

DELIVERING TVET AT THE SECONDARY LEVEL: A Practical Approach

Halden A. Morris and Carole M. Powell

Secondary education can be regarded as the watershed of the education continuum, as it is positioned between compulsory primary education and the world of higher education, training, and work. Hence, curricular content at this level should be enriched and should be culturally sensitive towards the holistic and relevant development of learners. The scope to provide a complementary mix between academics and technical and vocational education and training (TVET) in order to respond to global demands is evident, and should be pursued in order to facilitate human capital development (HCD). Challenges envisioned and experienced in implementing such formidable curricula exist, nevertheless with smart engaging approaches it is believed that these can be overcome. This paper presents a practical approach piloted in Jamaica to facilitate the delivery of TVET in an economical manner. The approach emphasized gains in sharing upgraded resources for the delivery of TVET.

Introduction and Background

As the sequel to compulsory primary education, secondary education presents a major watershed in the education continuum. This is particularly so as it prepares the way for entry into higher education and training, the world of work, or both. Secondary education is therefore a crucial arc in the learning curve and should offer an enriched culturally sensitive curriculum for the holistic development of learners. Goldin (2001) has noted that prior to the turn of the 19th century, industrial nations like the US and UK keenly eyed technology and physical capacity as the only sources of economic greatness. However, by the early 20th century, new insights revealed the power of human capital in the enhancement of economic production. Thus, according to Goldin, human capital development (HCD) became important as a modern concept in support of realizing the wealth of nations. Goldin further pointed out that it was the US which led the way in post-elementary or secondary education of the masses in support of HCD, which involves the educating and training of people. To fulfil the new mandate as identified and accepted by the US and other industrial nations, the

Halden A. Morris and Carole M. Powell

curriculum for secondary education became a feature for serious consideration and much debate.

Ravitch (2000) has written that within the US, until the mid-19th century, most of the secondary schools not only offered the classical curriculum of Latin, Greek, and mathematics, but also what was known as “modern subjects” such as history, science, English, and practical subjects such as bookkeeping, surveying, and navigation. At that time, the crux of the debate among education leaders revolved around whether or not curricular provision should educate students for college or for work. Ravitch pointed to teachings of the 19th century English philosopher Herbert Spencer, who was himself a contender in the debate. Spencer posed the signal question as to which knowledge was of most worth. His conclusion was that knowledge which prepares an individual for complete living was to be deemed most valuable. Knowledge for complete living took into account the multifaceted nature of human existence, and hence our need to know, to understand, and to do, so that we would be enabled to subsist, at the very least. This conclusion was one among similar opinions from powerful countries like France, Germany, and Sweden that heralded the addition of manual and vocational training to the secondary education curriculum and placed it on a firm footing. This novel and potent curricular inclusion spread in due course to the rest of the world, including the Caribbean.

A historical review of the Caribbean identifies the genesis of vocational education as far back as the mid-19th century. The early days of colonization saw the establishment of an apprenticeship programme where individuals were taught a craft or trade by someone already engaged in it. Payment for the instruction was in the form of a stipulated number of years of work which was given back to the said establishment or concern. By 1896, the early formalization of vocational education was effected by the establishment of Kingston Technical School in Jamaica. This and other such developments in the region was in response to the new era of self-government and its attendant need for commercial and manual skills to service local enterprise. More recently, in the formulation of its *Draft Plan for Educational Development in Trinidad and Tobago, 1968-1983*, the Government of Trinidad and Tobago stipulated that “the curricula and syllabus used in the educational system at all levels should be brought in line with modern trends and the needs of the country as a whole” (Alleyne, 1995, p. 86). During the implementation period of the plan, the Prime Minister, Hon. Dr. Eric Williams, proposed some guidelines, which were approved by Cabinet and resulted in what was deemed a signal guide for secondary curriculum planning in Trinidad and Tobago. One proposal was “that an integrated

Delivering TVET at the Secondary Level

comprehensive program embracing the traditional academic, pre-technical, commercial, general industrial and limited specialized craft training be adopted as the national model for the 14plus education” (Alleyne, 1995, p. 87).

