



## CHAPTER 12

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# THE NEED FOR STAFF TRAINING AND RETRAINING

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### INTRODUCTION: THE CONTEXT

Regardless of the size or economic state of a nation, there is a resurgence of demand for technical and vocational education training (TVET) services at the community and district levels, as well as at the provincial and ministry or federal levels. When these demands are found to be factual and a positive response is required, the decision-makers are normally faced with three major issues:

1. *Resources*: The availability of resources to meet the ever-increasing TVET need always appears inadequate.
2. *Instructional, ancillary and administrative staff*: The individuals responsible for producing and delivering the TVET services need to be initially trained or, at the very least, continually re-trained to meet changing global standards.
3. *Delivery methods*: A decision must be made on how to implement TVET services delivery method that is more effective (i.e., meets the needs of the clientele) and efficient (i.e., attains TVET objectives at the least possible cost).

In order to respond to these issues, individuals involved in TVET have come to realise that open distance learning (ODL) and the components inherent in this delivery method are proving to be highly adaptable for staff training and re-training requirements. Furthermore, these TVET professionals are currently adapting ODL to produce cost-effective outcomes associated with the development and implementation of the following:

- An efficient demand-driven TVET sector model involving a cost-effective use of ODL
- A needs analysis/identification methodology incorporating a labour-market information system (LMIS) to clearly define stakeholder requirements (employers as well as learners)
- Regional, national and local programme and course curriculum
- Skills standards, testing and certification (SSTC), prior learning assessment (PLA) mechanisms and learner knowledge and skill mobility enhancements (horizontally

across occupational categories as well as vertically through higher education and training levels)

- Effective TVET/ODL institute administrative systems, including an educational management information system (EMIS)
- Instructional design models (programme/course planning, instructional techniques and evaluation) and programme/course delivery methods involving formal (institute-based), non-formal (employer/NGO-based) and informal (family/mentor-based) training structures, including equitable opportunities related to gender, ethnic and other disadvantaged groups
- Programme and institutional evaluation and quality-control techniques as well as related accreditation activities
- A variety of research activities covering the above components, as well as foreseeable interventions having a potential effect on the TVET sector and on the use of ODL

Thus, not all TVET needs come from the community level. As noted above, TVET staff must also be trained to cope with institutional and sector-level needs. Unfortunately, not only do training/re-training requirements cover a wide range of knowledge and skills, but the individuals who can perform these tasks need continual upgrading. However, as with any organisational structure, these individuals have limited time, are beset with their day-to-day job requirements and the costs of bringing individuals from throughout a country or district for training becomes less and less feasible. An answer to this challenge is ODL, which is becoming both a feasible and a practical training delivery method.

## **A TRAINING IMPERATIVE STRUCTURE**

A “training imperative structure” has been formulated to help individuals think about how they want to rationalise their training decisions and how those decisions will best respond to expressed TVET needs. In reality, each nation must have a multitraining response mechanism at one of three TVET levels: sectoral, institutional and local. All three levels must be addressed by government policy-makers wishing to improve sector TVET services in the short- (less than four years), intermediate- (four to five years) and long-term (more than five years). These services could include quality assurance, increased access and more relevant and demand-driven programmes and courses, all delivered through the implementation of ODL (Lindell, 2001).

### ***Sectoral level training needs***

TVET sectoral improvements normally involve the development and implementation of one or more of the following:

- A demand-driven TVET system (replacing a traditional supply-driven system)
- An LMIS and/or an EMIS
- An SSTC structure, a PLA model and a programme/institutional accreditation mechanism
- An expanded TVET outreach system involving the implementation of innovative and culturally acceptable training delivery methods into rural areas for women and other disadvantaged groups and/or into the non-formal and informal training sub-sectors

It has become clear that these worthy endeavours continue to have both development, implementation and sustainability problems. Compounding the sustainability issue is a noticeable change in the broadening of TVET project objectives, activities and impact expectations. This has led to increased implementation complexities as policy-makers realise that a greater shift to system concerns is required (e.g., strengthening organisational structures, investing in instructional development, enhancing teacher training and fostering institutional development). However, it is not enough to simply pour external human and capital resources into these projects without considering the types and form of country-based human resource development and training interventions that must occur.

From the perspective of ODL, the training required at the sectoral level must respond to a number of the following issues:

- The magnitude of differences from existing practices and beliefs (e.g., moving from a supply to a demand-driven TVET system)
- The scope and level of change implementation difficulty (e.g., a specific activity, an organisational change or a sector-based restructuring)
- The kinds and number of objectives to be achieved, along with their implementation timelines (e.g., size and type of change interventions)
- The amount of uncertainty involved in applying implementation activities at the local, provincial and national levels
- A need for inclusion of more sophisticated ministry and institutional management methods

Immediate training needs should be satisfied at the sectoral level, especially for those countrywide TVET interventions that will, in turn, drive the further introduction of institutional and staff operational interventions. In the end, knowledgeable and well-trained individuals must be in place, for “training by itself will not be effective, unless the conditions for the deployment of learned skills are favourable” and “the number one problem of training...the mismatch between training and jobs” is rectified (de Moura Castro, 2000).

