLC was introduced in June 2007 and should provide a greater share of secondary school leavers with credentials that will enable them to gain employment or post-secondary training opportunities (CXC, 2006).

The CXC exams offer country comparisons at the regional Caribbean level, yet the OECS countries have not participated in any broader international student assessments to gauge whether students are receiving adequate preparation for the global economy. In the new

(see Background Paper III). The two estimates are rough estimates. They are compatible if a large number of pupils complete Form 5 but do not sit the CXC exams.

3 The CXC council is composed of the Vice Chancellor of the University of the West Indies; the Vice Chancellor of the University of Guyana; three representatives of the University of the West Indies appointed by the Vice Chancellor of the University of the West Indies; one representative of the University of Guyana appointed by the Vice Chancellor of the University of Guyana; two representatives appointed by each of the Participating Governments of Barbados, Guyana, Jamaica and Trinidad & Tobago; one representative appointed by each of the other Participating Governments; and one representative of the teaching profession appointed by each National Committee (http://www.cxc.org/The_Council.htm). At the subject level, there is private sector participation in some CSEC syllabus development panels.
knowledge-driven service economy, skills may be the most important input for competitiveness. As the OECS strives to become more competitive in the global economy, it is crucial for governments to understand how well their students and education system perform on a global scale. An accurate measurement would assist the governments to determine whether the learning outcomes of their education and training systems meet international standards and to gauge the importance of other globally measured factors for competitiveness. Global assessments are useful for benchmarking, diagnostics, and as an accountability mechanism. For example, the average performance of German and US pupils in the PISA assessments in 2000 spurred interest and widespread public debate about the need for better preparation of youth and public pressure for improvements to the education system.

III Specific Skills Sought after in Today’s World of Work

Part of the general disconnect between the education system and the labor market is manifested in the need to teach new specific skills. The transformation of the Eastern Caribbean economy has stimulated increased demand for some specific skills. The report discusses three of them: learning to learn, life skills, and ICT skills.

Rote memorization does not provide school leavers with enough necessary job skills; schools should teach “learning to learn.” In an economy where workers are expected to annually improve productivity and constantly deliver new innovative services, learning takes center stage. Box 4 shows how the knowledge economy has changed the competency requirements for the US labor force. Requirements have shifted away from routine competencies towards complex and expert ones. Labor-specific skills related to well-defined technologies, products, sectors and work functions only represent the visible part of the competency iceberg. More essential are the competencies which enable acquisition of new skills, adaptation to new technologies, and acceptance of new work forms. It is therefore necessary to apply a broader interpretation of skills than the specific knowledge and skill needs that can be deduced from foreseen or desired economic developments. Stimulating such meta-cognitive and creative capital has profound implications for teaching and pedagogy for the teachers and schools in the OECS.
What types of skills and competencies are increasingly in demand in the knowledge economy? Research carried out by Levy and Murnane (2004) on the skills requirements for tasks performed in the US labor market is revealing. The authors divide the tasks performed by today’s labor force into five broad categories:

- **Expert thinking**: solving problems for which there are no rule-based solutions, such as diagnosing the illness of a patient whose symptoms seem strange;
- **Complex communication**: interacting with others to acquire information, to explain it, or to persuade others of its implications for action; for example, a manager motivating the people whose work she supervises;
- **Routine cognitive tasks**: mental tasks that are well described by logical rules, such as maintaining expense reports;
- **Routine manual tasks**: physical tasks that can be well described using rules, such as installing windshields on new vehicles in automobile assembly plants;
- **Non-routine manual tasks**: physical tasks that cannot be well described as following a set of “if-then-do” rules and that are difficult to computerize because they require optical recognition and fine muscle control; for example, driving a truck.

In Figure 2, each trend reflects changes in the share of people employed in positions emphasizing that task. The importance of each task in the US economy is set to zero in 1969, the baseline year. Tasks requiring expert thinking and complex communication grew steadily from the 1970s to the 1990s. The share of the labor force employed in occupations that emphasize routine cognitive or routine manual tasks remained steady in the 1970s and then declined over the next two decades. Finally, the share of the labor force working in occupations that emphasize non-routine manual tasks declined throughout the period.