Thus, in the Caribbean, the formalizing of manual and vocational training, as evidenced by the establishment of technical schools and the inclusion of practical subjects in schools’ curricula, occasioned a complementary partnership between practical and academic subjects. This partnership, experienced worldwide, evolved into the formidable construct referred to as Technical Vocational Education and Training (TVET).

TVET is said to present that side of curriculum that activates the notion of applications learning, whereby the learner is made to consider the relevance of all knowledge gained. By way of the discipline, therefore, the learner becomes poised for meaningful entry into, and existence in, adult life and living. UNESCO (2011) has provided the following definition of TVET:

A comprehensive term referring to those aspects of the educational process involving, in addition to general education:

- the study of technologies and related sciences;
- as well as the acquisition of practical skills, attitudes, understanding, knowledge relating to occupations in various sectors of economic and social life. (slide 4)

UNESCO further stipulated that TVET should be understood as:

- an integral part of general education;
- a means of preparing for occupational fields and for effective participation in the world of work;
- an aspect of lifelong learning and a preparation for responsible citizenship;
- an instrument for promoting environmentally sound sustainable development (Greening TVET International Framework)
- a method of facilitating poverty alleviation. (slide 4)

For Jamaica’s Minister of Education, Hon. Burchell Whiteman, the emphasis was on the ability of TVET to provide the individual with competencies (knowledge, skills, and attitudes) required for on-the-job and tertiary advancement in pursuit of technological careers. He concluded that “TVET is not therefore ‘reclamation’ education for those who fail to achieve academic excellence” (1992, p. 2). The following CARICOM predecessor statement, which was based on a survey done in

Halden A. Morris and Carole M. Powell

1990, saw TVET covering all programmes and schemes that contribute towards the development of knowledge and skills required for work: “It transcends education systems provided by Ministries of Education, and includes many additional non-formal programmes provided by other government Ministries and Departments, by private colleges and by informal in-plant and on-the-job training” (CARICOM, 1990, p. 48).

Based on all that TVET means to these academics and practitioners internationally and regionally, it is clear that the discipline is an all-embracing process employed to prepare the human resource stock in society to enrich the labour force, with the aim of achieving competitive advantage in the global environment.

Morris (1998) offered the following recommendations for further development of TVET at the secondary level:

1. More funds should be allotted to the development of the technical and vocational section of secondary schools. Providing state-of-the-art equipment should be emphasized.
2. The government should provide more secondary places by building more secondary schools in addition to upgrading existing schools. Currently 50 additional schools with a capacity of at least 1,200 students each are needed.
3. Secondary schools across the island should be selected for phased development to deliver more advanced secondary education to a wider cross-section of the population.
4. Technical and vocational education at the secondary level should be promoted nationally. Large widescale advertisements might appeal to youngsters who would not otherwise have selected this field.
5. Bright students should be encouraged to study technical and vocational subjects to the tertiary level.
6. Students should be encouraged to establish junior technical and vocational training organizations. These would facilitate leadership development and social interaction.
7. Technical and vocational teachers should be encouraged and given incentives to join professional organizations in their field.

8. Technical and vocational teachers should be required to work in industries periodically to ensure knowledge of current industrial procedures. (pp. 125-126)

The question is, to what extent have these recommendations been considered in the development of TVET at this level? In considering an answer to Morris's question, it must be noted that to institute viable TVET systems there admittedly are some serious challenges; nevertheless, with smart, engaging approaches these challenges can be overcome.

Financial Challenges

TVET by its very nature, definition, and content has been seen as a difficult option to accommodate within the Caribbean formal school system for many reasons. Primarily, the experiences of participating nations have identified funding as the greatest challenge.