## **INSTITUTIONAL LEVEL TRAINING NEEDS**

Inasmuch as sectoral TVET restructuring initiatives concentrate on changing the focus of the system, thus demanding a certain type of training needs requirements, the institutional level presents its own ODL training requirements and specifications. These training activities concentrate on organisational restructuring and related interventions that will help link a TVET institution operating within a community, or a number of TVET institutions within a state, province or region, to government and community stakeholder output expectations. In this manner, the institutions, as well as the sector, will become more responsive (demand-driven) to stakeholder requirements and TVET delivery expectations — with the expectation of raising institutional efficiencies surrounding the use of its human and capital resources. From the perspective of TVET delivery of services, it is at this operational and organisational level where the system must expect ODL innovations to take place. It is one thing to have a number of sector level studies commissioned that clearly demonstrate the need for a TVET/ODL implementation schedule; it is quite another to have the trained personnel and resources to accomplish this feat at the local level.

### **Jordan: a TVET sector restructuring project**

A review of Jordan's supply-driven TVET sector led the government to request assistance to undertake a strategic restructuring that would meet the needs of three key stakeholder groups: government, industry and labour. Between 1994 and 1999, the Canadian International Development Agency (CIDA) funded a project that generated a TVET strategic plan involving the private and public sectors. It was fully adopted by the Government of Jordan.

Additionally, there were a number of institutional studies leading to organisational restructuring of the TVET institutional management and information system involving three key TVET suppliers: Ministry of Education's secondary schools, Ministry of Labour's vocational training centres and Al-Balqua' Applied University (manager of Jordan's community college system). Institutional capacity-building at the country's training and education co-ordinating agency — the National Center for Human Resource Development (NCHRD) — was also necessary. Furthermore, the project facilitated an initial shift in programme and curriculum development using a competency-based education/DACUM (developing a

curriculum) methodology. This forced an increased recognition of the importance of linkages between TVET institutions and employers. The project also provided assistance in the development of a national Instructional Resource and Curriculum Development Center (IRCDC).

Between 2001 and 2004 two new projects will build on the outputs of the strategic plan to:

- Support the formulation of national policy directions which focus on a realignment of Jordan's TVET system with the demands of a modern economy and to further strengthen the capacity of respective TVET providers to conform to this realignment at the sectoral, institutional, management/instructional and programme levels.
- Focus on building a capacity within NCHRD in the fields of occupational classification, LMIS and vocational guidance and counselling. Outputs from this initiative will be fundamental to the formulation of TVET policy and programme reform by TVET providers.

As an example, local TVET institutions may be designated to develop education and training partnerships with local stakeholders, including private and public sector employers, NGOs and community organisations. These ministry directives to TVET institutions are being woven into their mandate and are now becoming commonplace. Based on a study of public/private training partnerships in 14 countries, it was concluded "...that many countries are developing new types of partnerships because they are seen as strategic in the sense that they can have a significant impact on the development of skilled manpower and on social and economic development" (Coursey, 2000). It is through these partnerships that ODL is introduced as a cost-effective training/re-training system.

However, the desire to have TVET providers (training centres, secondary schools, community colleges, institutes of technology, etc.) successfully implement stakeholder-driven changes is predicated on their ability to effectively manage the institution itself. This outcome also assumes that the managers of the facility have the knowledge, skills and experience to, among other management activities:

- Understand, interpret and implement workforce data and information supplied by an LMIS
- Form active stakeholder programme advisory committees (PACs) composed of employers, community and union representatives, and other interested parties
- Use the LMIS and PAC input to develop new programmes and courses and to update and upgrade existing programmes and courses
- Implement innovative outreach ODL delivery modes and restructure course curriculum relative to the needs of the learners involved in ODL
- Reconfigure the use of instructional facilities, equipment and supplies, as well as human resources (administration, instructors and staff) to maximise the number of learners served
- Develop and implement quality-control mechanisms to evaluate the cost-effective use of capital resources, instructor behaviour, learner employment/self-employment outcomes after graduation and stakeholder satisfaction with the institution, and its supply of TVET services
- Develop co-operative education, work experience and other student internship opportunities using PAC and other stakeholder resources in the local area
- Organise sustainable and revenue-generating production units within the TVET facility and grounds to help learners reinforce their classroom and laboratory knowledge/skill base prior to entering the workforce or self-employment (Hoerner and Wehrley, 1995)

All of the above functions require extensive training of institution administrators, including principals, vice-principals, department heads and head lecturers. It is not enough to develop a system-wide policy that recognises the need for excellence at the institutional level. The ministry involved must be prepared to finance ongoing and continual training for institutional administrators to achieve the desired TVET sector outputs (Gasskov, 2000). Inherent in the requisite managerial functions is the expectation by the external stakeholders, the instructors and the learners that the institution has well-trained and knowledgeable innovative administrators.