Employers seek workers with behavioral life skills. There is a remarkable unequivocal request for behavioral skills, also called “soft skills,” by firms. These include cooperative skills, communication, work ethic, entrepreneurship, and commitment (Salling Olsen, 2006b). The results of several surveys of private employers highlight the extent to which they desire these skills (see Figure 3 and Figure 4). For instance, in St. Kitts and Nevis, firms’ top three desired skills were attitude to work, team spirit and cooperation skills. In another survey of employers for the wider Caribbean, honesty and integrity, work ethics and problem solving were the top skills required to obtain a job. Paradoxically, young students and workers are unaware of this high demand for life skills. In a survey of school leavers in St. Vincent and the Grenadines, only 3 percent of the youth reported that they lacked soft and interpersonal skills. The lack of recognition of the importance of “life skills” in the Eastern Caribbean is not unique. Many OECD countries have ongoing working groups to identify and improve teaching to incorporate these skills (see Box 5). These life skills represent a basic dimension of behavior and attitude which has a skills component but cannot be taught or learned separately. They are clearly related to work life because they are needed for successful performance at work, but they are of a more general nature applied to any sphere of life. There is, therefore, an important element of culture and up-bringing for which the school cannot be uniquely responsible.

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4 A work group on Skill Development under the Caribbean Forum for Development similarly found that many school leavers did not have the requisite soft skills to function adequately in the work place (CFD, 2006).
However, some life skills refer to very concrete attitudes and social behaviors that can and should be nurtured in a school setting, such as teamwork and problem solving.

**Box 5 The Teaching of Life Skills is also a Major Challenge in OECD countries**

Many OECD governments are concerned about whether their education system imparts the right set of skills to ensure their citizens a productive and successful working life. They have launched studies and working groups to identify the best skills for this purpose.

In Canada, the government launched the Essential Skills initiative. Essential skills are those skills needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Through research, the Government of Canada and other national and international agencies have identified and validated nine Essential Skills. These skills are used in nearly every occupation and throughout daily life in different ways and at different levels of complexity. They are: (i) reading text, (ii) document use, (iii) numeracy, (iv) writing, (v) computer use, (vi) oral communication, (vii) working with others, (viii) continuous learning, and (ix) thinking skills. The last four relate to life skills.

In the US, Michigan State University conducts a regular employer survey. In 2006, 864 companies were surveyed. The survey revealed that candidates are expected to possess more than academic skills. They are expected to have “the full package.” This includes, in particular, communication skills, leadership, teamwork, interpersonal abilities, and personal traits.

In 2004, the OECD undertook a program to define and select key competencies. The program assessed the key variables that determine students’ success in life. They found three life skills to be highly influential for success: (i) social competencies, including cooperation, (ii) lifelong learning abilities, and (iii) communication competencies.

**Opportunities abound for workers with technical skills; ICT skills are especially sought after.**

The results of employer surveys, previously presented in Figure 3 and Figure 4, show that ICT is the most demanded technical skill. Further, employers, government officials and trainers frequently point to lack of technical skills for careers such as plumbers, air condition technicians, and maintenance staff. This view is corroborated both by the enterprises surveyed for the Investment Climate in Grenada and for the case study on Skills for the Tourism sector in St. Lucia. Employers report that key skills shortages are found in technical areas such as industrial engineering, and managerial positions at middle and senior management levels. Higher availability of technical and managerial skills would: (i) reduce the upward wage pressure, which otherwise would escalate labor costs, for example in the construction sector, which currently is booming in several of the OECS countries; (ii) allow more businesses to invest in productivity-enhancing ICT and other cutting edge technology;
and (iii) create jobs and business in specific niche industries that are intensive in technical skills, such as yachting in Grenada.

Although many pupils have some access to ICT training in secondary schools, the knowledge of ICT among secondary school leavers seems insufficient, as judged by both employers and students. In a survey, conducted for this report, of secondary school leavers sitting the 2001 CXC in St. Vincent and the Grenadines, only 30 percent knew that the file extension of a word document is “.doc.” When asked where the school leavers lack skills, the highest share, 28 percent, answered, “Computer skills.” Thus, more widespread use and access to ICT is imperative in the OECS schools in order to adequately prepare youth for the global economy. This may require moving beyond the current configuration and use of computer labs. ICT should be incorporated across the curriculum and developed as a tool for learning. New Zealand’s curriculum provides a very good example of conscious integration of ICT skills across all subjects. Teachers would require additional training to implement this approach.

