

Working outside the square: The Commonwealth Fund for Technical Cooperation Distance Education Project at Samuel Jackman Prescod Polytechnic, Barbados

Margaretta Sealy, Anthony Headley and Colin Latchem

ABSTRACT

Samuel Jackman Prescod Polytechnic (SJPP) is the major provider of technical and vocational education and training in Barbados. Depending upon traditional face-to-face on- and off-campus methods, it cannot meet student demand and yet it faces Governmental, industrial and community expectations of expanding its provision across the nation and region. Open and flexible learning offers itself as a solution. In 2002, SJPP gained Commonwealth Fund for Technical Cooperation support for a one-year consultancy to help determine the needs and opportunities, develop a strategic and organizational plan, advise on the staffing, resourcing and infrastructure, train staff and conduct pilot programmes in open learning. This paper describes the processes and outcomes and discusses the lessons learned.

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INTRODUCTION

Barbados is the most easterly of the Caribbean islands. 34 km long and 23 km wide, it has a population of 275,330 (2001 estimate), 90 per cent of whom are of African descent, and a population density of 622 per sq. km. Education is valued highly, schooling is free, universal and compulsory up to age 16, about 28 per cent of 17 - 24 year olds engage in tertiary study and adult literacy is around 97 per cent.

Samuel Jackman Prescod Polytechnic (SJPP) is the island's major provider of technical and vocational education and training, catering for 3,500 full- and part-time students a year. Depending upon traditional face-to-face on- and off-campus methods, it cannot meet student demand and yet it faces Governmental, industrial and community expectations of expanding its provision across the nation and region. Open and flexible learning offers itself as a solution.

In 2002, SJPP gained Commonwealth Fund for Technical Cooperation support for a one-year consultancy to help determine needs, develop a strategic and organizational plan, advise on the staffing, resourcing and infrastructure, train staff and conduct pilot programmes in open learning. This paper discusses the processes, outcomes and lessons learned.

The authors who led the planning process adopted the theme, 'working outside the square'. This encapsulated the idea of using multi-disciplinary teams and new methodologies and technologies to move beyond the confines of the classroom and finite expertise and resources of the campus and offering opportunities to those precluded from on-campus study.

In accordance with the approach advocated by Norris and Poulton (1993), the authors undertook both strategic and organizational planning. The strategic planning was essentially concerned with the overall direction of effort and macro issues – the community's educational needs and constraints, the environmental conditions and the institution's relationship to its environment. It yielded information that was wide-ranging, qualitative, value-laden and political and that suggested alternatives and contingencies. The organizational planning involved examining the advice of local stakeholders, considering the impact of macro issues on micro issues, developing an operational plan (1 year) and tactical plan (3-5 years), and in accordance with Steeples (1988), adopting a systemic, action- and goal-oriented and quantitative approach.

The first step was to conduct an environmental scan. Morrison (1991) characterizes environmental scanning as gaining strategic intelligence on changing external needs,

trends and patterns and assessing the impact of these on the organization's vision, mission, strengths and weaknesses and strategic directions.

THE ENVIRONMENTAL SCANNING PROCESS

The national context

An inherent vulnerability attaches itself to a small island state such as Barbados exposed to the forces of globalization. The Government sees knowledge and information as no less important than capital as an engine of economic development. It envisages that there will be a decline in employment in manufacturing and that the key drivers of productivity and wealth creation will need to be in the service and knowledge-based industries.

In its ten-year human resource strategy to bring Barbados into the new economy, the Government plans to correct labour market imbalances by identifying and addressing skill shortages, create a cadre of multi-skilled personnel, enable disabled and disadvantaged groups to maximise their potential, expose a greater percentage of the population to postsecondary education and make education more accessible to those whose backgrounds and circumstances vary from the norm.

The 1995 White Paper (Government of Barbados, 1995) takes as its theme, 'Each one matters – quality education for all', and stresses the need to expand access to tertiary education. Between 1995 and 2000 the gross enrollment rate within post secondary/tertiary education moved from 21 to 28 per cent of the 17 - 24 year old cohort (Barbados Government, 2001). This may compare well with the total enrollment of less than 12 per cent in the English-speaking Caribbean and CARICOM's target to raise this to at least 15 per cent (Beckles, 2002), but it is still inadequate in terms of the country's human resource development strategy.