The outcome of inadequate training at the institutional level in a number of developing nations has led to a concurrent centralisation of decision-making at country's provincial/state level, or even at the central government level (Lamoureux, 2000). In fact, local decision-making about programme and course development, facilities renovation, equipment purchase, maintenance, instructor hiring and training, adoption of innovative training and outreach delivery and ODL methods is rarely found at the local or institution level. If the administrators are poorly trained one could expect little more. Yet, the understanding and adoption of true TVET innovation must occur at the local level for it to be relevant to the learner.

### *Local level training needs*

For the most part, this training paradigm level refers to TVET instructor training and re-training needs. However, other TVET-related professional and semi-professional staff

must also be involved in the training paradigm: instructional assistants for lab and workstation remedial instruction and equipment maintenance, work placement, student advisors and counsellors, librarians and other ancillary personnel that contribute to a TVET learning structure and delivery system, including outreach/ODL activities.

A number of studies on the topic of improving TVET invariably focus on some form of a strategic matrix surrounding the need to “improve the parity of esteem between

### **Guyana: teacher training through ODL**

This CIDA/Ministry of Education project has a four-year implementation timeline (1999-2003) and is, for the most part, completely concerned with using ODL techniques to:

- Strengthen major stakeholder capacity by establishing and strengthening ODL systems delivery mechanisms and institutions in Guyana (i.e., Cyril Potter College of Education, Guyana In-Service Distance Education, Institute for Distance and Continuing Education, National Center for Educational Resource Development (NCERD) and learning resource centres in a number of the country’s 10 regions)
- Establish an EMIS system that is compatible for all major stakeholders involved in ODL
- Develop an ODL educational management programme by revising and adding ODL modules from a Commonwealth Secretariat educational management training manual and by developing ODL “train-the-tutor/mentor” workshops in conjunction with the NCERD
- Support the continued development of ODL materials

and implementation of “pre-foundation” and “foundation” programmes for teacher-trainees in selected outlying regions, plus continuing the revision of materials for the ODL certificate programme for untrained teachers

What makes this project so interesting and important is its purpose and implementation methodology. The purpose is to strengthen both the basic teacher-training structure and the educational management training structure in Guyana. It is also understood that, for the most part, only an ODL delivery mechanism will be acceptable by stakeholders, be cost-effective and, in the end, allow for component sustainability after the project completion date. That is, it is simply impossible, due to financial and geographic constraints, to bring teachers and school administrators to Guyana’s capital city of Georgetown for full-time studies. Thus, the project uses an ODL implementation methodology to train Guyanese professionals to, in turn, develop and adopt a continuing ODL delivery mechanism as an acceptable method to acquire teacher and administrator knowledge and skills.

vocational and academic education” (Young, 2000). Within this matrix concept, there are normally four key strategies:

- Improving links with higher education
- Improving links with employers
- Improving TVET curriculum
- Raising the status and qualifications of vocational teachers and trainers

The demands on TVET teacher competence, professionalism, attitude, values and work ethics within the context of new and emerging technologies in their countries, within the region and through marketplace globalisation, have become enormous. In both developed and developing nations, quantitative expansion of TVET has put significant pressure on instructor recruitment and quality. Furthermore, the role of TVET instructors is undergoing significant, if not radical, change. They are no longer just dispensers of knowledge, skills and experience (all of which can become quickly outdated). TVET instructors are also expected to:

- Attain expertise in course, programme and curriculum development and become student career advisors while developing and maintaining linkages with local employers for student work placements or internships
- Become human and capital resource managers
- Acquire computer hardware, software and Internet skills
- Be able to integrate innovative TVET techniques while conducting their instructional duties

ODL has given new energy and has become a required delivery mode to meet many of the critical needs of TVET teacher education and training. As noted by Basu (1999) and Petty (1999), the objectives of ODL in these circumstances should include:

- Updating and upgrading a large number of TVET instructors, their lab technicians and other key professional/paraprofessional and staff personnel responsible for TVET institutional management and quality improvement
- Having convenient and continuing access to initial and advanced skills training that has immediate relevance, is cost-effective and that reflects major concerns of the country, province/state and local stakeholders
- Contributing towards developing and sustaining a cost-effective ODL resource and delivery centre
- Promoting innovations, research and development for improvement of quality and relevance in TVET, including ODL
- Establishing a network of similar organisations within the region to promote efficient production and delivery of ODL, along with a concurrent reduction in redundant activities