Almost all secondary schools offer technical and vocational subjects; however, quality seems low. Quality of education is difficult to measure. Therefore, it is inappropriate to make blanket statements about the quality of technical and vocational education in the OECS. Nonetheless, the following observations suggest problems with quality and relevance of technical education: (i) based on site visits, the teaching equipment available is outdated and the level of training of teachers seems low (McArdle, 2006) and (ii) in the survey of school leavers from St. Vincent and the Grenadines, there was no link between passed CXC exams in technical subjects and better labor market outcomes, as measured by higher salaries or less unemployment. Neither schools nor teachers could estimate job-placement rates of recent graduates, and there is no formal tracking system to determine whether the schools are adequately preparing students for work.

IV Improving Availability and Relevance of Professional Skills

The above paragraphs highlight the need to stress learning to learn abilities, life skills and ICT skills in the education system. This section discusses the gains from a closer alignment of professional skills with the demands of the labor market.

Specialized and highly skilled professionals, the output of post-secondary education institutions, are not readily available in the Eastern Caribbean. Yet rates of return to post-secondary and tertiary education are high in the Eastern Caribbean, as demonstrated with the case of St. Vincent in Chapter 2. As will be shown in Error! Reference source not found. in the next chapter, young workers with post-secondary education and tertiary education also have the lowest unemployment among all young workers in St. Lucia. This indicates that general demand for graduates of post-secondary education is relatively high compared to supply. Further, various studies find a shortage of people with specialized skills among the OECS countries. In an investment climate survey of 201 firms in Grenada, firms reported having difficulties finding management skills, in particular. The median delay to fill a vacancy was eight weeks, compared to four weeks for a skilled worker and one week for an unskilled worker (FIAS, 2003).

5 The International Standard Classification of Education (ISCED) defines post-secondary, non-tertiary education as an independent level of education (ISCED level 4). This level straddles the boundary between upper secondary programs and post-secondary education. The next level in the ISCED is Level 5A, which is the first stage of tertiary education with a minimum of two years full time equivalent. The community colleges in the Eastern Caribbean offer a mix of post-secondary, non-tertiary education (ISCED level 4) and tertiary education (ISCED level 5A). This section analyzes the two levels of education together and refers to them as post-secondary education.
A serious mismatch exists between supply and demand of professional skills in the tourism sector. The economic importance of the tourism sector should not be underestimated, for it is the largest foreign exchange earner in the OECS. It accounts directly for 25 percent of GDP in Antigua and Barbuda. Over 16 percent of St. Lucians are directly employed in this sector, and in St. Kitts and Nevis more than three-fourths of all new jobs for 2006 were expected to arise in the tourism industry (World Travel and Tourism Council, 2004 and OECS Secretariat, 2005). A case study analyzing skills for the tourism sector in St. Lucia, carried out for this report (see Background Paper IV), identifies the following type of workers as critically lacking: culinary and executive chefs, managers, and, to a lesser extent, waiters, spa workers, and maintenance staff. The first two of these positions offer salaries substantially above the OECS average. Companies are often forced to attract expensive foreign born and trained staff for these positions to the detriment of local economic benefits and competitiveness. For example, a study of the yachting sector in St. Vincent and the Grenadines finds that skills for administrative/clerical, sales and services are available in the country. However, specialized managerial skills required for marina or yacht charter company management are not available. This is exemplified by the fact that the managers of three of the four main yacht charter companies in St. Vincent are non-Vincentians (ECLAC, 2003). As was the case for Grenada, the case study of the St. Lucia tourism sector in 2006 detected a need for managerial skills. Manager skills were the second hardest skills to find. On average, it took 6.7 weeks to fill a manager position in the tourism sector compared to one week for an unskilled worker. The hardest skill to find was Chefs and Sous-chefs, another specialized skill usually trained by post-secondary level institutions (see Background Paper I). The education sector will need to adjust its curriculum to better prepare school graduates with the skills needed for tourism, the islands’ foremost economic sector. It is not the objective of this report to identify all specific careers that are in short demand. This should be left to a labor market needs assessment. However, it is essential for the report to highlight that the current supply of professional skills has important shortages and mismatches with demand.