Barbados faces a massive training deficit. For the academic year 2000-2001, there were 13,282 applicants for places at the three national post-secondary and tertiary institutions, Samuel Jackman Prescod Polytechnic, Barbados Community College, and Erdiston Teacher's Training College. Only 4,504 of these could be accepted, leaving 8,698 unplaced (Barbados Government, 2001). It was for this reason that the Government decided to restructure post-secondary education to maximize the productive capacities of these institutions within a new University College of Barbados. It has so far refused to introduce tuition fees, despite political pressure from international donors. It stresses the need for distance education, keeping abreast with the latest instructional technologies and methodologies, and greater collaboration, articulation and cross-accreditation within the tertiary sector.

The Ministry's rationale and guidelines for curriculum reform (Government of Barbados, 2000) stress that the imperatives driving this must be based upon sound philosophical and psychological principles. It notes that its own research findings show that students learn at different rates, have different learning styles, respond to a variety of stimuli, and learn best from what interests them and is meaningful to them. It proposes that a constructivist philosophy be infused into the curriculum and more learner-centred methodologies adopted so that learners can actively engage in their

own learning and use their existing understanding as a building block for evaluating and acquiring further knowledge.

The Government recognises the need for young and old alike to acquire ICT skills. Internet access is affordable for most Barbadians, but the price of computers is still high relative to the average monthly income. The International Telecommunications Union (ITU) has published data that show that Barbados has 7.46 computer users and 2.2 Internet users per 100 inhabitants and The Green Paper on Telecommunications published by the Ministry of Industry and International Business states that as at March 2000, there were only 12,000 Internet users on the island. According to the ITU, Barbados is outranked on a per capita basis by other Caribbean countries such as St Vincent, Dominica and Antigua, let alone the world's more advanced nations (Marshall, 2001).

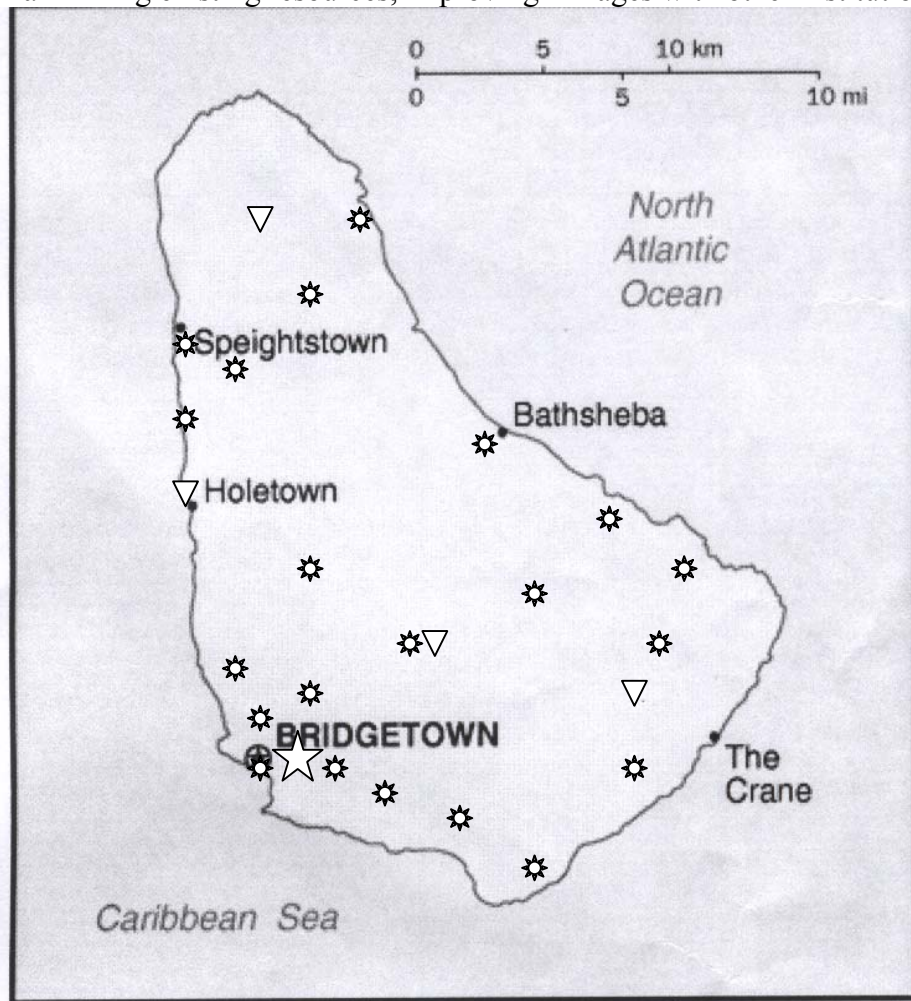
Aware of the escalating importance of ICT in business, learning and recreation and the need to bridge this digital divide, the Government has initiated two major programmes. The Ministry of Education's seven-year EduTech 2000 is designed to provide students in all primary and secondary schools with ICT for learning, information access and analysis and telecommunicating. The B\$6 million Community Technology Programme (CTP), spearheaded by the Ministry of Social Transformation, involves refurbishing community centres and, in collaboration with the National Sports Council, sports pavilions, to become ICT resource centres. These will provide free access and training in Microsoft Windows, Excel, Powerpoint, spreadsheets, the Internet and Web, multimedia, computer graphics, desktop publishing, Web design and computer assembly and repair. Each of the 21 centres will be equipped with up to 18 Internet-connected workstations, plus printers, scanners, laptops and video projectors. CTP is aimed at people of all ages but in particular, those on low incomes with the fewest educational opportunities. It will also provide small business with access to ICT.