Improving TVET is intimately related to raising the quality of vocational instructors. Although various human resource development reform patterns are emerging, reflecting differing national improvement strategies, a much greater emphasis is still being placed on improving the quality of TVET instructors in the formal sector than trainers responsible for workplace training in the non-formal sector. Still less is applied to the train-the-trainer requirements involved in family, village micro-enterprises and small and medium enterprises (SMEs). This strategy is erroneous and counterproductive to a country’s wealth generation and poverty alleviation objectives, especially in the rural communities.

## **Caribbean Technical Teacher Training Programme**

The Commonwealth of Learning (COL) has been developing a core curriculum to provide TVET teacher and administrator training by ODL in countries where an expanding TVET system has resulted in acquiring technically competent staff who lack teaching skills. Programme modules could also be developed or modified for use by enterprises that wish to use existing staff as trainers. The documentation was produced with TVET representation from 14 countries and substantive input from eight Caribbean technical colleges and administrative bodies, in collaboration with CARICOM. The programme provides distance education learning activities for TVET instructors and industrial trainers and addresses the core pedagogical needs of the teachers in the field. The curriculum modules are divided into three conceptual categories:

### **Section A: Pedagogical**

1. Safety
2. Educational Theory and Practice
3. Instructional Techniques
4. Education Technology (renamed)
5. Learning Resources

### **Section B: TVET**

1. Language and Communication
2. Administration and Management of TVET
3. Workshop Organisation and Management
4. Applied Computer Studies
5. Entrepreneurship

### **Section C: Teaching**

1. Practical Teaching
2. Action Oriented Research (new module)
3. Learning Materials Review

The Technical University of Jamaica (UTech) agreed to begin offering the programme in September 2000. UTech is also responsible for quality assurance and will establish the general management procedures for the implementation of the programme in the various countries. The procedures will form the basis for a franchising co-operation between UTech and institutions in CARICOM countries. Those countries wishing to start teaching the programme would provide UTech with information about tutors and co-ordinators. COL/UTech will develop a standardised form to collect these data and the region will adopt common standards and teach a common curriculum. The programme and its implementation will be overseen and monitored by COL and UTech, who will issue a joint award. The UTech franchise will offer programme students the ability to transfer and to articulate into other award programmes. Awards will also be jointly offered by institutions nominated by the Ministries of Education in the individual countries. UTech involvement provides immediate portability of the qualification throughout the Caribbean. Programme materials are designed for open and flexible delivery with individual countries determining the most appropriate delivery methodology to suit their particular context and agreeing to provide COL with information about the provision of TVET in their countries. COL will post this information on its TVET Web page to become the prime source of information about programme developments. Furthermore, COL will also post on its Web site information about the curriculum as it is modified.

These smaller organisations have become recognised for their enormous contribution to a nation's GDP and employment opportunities. They, along with larger employers who have training departments, must be recognised for their contribution to a country's human resource knowledge and skill base (Herschbach, 2000). Thus, a more balanced allocation of instructor training (formal sector), training-of-trainers (non-formal sector) and on-the-job mentors (informal sector) much be achieved (Nonis, 1998).

## **OBSERVATIONS**

The need for training in order to develop innovative TVET activities appears to be self-evident. What is not necessarily self-evident is how to balance unlimited training and staff re-training demands with limited resources. As TVET interventions become more complex and the requirement for higher-quality human and capital resources proportionally increases, one should aim at rationally preparing the system, its institutional structure and its professionals to efficiently develop and implement macro innovations on behalf of the greatest number of stakeholders. Secondly, as the system becomes more relevant, cost-effective and, for TVET, more demand-driven, efforts must be applied (sometimes concurrently) to local institutions and their administrative personnel in order to make the innovations relevant to local stakeholders. Finally, the individuals who must truly operationalise TVET innovations must become the core for lifelong education and training implementation work plans.

In order to respond to these needs and compensate for the inefficiencies behind traditional learning methods, TVET decision-makers must begin to realise that the driving force behind initial training as well as re-training involvement is a shift towards open, flexible and distance TVET delivery methods. The method must be open so that individuals can learn on their own time, at their own pace and in private without the experiencing classroom-style failure or embarrassment. It must provide flexible learner-centred involvement by meeting individual learning needs, helping learners take on more responsibility, make effective use of limited instructional resources and allow for individual learning styles. Finally, an ODL method must be brought to the individual through a distance education delivery system that is appropriate for the learning outcomes required and attractive to the cultural framework of the learners, their trainers and the providing institutions.

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