Four factors explain the shortage of professional and highly skilled workers in the OECS: (a) a low enrolment rate into post-secondary education; (b) a high out-migration of highly skilled labor; (c) a need to better link the career programs of the OECS community colleges to demand; and (d) the relatively small size of the individual Eastern Caribbean labor markets. The following four sections briefly analyze these factors.

a. Low enrolment rate in post-secondary education

Overall enrolment into post-secondary education in the Eastern Caribbean is low, which is principally due to low supply of seats in tertiary education. The high returns to tertiary education fuel young people's decision to demand access to tertiary education. The number of students that completed secondary education in the last decade far surpassed the enrolment numbers for tertiary education. In 2001, an estimated 55 percent of a cohort completed secondary school in the Eastern Caribbean - the gross completion rate - but only 11 percent of a cohort entered post-secondary education - the gross enrolment rate (World Bank, 2004). This large gap between completion of secondary education and enrolment into post-secondary education may be due to the fact that not all those who completed secondary education passed the sufficient number of CXC exams to qualify for post-secondary education. For example, in the survey of school leavers in St. Vincent, only 55 percent of those that sat for CXC exams subsequently attended post-secondary education. There seems, therefore, to be sufficient demand for post-secondary education. Hence, in the short run, the bottleneck for expansion of tertiary education seems to be an inadequate supply of post-secondary education.6

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6 Nevertheless, in the medium to long run, quality post-secondary education will only expand in the Eastern Caribbean if CXC pass rates (and learning outcomes) improve.
Increases in private financing are critical for increasing supply and enrolment of post-secondary education. The OECS countries rely almost exclusively on public financing for provision of post-secondary education. The OECS invested an average of 0.8 percent of GDP in post-secondary education, of which only one eighth is from private funds (0.1 percent of GDP) (see Table 1). Continued reliance on public financing to expand post-secondary education is untenable for three reasons. First, many Eastern Caribbean countries are in a distressed fiscal situation and cannot afford such an increased long-term recurrent expenditure. Second, public spending on post-secondary education is regressive in the Caribbean, since the majority of students come from high-income families. For example, in Jamaica, 77 percent of all post-secondary students come from the richest quintile of the population. Third, a significant share of graduates leaves the country, thus significantly reducing the benefit of the public investment to the national government. Therefore, increasing private financing is critical for expansion of post-secondary education. Other nations have increased private investment in post-secondary education by broadening the revenue base, including reforming tuition fees and attracting non-governmental providers.

To increase available financing, the community colleges could broaden their revenue base. Figure 5 compares the revenue sources of the T.A. Marryshow Community College and the Sir Arthur Lewis Community College with those of public community colleges and universities in the US. Like in the US, revenue generation and student fees could be tapped more to increase investment into post-secondary education. For example, tuition fees account for 18 percent and 20 percent in the US, depending upon the type of education, while they only account for 7 percent in Grenada and 10 percent in St. Lucia. The two Eastern Caribbean colleges seem to rely markedly

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Table 1 Low Enrolment and low private investment in Post-Secondary Education

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross enrolment rate</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Dominica</td>
<td>7.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Grenada</td>
<td>13.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>St. Kitts and Nevis</td>
<td>12.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>St. Lucia</td>
<td>14.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>St. Vincent and the Grenadines</td>
<td>5.0%</td>
<td>0.5%</td>
</tr>
<tr>
<td>OECS Average</td>
<td>10.3%</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

**Comparator countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross enrolment rate</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Barbados</td>
<td>41.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>28.8%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Jamaica</td>
<td>14.6%</td>
<td>1.0%</td>
</tr>
<tr>
<td>OECD Average</td>
<td>1.0%</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

Source: (World Bank, 2003c) and (World Bank 2004a-c) based on national budgets and educational statistics. For OECD: (OECD, 2005b), Year: 2002, except for Jamaica and Barbados (2003), and Dominica Republic (2001).

Note: n.a. not available. For the OECS, private investment is defined as household payments to meet fees for students enrolled in the OECS community colleges and does not include fees for attending foreign institutions.

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7 This includes public funding allocated to the University of the West Indies. Years of reference are 2002 and 2003. For further analysis, see Annex 2 to this report, which summarizes a series of World Bank Public Expenditure Reviews for the OECS.

8 In line with good practice, governments maintained funding of primary and secondary education during the periods when fiscal restraints were necessary. This has benefited low and middle-income segments of the population.