Henderson Eastmond, Executive Director of the TVET Council in Barbados, stated that:

One of the challenges facing Technical and Vocational Education Training (TVET) is the high cost and sustainability of its programming...One of the challenges being faced in the Caribbean is how to increase the involvement of the private sector in the funding of TVET. (High cost of TVET, 2011)

In addition, Eastmond alludes to the maintenance of equipment, the upgrading of facilities, and the professional development of staff as major cost factors. Hutton (2012) reviewed the CARICOM Regional Strategy for TVET, and among the areas of least accomplishment, he highlighted inadequate or obsolete infrastructure and inadequate funding mechanisms for implementing TVET. These and other such observations lead to the conclusion that, for TVET in the Caribbean, lack of financing has been the central factor curtailing its development. It is heartening to note, however, that in the face of these challenges there are valuable lessons emanating from both the international and regional scenes with respect to responding to the challenges of financing TVET. The search continues for key elements to establish and bolster informed TVET systems in an affordable manner.

The Jamaican Ministry of Education began seeking to create and strengthen partnerships with other related public bodies and Ministries within the country, and to engage full participation of the local private sector to ensure the strengthening of the TVET system. This was substantiated by the input for TVET in the 5-year Plan for 1990-1995,

Halden A. Morris and Carole M. Powell

thus committing to the concept of HCD as the primary tool for the achievement of social and economic development. For these reasons, the Planning Institute of Jamaica (PIOJ) (1991) noted that, in conjunction with the Ministry of Education, the Government's policy perspective was to develop a quality TVET system in support of the notion that investment in human capital would produce greater returns in the long run than investment in material resources. There are examples from Europe and Asia and from within the Caribbean which seem to declare that policies of inclusion for TVET, which encourage shared responsibility, show the way forward.

A Pilot Response Towards a Model for Affordable Secondary Level TVET Delivery

TVET practitioners like Hutton (2012), Morris (2011), and Eastmond (High cost of TVET, 2011) are in agreement that the lack of sustainable development of Caribbean TVET systems is due to the paucity of input resources as a result of inadequate funding. Jamaica's response was affected by this factor, and has been dogged by the problem of an overwhelming outflow of unskilled and uncertified graduates from the secondary school system annually. The country thus committed itself to explore avenues that might address the challenge within its boundaries, in the most cost-effective manner. The Ministry of Education marshalled the support of its National Training Agency (NTA) in its quest for enhanced HCD, by engaging its secondary schools as a premier resource. The integration of TVET into curricula was seen as the strategy to be employed in this regard; hence a pilot project was undertaken to identify the most cost-effective way to realize the favoured outcome. The pilot plan was implemented in stages, so that findings would be timely, measurable, and useful.

In view of the problem, the Ministry of Education pondered whether or not the secondary school could be regarded as a part of the engine for economic growth and national development in Jamaica; and, if so, whether it could play a role in the nation's HRD by promoting equitable access to relevant quality TVET. The joint pilot project on rationalizing TVET in secondary schools set out to provide some answers in this regard.

The Pilot Project

The pilot project, entitled *TVET Rationalization in Secondary Schools*, was initiated in 1998. The project title referred to: "the integration of

Delivering TVET at the Secondary Level

TVET in secondary schools' curricula, emphasizing the ensuring of access and equity; the assurance of quality and relevance; while creating greater efficiencies in a comprehensive education framework" (Jamaica. Ministry of Education [MOE], 2010). The basic format employed by pilot implementers was to upgrade all input resources and then share them. Input resources for TVET, such as plant, equipment and tools, furnishing, curricular programmes, programme materials, administration, instruction, and career guidance were thus upgraded and then shared among schools within the pilot domain.

The Process

Launch and leadership. The Ministry of Education, in conjunction with the NTA, engaged the services of two consultants from a local human resources and organization development firm in late 1997, and launched the project in the domain identified. The domain covered two parishes—St. Elizabeth and Westmoreland—which are parishes situated in the south-western and western end of Jamaica, respectively. By January 1998 a project director was engaged to represent the Ministry, and the project team was established, consisting of the two consultants and the project director. The team reported to a management committee co-chaired by the Chief Education Officer and the Executive Director of the NTA. Other members of the committee were the Assistant Chief Education Officer in charge of the Technical and Vocational Education Unit (Tech/Voc Unit) of the Ministry; the Deputy Chief Education Officer; and the Chief Technical Director of the NTA.