With such developments in train, there will soon be a cohort of computer literate students entering the tertiary institutions and expectations of open and flexible learning in the wider community. The network of CTP centres, plus the schools already used for SJPP's face-to-face off-campus courses, assures an island-wide learner support network (see Figure 1 overleaf). This finding led the planning team to mainstream ICT into its planning much earlier than originally envisaged.

The institutional context

There are annually 3,000 applicants for SJPP's continuing education courses and about 50 per cent of these have to be turned away, even if they have the required qualifications or experience, because of limitations of physical space, facilities and staff. This problem is particularly acute in Applied Electronics, Architectural Drafting, Automotive Electrics, Childcare and Nursery Administration, Building Drawing, Electrical and Electronics courses, Ladies Tailoring, Massage Therapy, the Motor Vehicle Engine Certificate courses, Plumbing and Refrigeration and Air Conditioning. Furthermore, applications are received from Suriname, St Lucia, St Vincent and elsewhere in the region, and even as far afield as Namibia.

In July 2000, in consultation with internal and external stakeholders, SJPP drafted its *Strategic Plan 2000-2010*. This spelled out the need for 'distance education', maximizing existing resources, improving linkages with other institutions and



- Key**
- ★ Samuel Jackman Prescod Polytechnic
 - ▽ Schools currently serving as SJPP continuing education centres
 - ☼ CTP IT Resource Centres in community centres and sports pavilions

Figure 1: The potential network of learning centres

partnering with the private sector. It warned of increasing competition from private trainers. It acknowledged the importance of staff development and addressed the morale, status and remuneration concerns of staff. It called for leadership in strategic thinking, applied research, performance budgeting, team-building, and greater interdepartmental co-operation. It also called for an institutional culture that embraced prior learning, competency based education, national vocational qualifications, programme review and a more client-focused and entrepreneurial response to learners' and employers' needs.