9 Developing a strong non-governmental sector for tertiary education could pose greater difficulties in the Eastern Caribbean than in larger countries. The small size of the individual islands and the multi-country setting is likely to reduce the interest of private providers, since delivery of tertiary education entails significant economies of scale and requires regulatory stability. This explains why only one private institution in the Eastern Caribbean offers tertiary education to nationals. The notable example is the partnership between Grenada’s T.A. Marryshow Community College and the private St. George University. This partnership allows local youth to benefit from the quality programs offered by one of many offshore universities (i.e. institutions which are located in the Caribbean but cater to students from the US). Such a situation would call for a greater public effort to attract private providers. One line of action could be financial incentives to seek greater public-private partnerships.
more on government subventions. A working group of Caribbean rectors, academics, and policymakers concurred with the need for increased revenue generation and recommended that post-secondary education institutions develop “…a strategic plan to guide fundraising efforts, and establishment of functional structures to facilitate revenue generation.” The working group also suggested that, “A change in the administrative system/institutional culture with respect to efficiency and timeliness…” should take place. “Heads must change their view of the world; leadership is critical. Heads may have to undergo training in management and entrepreneurial skills in order to achieve a holistic approach. There is a need for performance-based management.” Institutional performance-based management can be stimulated by performance-based funding. Performance-based funding provides incentives for the education institutions to improve and increases accountability for funds. This is especially important for the community colleges in the Eastern Caribbean, since they do not have strong incentives from the government to perform (World Bank, 2003e and World Bank, 2004a-c).

Two types of performance funding can be distinguished: (i) the government negotiates specific targets with the education institution in exchange for funding. One such goal could be to increase the share of revenue generation from the current level to a mutually agreed higher level, and/or (ii) the government provides financing to all tertiary institutions based on pre-established criteria, which might be unit cost per graduate (Thorn, Holm-Nielsen and Jeppesen, 2004 and CHEPS, 2001).

**Figure 5 Source of Revenue for Post-Secondary Education**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Source of Revenue Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.A. Marryshow Community College,</td>
<td>76% Government, 14% Student fees, 10% Revenue Generation</td>
</tr>
<tr>
<td>Grenada</td>
<td></td>
</tr>
<tr>
<td>Sir A. Lewis Community College, St. Lucia</td>
<td>84% Government, 7% Student fees, 9% Revenue Generation</td>
</tr>
<tr>
<td>Public US Community College</td>
<td>69% Government, 11% Student fees, 20% Revenue Generation</td>
</tr>
<tr>
<td>Public US Universities</td>
<td>36% Government, 18% Student fees, 46% Revenue Generation</td>
</tr>
</tbody>
</table>

Source: Arthur Lewis Community College and T.A. Marryshow Community College, and Chronicle of Higher Education for the US. Year is fiscal year ending summer 2003, and 2000 for the US.

**b. Migration of highly skilled workers**

Multiple studies have shown that Caribbean workers with post-secondary education are likely to seek employment outside the region (Adams, 2003; Wodon, 2003; and Mattoo, Neagu, and Ozden, 2005). This leads to at least a temporary brain drain and reduction in competitiveness. However, the out-migration also carries significant benefits in terms of remittances and improvement in the economic wellbeing of the migrants. Further, experiences from India, Korea, and China show that the Caribbean diaspora can be an economic advantage if the OECS countries succeed in drawing upon their skills, knowledge and business connections (World Bank 2006b). Nevertheless, the large outflow of graduates reduces the economic benefits to the state from public investment in education, since the benefits from education in terms of taxes and higher ability to assist firms in the adoption of new technology do not accrue to the country. Therefore, education policies should be adjusted to this significant outflow. First, the government could ask households to pay a larger share of the costs of post-secondary education, for example through increased tuition that can be financed by a student

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10 The working group was part of a Symposium co-hosted by the Caribbean Development Bank and the University of the West Indies, held in November 2005 to discuss "Tertiary Education Financing in the Anglophone Caribbean" (CDB, 2005).