Early activities. Beginning with intensive consultation with primary stakeholders, the first segment concentrated on creating awareness of the Ministry's concerns and quest, as well as on fact-finding. Primary stakeholders were principals, teachers/instructors, teachers' union representatives, parents, board chairmen, community employers, and, most importantly, students. Consultations were effected by way of (a) organized team visits and revisits to all 17 secondary schools within both parishes; (b) community tours executed by a demographic specialist; and (c) specially organized team meetings with board chairmen and Parent Teacher Association (PTA) representatives of all 17 schools. Special meetings with officers of regional directorates of the Ministry of Education also added to the rich backdrop provided, and helped to inform further planning and the pilot process. The TVET rationalization plan and principles were the primary output from the wave of early consultations, data collection, team meetings, and management meetings. It was said that the participatory approach yielded

Halden A. Morris and Carole M. Powell

“valuable information and considerable goodwill” (Tomlinson, Powell, & Neil, 2005, p. 4).

The TVET rationalization plan and principles. In deriving the plan, foremost in the minds of team members was the Ministry’s mandate to ensure access, equity, relevance, and quality in the most cost-effective manner. This mandate informed the following far-reaching recommendations:

1. Sharing of scarce resources
2. Formation of school clusters geographically
3. Derivation of an optimal mix of TVET programmes
4. Physical upgrading of existing school plants to accommodate 68 work labs or centres of excellence
5. Installation of modern equipment, tools, and furnishing
6. Instituting strong career guidance programmes
7. Upgrading/sensitization of school and Ministry staff, and the community in general.

Based on the recognition of a dearth of funds in the system, the notion of sharing resources proved to be the linchpin of the TVET rationalization endeavour. Sharing resources was facilitated by an operating model based on the cluster concept, whereby all schools in the pilot domain were grouped into five geographic clusters of three or four, and the resources allocated were shared intra-cluster.

Optimal mix of TVET programmes. An array of TVET programmes was identified by stakeholders and advised by the National Council on TVET (NCTVET) as being relevant to the communities’ and the country’s needs. The array included:

1. Agriculture
2. Auto Mechanics (Secretarial)
3. Building Technology
4. Business Education
5. Clothing & Textiles
6. Cosmetology
7. Electrical & Electronics

8. Food & Nutrition
9. Home Management
10. Information Technology
11. Machine Shop and Welding
12. Plumbing & Pipe Fitting
13. Visual Arts

These programmes were deemed practicable for delivery in schools and were to be offered in every cluster to ensure equity. The list of programmes could not be exhaustive for reasons of practicability and funding, but it provided the best possible base for introducing work-based education in a variety of TVET skills, and was therefore termed the “optimal mix.” Within each cluster, schools were assigned to host specific programmes based on the concept of “lower hanging fruit.” The concept led to the ascertainment of projected least financial cost and effort for programme development in different schools, based on already existing plant and equipment. For example, some schools were already hosting comparatively successful programmes because of infrastructure and set-up; these labs were seen as lower hanging fruits and were upgraded to suit the new requirements and to accommodate the expanded numbers. If a programme was not earmarked for upgrading and was present in a school, it was phased out. However, fairly early during the introductory phase of the pilot, three of the programmes in the optimal mix, Information Technology, Food & Nutrition, and Home Management, were deemed to be of such urgent value to all schools that they were mandated as imperatives. As a result, these were not phased out of any school. Instead, all schools were encouraged to ensure their sustainable development on each and every plant.

Staff development. The staff development exercises were in-service and covered the upgrading of instructors/teachers, guidance counsellors, work-experience coordinators, principals and vice principals, education officers, and directors of the Ministry of Education and the NTA. The Tech/Voc Unit was relied on to recommend and follow through with the upgrading of existing TVET instructors/teacher, in the skills and in pedagogy. Professional Guidance Information Services (PROGIS), now Career Development Services (CDS), of the NTA guided the upgrading process in the area of Career Development and Counselling. This body prepared guidance counsellors and work experience coordinators in career awareness, planning, and the

Halden A. Morris and Carole M. Powell

development of career programmes for their respective schools. The plan also indicated the need to have targeted upgrading and awareness sessions aimed at principals and other school administrators, education officers, and directors and managers of both the Ministry of Education and the NTA. The core content of upgrading sessions for this group included:

1. Change management
2. SWOT analyses
3. Creating synergies
4. Force field analyses

Study tours to a rationalized TVET system in Oklahoma, USA served to enrich the awareness process and ratify the pilot endeavour.