The concurrent master planning for a merger between SJPP, Barbados Community College and Erdiston Teacher's College and creation of a new multi-campus 10,000 student University College of Barbados within the next 5-6 years had to be taken into account by the planners. There will be multi-million dollar funding for this initiative. There will be need to upgrade and develop new programmes ranging from certificate and diploma to undergraduate and postgraduate level and to cater for students entering at different levels. There will also be need for modularized, competency-based programmes delivered within the shorter timeframes of semesters, mixed-modality and more flexible provision for the many students who cannot be accommodated in the conventional on-campus programmes.

THE STRATEGIC PLANNING PROCESS

The above findings suggested that an all-of-government, all-of-community approach would be most likely to gain political and funding support for SJPP's moves into open and flexible learning. Early in the planning process therefore, a one-day strategic planning workshop was organized to gain input from key stakeholders - carefully targeted representatives of the Ministries of Education, Economic Development and Social Transformation, Technical and Vocational Education and Training Council, Bureau of Gender Affairs, Government Information Service, Audio Visual Aids Department, Distance Education Centre of the University of West Indies, Barbados Community College, Caribbean Development Bank, public and private sector employers and unions, as well as SJPP's senior and middle managers.

These participants considered the national priorities for education and training, conducted a SWOT (strengths, weaknesses, opportunities and threats) analysis, contributed to the drafting of the vision, mission and objectives statements and discussed the ramifications of open learning at SJPP.

THE SWOT ANALYSIS

The SWOT analysis findings were as follows:

Strengths

- SJPP's senior management is strongly committed to increasing access and flexible learning.
- There is strong support from other stakeholders.
- SJPP is starting with a carefully conceived strategic and organizational plan
- Employers see advantages in flexible 'just in time' training for employees.
- Such modalities accord with plans for industry-based competencies acquired independent of mode or place of learning and open to anyone in the community.
- Such approaches will encourage more people to study.
- Open and flexible learning is typically cheaper per student than face-to-face teaching and can be self-financing as well as government-supported.
- ICT is becoming cheaper, more user-friendly and more widely available, technophobia is reducing with greater access, and bandwidth is increasing.

Weaknesses

- Many staff are well-versed in traditional face-to-face methods, may be resistant to change and/or may feel deskilled by the new methodologies and ICT.
- A lack of infrastructure, resource personnel, time, training, support and incentives.
- Staff reluctance to engage in evaluation.
- Students may lack the necessary self-discipline and skills for autonomous study.

Opportunities

- To join the information age and global village.
- To support the socio-economic development of Barbados and other small island nations.
- To increase the student intake, cater for greater student diversity and serve new markets through a range of accredited and nonformal programmes.
- To reduce classroom contact time.
- To maximize existing resources and expertise.
- To achieve greater workplace productivity by reducing 'downtime' for training.
- To provide education more cost effectively.
- To use ICT for the in-service training of SJPP staff.
- To collaborate with other institutions in achieving articulation, cross-accreditation and credit transfer, sharing experience, infrastructure and costs, and developing and delivering educational products and services.

Threats

- Other public, private, international and 'virtual' providers capturing and the Barbadian educational market and marginalizing local face-to-face programmes.
- Possibility of inadequate resources or wasted scarce resources.
- The ongoing per capita costs may be lower but the initial costs are higher.
- Inadequate supervision of practical work and examinations compromising the integrity and quality of programmes.
- A loss of face-to-face interaction and camaraderie.
- The possibility of higher dropout and failure rates.
- The lack of trained persons to operate, maintain and repair ICT equipment.
- Technological dependency leading to disruptions through outages, hurricanes, etc.

THE VISION, MISSION AND OBJECTIVES

The stakeholders suggested the following for SJPP's moves into open learning:

Vision

- To be a regional leader in developing and delivering open and flexible technical education, nationally and internationally.

Mission

- To be proactive in providing quality, inclusive and cost effective open and flexible initial and continuing education relevant to the needs and circumstances of the nation, region and widest possible range of learners.