11 The cited reports review public expenditure in four OECS countries. In only one instance, Dominica, was funding to the local community college linked to specified goals. However, it was not specified how success or failure to meet that goal would affect funding.
loan, as has been successfully implemented in New Zealand, the United Kingdom (UK) and Australia. This would reduce the loss to the state, should the graduate decide to leave the country. Second, the government could consider the feasibility of specialized education programs in disciplines with high global and local demand.\footnote{The Caribbean region, and specifically the English-speaking countries of CARICOM, faces a substantial shortage of nurses. Concerned with the impact on access and quality of health services, governments, who in general shoulder the major burden of the provision and financing of nurse training, increasingly respond by expanding the capacity of public training programs. As out-migration is the main source of attrition among the nurse workforce, simply expanding public training programs is not an efficient solution as long as significant investments in nurse education result in uncompensated returns offshore. Given the importance of this outflow for economic, educational and health reasons, the World Bank has initiated a study aimed at developing alternative approaches to expand, diversify and finance nurse training programs that efficiently reduce local nurse shortages in the context of a growing global demand.} Third, education programs should be more closely linked to private sector needs in order to create immediate job opportunities for graduates. This would reduce the likelihood of out-migration.

c. The need to better link the career programs of the OECS community colleges to demand

The governing bodies of the Eastern Caribbean community colleges are responsible for ensuring that the education offered in their institutions is relevant. A greater enrolment into post-secondary education and a lower migration rate would result in a larger pool of highly skilled workers in the OECS. However, it would not necessarily fill the identified gap of specialized workers unless the enrolment increase took place in fields linked to the skill gaps. Judging from the available firm surveys, economic analysis of labor surveys, and ad-hoc evaluations of private sector associations - cited previously in this chapter - the current output of graduates from the OECS community colleges do not meet sufficiently the demand.\footnote{The University of West Indies (UWI) conducted in 05/06 a series of consultations with non-campus countries (the UWI-12) to respond to the needs of these countries, UWI (2007).} It is key to undertake further assessment of the relevance on a case-by-case review of each institution to verify the above information and examine ways to improve relevance. To better link the programs to demand, many governments in high-income countries have focused on the governing aspect of post-secondary education institutions (USdED, 2007). Improvements in governance seek to empower those who will ultimately benefit from the institutions. This is primarily achieved by giving employers and wider society a significant role in the leadership of the institutions. Further, governance improvements focus on setting clear goals for each institution, for example through performance-based funding described above, and empowering management of the institution to reach those goals (see...}
Box 6).
Box 6 Global best practice on governance of post-secondary education institutions

<table>
<thead>
<tr>
<th>Worldwide, the post-secondary education systems are under pressure to better respond to a marked increase in demand for post-secondary education and to society’s knowledge economy needs. Fielden (2007) reviews recent governance changes in Australia, Czech Republic, Denmark, Kenya, New Zealand, Pakistan, South Africa, Tanzania, the UK, and the US, among others. In order to help post-secondary education institutions better respond to the needs of society, new best practices on governance have emerged:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Legislation that establishes universities as autonomous independent entities. This implies a withdrawal of the State from certain detailed control and management functions and the devolution of responsibility to universities themselves.</td>
</tr>
<tr>
<td>• The creation of agencies to carry out some of the detailed financial control and supervision functions.</td>
</tr>
<tr>
<td>• Confirmation of the role of an Institutional Board as having overall responsibility to the Minister. Civil society has significant representation on the Institutional Board.</td>
</tr>
<tr>
<td>• Expectations of managerial competency by the Board and the President.</td>
</tr>
<tr>
<td>• The development of new forms of accountability and financing through reporting on performance and outcomes in achieving nationally set goals for the sector, as well as institutionally set targets. One example is performance-based funding, where an element of public funding is based on performance; the most common example of this is where part of the grant is linked to the number of students who complete a given program and successfully graduate.</td>
</tr>
<tr>
<td>• Adoption of funding models that encourage Institutions to develop new sources of income.</td>
</tr>
</tbody>
</table>

In most cases, these practices were manifested as outcomes by national post-secondary education commissions, consultations and evaluations.