The integration. The integration of TVET into the curriculum of pilot schools was approached by way of process facilitation. The main elements in this regard were:

1. TVET rationalization plan and principles
2. Human and physical resources
3. Curriculum based on internal programmes and external examinations
4. Intra-cluster timetables
5. Shuttle schedules

The integration relied heavily on the phasing of activities to give latitude for timely injections from the funding sources, as well as to facilitate replications in an iterative mode. Except for initializing events and activities, replication of all events and activities was guided, and thus tempered, by lessons learned by all relevant stakeholders from predecessor phases, during the iterative process. Quality was ascertained by way of the physical upgrade of work labs and the acquisition of state-of-the-art equipment and tools; it was also facilitated by the upgrading of relevant staff. Access to the quality resources was facilitated by the input of a dedicated shuttle system, which was guided by integrated cluster timetables and shuttle schedules. The cluster concept facilitated sharing of quality resources equitably, and relevance was ensured by the industry-informed optimal mix of TVET programmes. A crucial aspect of the integration was establishing complementarities between TVET and the academics. This was deemed an imperative for applications learning and, according to pilot implementers, was seen as the heart of the TVET

integration process. Subject packaging around TVET programmes was pivotal to the establishment of complementarities during operationalization.

Implementation

Implementation of plan and principles, the second segment of the pilot, was effected in three phases, mainly because it was not possible to have items in place all at once throughout the domain.

Phases

1. Pilot-in-pilot

Starting September 1998, this initial phase of implementation was effected in two stages. The first stage saw two out of the five clusters (one in each parish) addressed and operationalized at one programme per school. The second stage saw the addressing and operationalization of the remaining three clusters at one programme per school.

2. Pilot roll-out

This phase addressed operationalization within all five clusters and was concerned with the development and operationalization of all remaining TVET programmes as reckoned by the optimal mix.

3. Replication I: Corporate Area

This phase was introduced based on a strong recommendation from officialdom to intensify public awareness of the TVET rationalization concept throughout the wider Jamaican community. In addition, it served to create an opportunity for the examination of any differences in accommodation and management of the concept in urban Jamaica.

Challenges

Implementers claim that challenges presented themselves as the pilot process flowed. Chief among the challenges emerged as a result of gaps in the support system rather than with the operating mode per se. According to Powell (2013), all concerned in the implementation referred especially to:

- a. **The lengthy time it took for on-the-ground action to start and to be completed.** This gap was created mainly due to bureaucratic delays. These were encountered especially because there was a lengthy chain of action in the upgrading of physical plant, as well as in the procurement of tools, equipment, and furnishing. The chain of

Halden A. Morris and Carole M. Powell

action for any one of these activities lasted many months, even up to two years in the case of physical upgrading works.

Human frailties also contributed to time lags. This was seen in the attitudes of some primary stakeholders on the ground, who only budged after several bouts of moral suasion by project team.

- b. **The sometimes awkward decision making in allowing students access.** There was sometimes a difficulty for school staff in acquiescing to students' choices of programmes, reasoned hosting of programmes per school, and timetable integrating exercises.

Dedicated transportation also affected student access. In this regard, the greatest setback was experienced during down times of designated buses, "there being no affordable provision for redundancy in the system" (p. 288).

- c. **Barriers to effective instruction.** These were experienced due largely to the unavailability of knowledgeable instructors. In cases where the instructor resigned, it often took in excess of a year to receive an adequate replacement. In cases where the instructor took leave, there was usually no replacement. In both cases, lab assistants were relied upon to keep the students occupied.