Objectives

- To provide open and flexible courses, programmes, facilities and services that are responsive to demand, inclusive and provided at a reasonable cost.
- To serve group and individual needs, including those with special needs, by employing a variety of methods and media.
- To enable SJPP staff to keep abreast of developments in open and flexible learning and technology and to recognise and reward endeavour in these areas.
- To assure quality in open and flexible learning through monitoring, evaluation, reflective practice and action research.
- To establish strategic alliances with other institutions, sectors and internationally for the purposes of information/resource sharing, collaborative course development and delivery, articulation, accreditation and credit transfer.

The above objectives were seen as requiring:

- Official recognition by Government.
- Funding.
- Legislative changes and revisions to institutional regulations regarding entry qualifications, prior learning, accreditation, credit transfer, articulation, etc.
- Public relations and public awareness.
- A wide range of new administrative, educational and technical skills.
- Staff development and technological support for staff.
- Amendments to physical infrastructure.
- Affordability and availability of technology.
- Facilities and software for those with special needs.

This exercise revealed strong stakeholder support for SJPP's open and flexible learning initiative and yielded invaluable data to inform the next stage – the organizational planning.

DEVELOPING THE ORGANIZATIONAL PLAN

With the objectives in place, it was essential to define the performance indicators – the policies, procedures and outcomes by which the achievement of these objectives would be judged – and to establish who would be accountable for each of these.

To give an example, in regard to Objective 1: To provide open and flexible courses, materials, facilities and services that are responsive to demand, inclusive and provided at a reasonable cost, the performance indicators were found to be as follows (the abbreviations stand for SJPP's Board of Management (BM), senior management (SM), Division of Distance and Continuing Education (DCE), Heads of Department (HOD), subject experts (SE), Student Affairs (SA), Guidance Office (GO), Computer Services (CS) and Library (LIB) and external agencies such as the Audio Visual Aids Department (AVA) and/or Government Information Service (GIS). Abbreviations in bold denote prime responsibility):

- The institution seeks and provides funding and other resources for open and flexible learning. (**BM, SM, DCE**)

- There is careful costing, budgeting and monitoring of costs to the institution and the learner. **(SM, DCE)**
- Accreditation of prior learning, credit accumulation and transfer, enrolment, teaching and assessment are in accord with the principles of open learning. **(BM, SM, DEC)**
- Accommodation, technology and other physical facilities are provided for open and flexible learning. **(BM, SM)**
- The institution promotes open and flexible learning and its commitment to this externally and internally. **(BM, SM, DCE)**
- Staff are encouraged to embrace open and flexible learning. **(SM, CDE)**
- Specially-trained personnel are provided to train and support staff in this work. **(SM, DCE)**
- Teaching staff have time release for developing courses/materials. **(SM, HOD)**
- The design, development and delivery of courses are subject to ongoing review of ever-changing needs and circumstances. **(DCE, SE)**
- Materials and methods are sensitive to gender, culture, special needs and disabilities. **(DCE, SE)**
- The ICT infrastructure supports open and flexible learning. **(DCE, IT)**
- Library, guidance and other student support services support open and flexible learning. **(DCE, LIB, GO, SA, IT)**

This analysis provided a framework for the operational and tactical planning. It showed that:

- Official recognition and additional funding is required from Government.
- Policy-making is required by senior management in regard to enrolments, credit, collaboration with other institutions/agencies, budgets, staffing, resources and time release for staff, intellectual property, quality assurance and accountability, plagiarism, copying, cheating, etc.
- The cross-institutional responsibilities require a strong open and flexible learning committee reporting to the Principal and representative of senior management, the teaching departments, support services, and external interests.
- There is need for new specially designated Centre for Open and Flexible Learning within the Division of Distance and Continuing Education mandated, staffed, funded and resourced to:
 - Train and support teaching staff, help them recast their roles and work in teams and ensure quality in development, delivery and learner support.
 - Ensure best practice in student information, pre-enrolment, credit and prior learning recognition, enrolment and orientation.
 - Develop a sound and speedy system for delivering course material, assignments and tutors' assessment and feedback.
 - Build a strong learner support system by training and supporting the full-time, part-time and community tutors and mentors and gaining the support of the library, ICT, guidance, counseling, student affairs and administrative personnel.
 - Establish and maintain an island-wide learner support network.
- There is need for collaboration between this Centre and Computer Services to:
 - Ensure the ICT network had sufficient bandwidth and processing power to handle multiple learner support and management information services.