d. Small size of the market for tertiary education in the Eastern Caribbean

OECS characteristics, namely small size and geography, demand innovation and collaboration to provide the full range of professional skills required. A community college in the OECS, or anywhere else, cannot offer curricula and courses to educate all professions of a modern society, ranging from assistant dentists to anthropologists. Course development is expensive for small institutions (HIU, 2003). Other regions in the world face similar geographical and educational challenges. They have successfully developed new organizational, technological and educational solutions to overcome geographical difficulties. They have done so in at least two organizational ways, both of which take advantage of ICT to increase economies of scale: (i) forming networks of disperse community colleges, like the Universities of Highlands and Islands. This is a highly relevant example to the Eastern Caribbean. It is a partnership of colleges and research institutions, along with an associated network of outreach learning centers, which offers vocational courses, diplomas, undergraduate and postgraduate degrees throughout the highlands and islands of Scotland. This university involves collaboration among the existing small colleges and specialization of each college into a narrower set of coursework, thus developing more specialized knowledge and higher quality education; and (ii) contracting of post-secondary education institutions to provide a blend of on-line and in-person teaching to students in rural towns with no post-secondary education institution. The government furnishes the ICT equipment necessary for the delivery of the courses and contracts an education provider. This is the case of the Centros Regionales de Educación Superior in Colombia, and the contracting of Tech Milenio of Mexico in the state of Quintana Roo, Mexico. In both cases, specialization and collaboration are indispensable. Similar collaboration would allow the OECS community colleges to: (i) increase economies of scale through teaching a large number of students via ICT; (ii) develop more courses linked to the specific demands of the key labor shortages of the region, for example, cutting-edge management courses for the tourism sector and culinary arts programs in partnership with the private sector; and (iii) through collaboration with a recognized international university with distance learning courses, offer specialized courses with a smaller number of students without having to invest in the development of such courses.

There are several on-going initiatives to provide ICT infrastructure and foster regional collaboration among the colleges. The Caribbean Knowledge and Learning Network (CKLN) was
launched by the Caribbean Community (CARICOM) and the OECS in 2004, with support from the World Bank. The CKLN is designed to enhance the competitiveness of Caribbean countries by: (i) leveraging ICT to connect the region to the global pool of knowledge; (ii) developing human resources; and (iii) facilitating greater regional integration. Building on past experience in the region and elsewhere, the CKLN is taking a phased approach to the introduction of new technologies and open and distance learning approaches. The initiative has focused first on awareness raising, capacity building, the introduction of pilots, and the development of relationships to support the forthcoming investment phase. Supported by the World Bank, the European Union, and several other donors, the CKLN is steering donor investments in ICT and tertiary education and supporting existing regional efforts to advance the definition of regional standards and other necessary reforms. The CKLN is operating as an umbrella initiative in partnership with The University of West Indies Distance Education Center (UWIDEC), Commonwealth of Learning, and UTECH. It is crucial that policymakers provide incentive to the existing community colleges to take advantage of this new ICT-based initiative.

**Policy Recommendations to Improve Relevance of Formal Education:**

In the analysis part of this chapter, three main opportunities were derived to improve the relevance of formal education: (i) better connect the education sector and the labor market; (ii) improve relevance of secondary education through measurement of learning outcomes at the global level and increased focus on sought after skills such as learning-to-learn abilities, life skills, ICT skills, and quality vocational skills; and (iii) increase availability and relevance of professional skills.  

(i) **Recommendations to connect the education sector and the labor market**

The most effective action would be a governance improvement of the leading education institutions in the Eastern Caribbean. Education institutions exist to serve the needs of society. Therefore, a wide set of stakeholders from society should have a voice in the governance of the educational institutions, including examination councils, colleges and schools. This could be considered the most effective action because it is, by default, the board of an institution that has the power to change the direction and paradigm of said institution. Broad stakeholder representation on the board would increase the probability that institutions would be more responsive to all needs of society, including labor market needs.

At the secondary education level, one way to improve governance might be to seek better balance among members of the Council of the Caribbean Examination Council. The inclusion of private sector representatives and other labor market-oriented stakeholders on the CXC Council would encompass broader societal representation to more accurately determine the needs for the different assessment tools.

At the tertiary level, the governance and accountability of the region's community colleges could be strengthened by focusing more on labor market needs. Following global trends, the governments could consider increasing accountability and setting goals for each college. In particular, the OECS governments could negotiate performance contracts, establishing a few clear, strategic, and multi-annual goals with tied funding agreements. This would include rewards and penalties based on periodic external assessment of whether the institution had reached the agreed goals and would go hand in hand with increased autonomy of the college to independently determine how to reach those goals. As such, this action would lead to a better alignment of the supply of professional skills with the demand.