Inadequate monitoring, due to a deficiency in the number of technical officers in the Ministry, also affected instruction. This was a sore point, as many instructors required guidance in curriculum choice, management, and methodology.

Successes

In spite of the challenges, however, records show that successful outcomes were seen in terms of physical plant and equipment upgrade, student enrolment and performances, staff development, and policy development.

Throughout the period 2001-2007, as shown in Table 1, access was increasingly extended to more students from all 17 schools (five clusters) in the domain, with the rate of student increase averaging 17.7%. The annual increase in access, though modest, was encouraged by the upgrading of more TVET work labs annually and the inclusion of more TVET programmes. By 2007, over 3,000 students had gained access to an optimal mix of 10 TVET programmes offered from 51 upgraded and highly equipped work laboratories. The figures also show that in respect of external examinations—Caribbean Secondary Education Certificate

Delivering TVET at the Secondary Level

(CSEC) Technical Proficiency and National Vocational Qualifications (NVQs)—the entry numbers increased by 52% over the period under scrutiny. Though students' performance showed an inverse relationship between number of entries and percentage passes, the passes never fell below 60%.

Table 1. Comparative Exam Data for TVET: 2001-2007

Year	Entries	Passes	%
2001	609	453	74.4
2002	895	551	61.6
2004	585	364	62.2
2005	537	406	75.6
2006	661	519	78.5
2007	926	552	59.6

Each programme of the optimal mix was externally examined, and implementers claimed that some landmark successes had been masked by the modest figures. They referred to three of these successes specifically. Two materialized when, in 2006, two students from the domain but from different home-schools commuted to schools within respective clusters in order to access TVET studies in Agriculture and Business Education. They were not only successful in the NVQ external examinations, but topped the regional cohort for that year. The third referred to a group of Grade 10 students who likewise commuted, and after the first year of the two-year TVET programme in Auto Mechanics sat the NVQ-J and successfully received certification at Level 1. Another point emphasized was that, based on a limited Tracer Study done in 2003, implementers were able to conclude that directly out of pilot domain schools, at least 17% of leavers got employment in positions for which they were certified.

Much of the successes claimed were due to elements of staff development occasioned during implementation of the pilot plan. By way of in-service training, which included retreats, seminars, meetings, workshops, and study tours to a rationalized secondary school system for

Halden A. Morris and Carole M. Powell

TVET in Oklahoma, USA, school staff were schooled in higher-order TVET instruction methods, and sensitized to the benefits of establishing the desired complementarities en route to a transformed education system. It was always hoped that output from the transformed system would support the national thrust at HCD, towards economic development.

Piloting the rationalization of TVET in secondary schools led to the development of a policy for TVET in Jamaica. With a mandate for TVET integration in schools' curricula, pilot project staff initiated policy development sessions throughout the domain. These sessions were addressed by co-chairs of the management committee and involved the contribution of principals and vice principals of the pilot schools. As the processes flowed, it became obvious to the Ministry that the lack of TVET policy stymied progress in this regard. Hence pilot staff were directed to formalize their work on policy development and prepare the first concept paper on a policy for TVET in schools. This was later refined and embedded into the policy for compulsory education. The policy statement read:

The Government of Jamaica through the Ministry of Education must make provision for all students at the upper secondary level to pursue at least one TVET offering leading to approved work-based certification nationally, and globally. (p 15)

Post-Pilot Status of TVET in the Domain

The status of TVET in the domain was analysed and measured during the immediate post-pilot period by way of Portfolio Analysis, as popularized by Heitmann (1996). Firstly, the pilot domain was scrutinized to ascertain whether or not it could be likened to a subsystem for TVET, by identifying with Heitmann's nine characterizing elements:

1. Learning sites
2. Fields of study or training
3. Shares of "general" and "vocational" elements within curricula
4. Degree of modularization within curricula
5. Level of education
6. Duration of study or training
7. Entry requirements
8. Certificates or qualifications obtained

9. Entitlement/access to further education or training

These elements were all addressed in the pilot, thus the pilot domain, inclusive of rural and urban sections, was viewed as a TVET subsystem to be scrutinized, operating under the category Technical Education. The analysis then proceeded and indicated contributory factors affecting the subsystem's internal efficiency, which was measured by its condition; and the subsystem's external productivity, which was measured by labour market orientation.