- Harmonize the instructional design, Web design and programming support to transform instructional content into workable and pedagogically sound applications.
 - Train staff and students in the latest tools and applications.
 - Provide quality service to the developers and deliverers of online and open learning and students, regardless of whether these are in-house or out-sourced.
 - Develop policies for copyright, plagiarism, disclaimers and dispute resolution, and protection against tampering, hacking, piracy, etc.
 - Capture data on learners' use of and satisfaction with educational products and services.
 - Gain the support of other public and private sector ICT providers across the island and region.
- Evaluation is critically important – monitoring the learners' experience, performance and success rates for quality control and to ensure recognition of qualifications regardless of modality.

With the support of the SJPP accountant, the plan will also include costings and evidence of cost and other benefits. Before finalization, the plan will again be the subject of a one-day workshop involving key stakeholders. On completion, it will be submitted to the Government for funding with a view to implementation in the financial year 2003-2004.

PILOT PROJECTS

Four pilot open and flexible learning projects are being undertaken to develop core team members' capacities and determine the actual resource, skills and time-release needs of such work. SJPP further demonstrated its commitment to the initiative by funding the time release, production and travel costs of these four projects.

The one-year timeframe will not permit the development, delivery and testing of entire courses and so the work will focus on developing, adopting or adapting modules (some provided through the Commonwealth of Learning) that present particular challenges or opportunities. All programmes will involve some face-to-face or mediated tutoring/mentoring and practical work, some may require audiovisual as well as print development and all will be formatively and summatively evaluated.

TRAINING

Training is being provided for the developers and print/Web self-instructional training material for other interested staff. CFTC also provides for the two SJPP planning team members to receive further training overseas.

GENDER

The project operates in accord with the Commonwealth Plan of Action on Gender and Development (Commonwealth Secretariat, 2000). The pilot project team comprises

equal numbers of male and female staff, gender issues were addressed at the strategic planning workshop, and all of the courses and courseware will take account of gender mainstreaming.

CONCLUSION

There is always a possibility that planning will be overwhelmed by unanticipated events and/or fail at implementation because of: a lack of commitment, involvement, process understanding or conceptual focus; inadequate analysis, erroneous assumption/presumption: inflexible adherence to a particular theory, philosophy or approach; poorly conceived operational plans; inadequate understanding of the resource requirements and availability; planning not being integrated into the regular management process; failure to monitor progress and developments, and so on.

This SJPP project has revealed the vital importance of the following conditions in planning for the introduction of open and flexible learning at the institutional level:

- Evidence of need, support for such by government, industry and the wider community and ongoing consultation with key stakeholders.
- Commitment, consensus and common understandings on the part of the senior and middle managers.
- Ongoing involvement of the whole staff to ensure understanding and agreement on the nature and processes of the planning process, the changes envisaged, and what is expected of them.
- Development of a strategic plan to define what needs to be done and an organizational plan which details how to do it, the performance indicators and who is accountable for these.
- Determining all of the staff skills, time release, resource and funding requirements.
- Associated staff development and pilot projects to inform the planners, managers and staff about possibilities, needs and constraints.
- Collaboration with ICT, library and other support services within and beyond the institution.
- A final planning document that not only addresses educational and technological issues but spells out the political, cost and commercial benefits of open and flexible learning.

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THE COMMONWEALTH FUND FOR TECHNICAL CO-OPERATION (CFTC)

CFTC operates under the aegis of the Commonwealth Secretariat, drawing upon the Commonwealth's shared legal, administrative and education systems, history and working language to provide technical assistance and support. CFTC funding is through voluntary contributions from member Governments, assistance is demand driven, and programmes are tailored to specific Governmental and regional needs. CFTC channels

more than 60 per cent of its technical assistance to the 32 Commonwealth countries classified as small states. Each year, more than 3,000 people receive training through CFTC programmes and about 300 experts take up long- or short-term assignments.