The countries should bring industry and education providers together on a regular basis through skills councils. Currently, the private sector and education institutions have few
opportunities to discuss and agree upon national or industry skills needs, for example in the tourism sector. This lends itself to an environment of poor communication and distrust between these two key partners. Governments could consider establishing skills councils in key industries with the participation of employers, labor unions, education institutions, and the Government. However, it is important that the institutions have incentives in the form of governance and funding to cater to local labor market needs.

**More labor market information to schools and students is part of the solution.** An OECS-wide labor market needs assessment capturing labor shortages in each country would be an appropriate first step to remedy this lack of information. Undertaking the assessment at the OECS level would provide substantial cost savings, rather than financing a series of assessments in each country using different methodologies. Subsequently, this information could be regularly updated and broadly communicated to students, families, schools, colleges, and government officials. One way to share the information in schools would be through the school counselors, who could assume responsibility for some aspects of career counseling. This would better guide students in making important life decisions and help them understand the preparation steps (exam requirements, selection of appropriate programs, application to universities, and so forth) to reach their goals.

(ii) **Recommendations to increase relevance of secondary education**

**OECS students’ learning should be assessed against international standards.** In particular, the government could consider participating in the Program for International Student Assessment (PISA) or the Trends in International Mathematics and Science Study (TIMMS), which have become the gold standard for global student assessments. Global assessments are useful for benchmarking, diagnostics, and as an accountability mechanism. As the OECS strives to compete in the global economy, it must understand how well their students - their future workforce - and their education system perform comparatively on a global scale.

**Teaching methods and curricula should develop “learning to learn” abilities and stimulate critical thinking in students.** For this, the OECS primary and secondary school system needs to emphasize more interactive teaching methods, active participation, case-based training, simulations, and team projects - in short, more of a problem-oriented curriculum. Schools could also encourage different forms of pedagogical experiments, using the actual contexts of engagement of learners to increase relevance and task-specific learning. Teacher training - both pre-service and in-service - is indispensable to a move towards formation of adaptable, proactive and lifelong learning graduates.

**Education should nurture life skills in teaching at all levels.** The early lessons learned from OECD countries suggest that: (i) teaching should use participatory methods and cooperative learning, such as group work, to induce behavioral change; (ii) teaching should be problem-based; (iii) new assessment measures need to be developed to assess learning of life skills; and (iv) teacher training and development of new material and curricula is necessary.

**Technical and vocational education should meet regional quality standards and provide training to meet demand.** As further discussed in Chapter 5 of this report, technical and vocational training in secondary education could be better linked with labor market training and post-secondary level courses to create recognized career and learning paths in the trades. Once such policies are in place, investment in teacher training, didactic material and labs for technical and vocational education could be undertaken with quantifiable benefits. Policymakers should address the lack of career and
education opportunities in technical and vocational education and facilitate labor market recognition by bestowing diplomas that are quality assured and valued by employers.¹⁴

(iii) Recommendations to better align supply of professional skills with demand

**The governments should stimulate greater private investment in post-secondary education in order to increase enrolment.** The governments could consider increasing tuition fees, possibly implemented jointly with a student loan and scholarship program for students that cannot shoulder the fees. Further, the governments could provide incentives for the colleges to broaden their revenue base. The extra investment would allow the Eastern Caribbean community colleges to increase the number of available seats in their institutions, and thereby enroll more students.

**The community colleges need to specialize and gain higher quality in specific demanded areas.** The OECS colleges could more aggressively partner among themselves and with outside institutions to adapt curricula and use technology to offer cutting-edge courses in more subjects, for example through the Caribbean Knowledge and Learning Network (CKLN). This would involve entering into transfer agreements and partnerships with other OECS colleges, the medical “off-shore” institutions operating in the OECS, the University of the West Indies, and foreign providers. The CKLN is well suited for facilitating such partnerships. The agreements would serve the benefits of the students through higher quality and internationalized curricula. Working students and firms could be asked to contribute to the costs.

¹⁴ This recommendation is consistent with the recommendations of the Caribbean Development Bank regarding TVET: (i) avoid early streaming into TVET; (ii) broaden TVET and include certification; (iii) improve the prestige of TVET through higher relevance; (iv) link TVET in secondary education to tertiary education to create learning pathways and career options; and (v) involve post-secondary education institutions more in technical and vocational training in emerging sectors (CDB, 2006). Also see similar recommendations in CARICOM, 2006.