Indicators examined for internal efficiency were: architecture, administration and organization, quality and condition of TVET in physical and material resources, training of teachers and instructors, and costs of operation. On the other hand, those examined for external productivity were: government TVET policy and its objectives, qualification needs and manpower distribution, attitude of firms and organizations towards TVET, and employment of graduates and school leavers in posts that correspond to their training.

Subsequent to a series of examinations, weighting and scoring of all indicators and their elements, the overall rating of internal efficiency, based on the final score of 86%, was "High"; and that of external productivity, based on a final score of 39%, was "Low" (Powell, 2013). The outcome pointed to the areas for development and hence should advise policy and indicate areas for financing without redundant expenditure. According to Powell, the motive behind executing the portfolio analysis was to discover areas that needed to be addressed, invested in, and developed towards the sound economic infrastructure that TVET can promote.

Main Post-Pilot Activities

1. **Mainstreaming plan.** The plan, titled *Roadmap for Mainstreaming TVET in Jamaican Public High Schools*, was commissioned by the NTA and executed by the pilot team, headed by the FACTS Limited consultants. It was not only informed by documented pilot experiences, but also by a series of consultations with key organizations. The organizations targeted were The University of the West Indies (UWI) and the University of Technology (UTech); the Ministry of Labour; head of the labour unions' alliance; teachers' union representatives; representatives from the high school principals' association; representatives from the Private Sector Organization of Jamaica; tourism sector representatives; and representatives of the Jamaica Employers' Federation.

Halden A. Morris and Carole M. Powell

The first activity to mark implementation of the plan was a virtual clustering of secondary schools island-wide. The outgoing pilot staff, along with staff from the Ministry and the NTA, travelled the entire island, in order to execute this aspect of the plan

2. ***The Career Advancement Programme (CAP)***. This was, in effect, an elaboration of the TVET rationalization in schools programme. It involved the introduction of an additional two years to the school life of students in general—the senior school. Here, senior students (post-Grade 11) were to continue general academics and pursue TVET at Levels 2/3 according to the learner's level of attainment.

Conclusion

Regional and international trends, projects, and experiences point to the eminence of TVET. This seems to be so because the discipline, by its very nature and potential for output in terms of HCD, supports a path towards the economic development of nations. Its integration into formal secondary education is therefore prudent, as this is the route through which the human resource stock of contemporary society must travel, before arriving at the productive platform. In order to satisfy the demands for quality resource inputs for TVET, the reality of increased financial injection into formal education systems must be faced. Countries in the region must thus pay keen attention to the strategies employed by international partners like Australia, Europe, and Eastern Asia, and to the approach taken by Jamaica, as described above. They must pay particular attention to policies of inclusion and resource sharing, as these are formidable trends towards affordability. Lessons learned from these sources should be reflected upon and put into practice where feasible.

One critical factor that has been known to present hindrances to expeditious TVET delivery is popular attitudes towards the discipline. For example, in the case of Uganda, Ghobadi (2010) explained that there were still people who believed that the aim of TVET was to provide an outlet for school dropouts. The UNESCO (1983) position was that the situation of inadequate preparation of school-leavers seemed to, among other things, be exacerbated by a perception that TVET is a substandard alternative rather than a complement to the academics in general education. According to UNESCO, that perception of TVET led to, among other things, the delivery of TVET programmes from ill-equipped workshops, and a persistent scarcity of qualified persons to teach in the field. The Jamaican pilot implementers reported that piloting the TVET

Delivering TVET at the Secondary Level

rationalization in schools intervention was a huge challenge, mainly because of attitudes towards TVET. One of the implementers explained this challenge and the effects thus, especially with reference to the experience in Corporate Area Jamaica:

This low perception operates at all levels of the society. We have seen traditional high schools resisting the advent of these programmes in their schools ... even some Principals would not accept the concept in Kingston so they opted out, and some Boards opted out of participation which was very heart-breaking for us... (Int. 1. L 19-23, p. 4). (Powell, 2013)

Much was therefore dependent on the willingness of players to accommodate the changes and adjustments necessary for implementation. Thus, much more time than initially anticipated was spent exercising moral suasion. This was not only necessary in respect of school staff and community, but also in respect of Ministry staff from whom much of the mobilizing support was expected. These and other experiences have prompted the advice that it is urgent for nations to devise public education strategies to facilitate the development of policies that will, in the interest of time, expeditiously counter the lingering public bias against TVET. This is to be borne in mind as we reflect on the old adage: *Time is money*.

References

- Alleyne, M. H. M. (1995). *Nationhood from the schoolbag: A historical analysis of the development of secondary education in Trinidad and Tobago* (INTERAMER 63. Educational Series). Washington, DC: Organization of American States.
- CARICOM Secretariat. (1990). *Regional strategy: Technical and vocational education and training*. Georgetown, Guyana: Author.
- Ghobadi, D. (2010). Information on TVET in Uganda. In *TVETipedia*. Retrieved from [http://www.unevoc.unesco.org/tvetipedia.0.html?&tx_drwiki_pi1\[keyword\]=Uganda](http://www.unevoc.unesco.org/tvetipedia.0.html?&tx_drwiki_pi1[keyword]=Uganda)
- Goldin, C. (2001). The human-capital century and American leadership: Virtues of the past. *Journal of Economic History*, 61(2), 263–292.
- Heitmann, W. (1996, December). *Development of a portfolio concept in strategic technical education and vocational training planning*. Paper presented at Cincinnati Convention Centre.
- High cost of TVET programming a challenge. (2011, September 28). *The Barbados Advocate*. Retrieved from <http://www.barbadosadvocate.com/newsitem.asp?more=local&NewsID=20044>

Halden A. Morris and Carole M. Powell

- Hutton, D. (2012). *TVET in the Caribbean: Pitfalls, successes and challenges: Reviewing the CARICOM Regional Strategy for TVET* [PowerPoint slides]. Retrieved from <http://www.soeconferences.com/sites/default/files/PB5%20TVET%20in%20the%20Caribbean-Review%20of%20the%20Regional%20Strategy%20-%20Hutton.pdf>
- Jamaica. Ministry of Education. (2010). *TVET rationalization report*. Kingston, Jamaica: Author.
- Jamaica. Ministry of Education & Youth. (2007). *Towards a policy for TVET in Jamaican high schools: Concept paper*. Kingston, Jamaica: Author.
- Morris, H. A. (1998). Technical and vocational education at the secondary level. *Institute of Education Annual, Vol. 1*, 110-127.
- Planning Institute of Jamaica. (1991). *Annual report 1991*. Kingston, Jamaica: Author.
- Powell, C. (2013). *Towards a model for engaging the Jamaican secondary schools in efficient delivery of TVET*. Unpublished manuscript, The University of the West Indies, Mona, Jamaica.
- Ravitch, D. (2000). *Left back: A century of failed school reforms*. New York, NY: Simon & Schuster.
- Tomlinson, W., Powell, C., & Neil, R. (2005). *TVET rationalization in schools: Pilot report 1998-2005*. Kingston, Jamaica: Ministry of Education Youth and Culture/HEART Trust/NTA.
- UNESCO. (1983). Secondary education and the labour market. In UNESCO, *Jamaica: Development of secondary education* (pp. 13-17). Paris: Author.
- UNESCO. (2011, December 30). *Introducing UNESCO's Technical Vocational Education and Training (TVET) definition and strategy* (PowerPoint slides). Retrieved from http://www.uis.unesco.org/StatisticalCapacityBuilding/Workshop%20Documents/Education%20workshop%20dox/2011_Vina%20de%201%20Mar/English%20documents/10_TVET_UNESCO_OREALC_EN.pdf
- Whiteman, B. (1992). *Development in Jamaica's TVET system*. Kingston, Jamaica: Ministry of Education and Culture.