INTEGRATING VOCATIONAL EDUCATION WITH ACADEMIC EDUCATION IN COMMONWEALTH OPEN SCHOOLS

GUILHERME VAZ

COMMONWEALTH of LEARNING
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Integrating Vocational Education with Academic Education in Commonwealth Open Schools

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Preface

FROM PREJUDICE TO PRIDE:
POLICY PERSPECTIVES FOR VOCATIONAL SKILLS
AND TRAINING TO EMPOWER CITIZENS

Transcript of Mr Guilherme Vaz’s keynote address at the International Conference on Integrating Academic Courses with Vocational Education in Secondary Schools, New Delhi, on 17 February 2012.

I am greatly privileged and honoured to be with you at this International Conference on Integrating Academic Courses with Vocational Education in Secondary Schools. I am also humbled to address such an esteemed gathering. With my active involvement with all three collaborators of this conference — NIOS, UNESCO and the Commonwealth of Learning (COL) — I take this opportunity to express my sincere appreciation for the work they do. Despite enormous challenges, these three organisations have been at the forefront of change with pioneering initiatives, research and debate in integrating academic courses with vocational education at the secondary level. I would also like to acknowledge that my experience in 27 countries has been enriched by the Commonwealth of Learning’s multi-country research project for The Commonwealth Open School Association (COMOSA). While the findings of this research on Integrating Vocational Education with Academic Education in Commonwealth Open Schools, for which I was the lead researcher and consultant, are under publication by the Commonwealth of Learning, Vancouver, I am happy to note that three of the countries will be presenting papers based on this research at this conference. With all these extraordinary organisations collaborating together with you for this conference, I expect that fresh insights will confront the challenges and make integration of academic courses with vocational education a sustainable reality in secondary schools — a reality which is only possible when stakeholders with diverse and specialised backgrounds such as policy makers, planners, private enterprise, educationists, practitioners, educational and training institutions and providers along with financial institutions and international experts converge in their thinking to secure the desired outcome. With such diversity and specialisation, however, let us keep in mind the story of the five blind men and the elephant, each feeling a different part of the elephant and pronouncing his judgement. As the story goes, while each was partly in the right when considering their own independent part, all were in the wrong because the totality was lost. Aware that this is a challenge we face, I urge you to keep an open mind so that while your individual experience and expertise are confronted with differing views and perspectives, collectively, we can try to address the complex issue we have on hand.
To ensure that we have a common context for discussion on policy perspectives, I have taken the liberty of taking a very broad view of policy, which is otherwise regarded as a statement of purpose or present decision for future action, by also touching on critical procedures and processes that provide important pointers to policy perspectives. It would also help to start with some basics. For instance, it is globally accepted that knowledge, skills and innovation are a country’s most valuable assets, particularly in the context of overall development, changing global demographics due to ageing societies, declining fertility rates, increasing longevity, skills deficits in the workforce and global competition. It is also recognised that there are several driving forces for migration of skills, which can result in mutual advantage to both sending and receiving countries. However, advantages such as increased foreign remittances, increasing opportunities and higher wages of persons from dispatching countries are often countered with fears and apprehensions of recipient countries that immigrants take jobs away from existing citizens, drive down wages and could remain beyond their permitted or expected stay. To this, there is also a counterview that ageing but affluent countries have little option but to import vast numbers of immigrants to maintain the age ratio between tax-paying workers and retirees to prevent the collapse of their social security systems. Whatever the opposing views, there can be no doubt that most developed countries faced with severe skills shortages must, unless they choose to put their country at risk, embrace labour migration from developing countries to overcome their own labour shortcomings. There are, of course, notable arguments of brain drain and its consequences for developing countries and the phenomena of xenophobia, discrimination and other cultural barriers, which have social costs that are yet to be ascertained. Whatever the compelling arguments, it cannot be denied that labour migration is important to both the developing and the developed nations and the question is not whether labour migration should be endorsed but how it should be responsibly and ethically endorsed so that risks are mitigated, fears are allayed and mutual benefit is achieved. Although countries all over the world are increasingly recognising the pressure for co-operative approaches to the management of migration flows, attempts to promote such approaches at the global level have received only lukewarm support. In an increasingly interconnected and interdependent world, where goods and capital flows are progressively more liberalised, control over who enters a territory is often regarded as one of the last bastions of national sovereignty and is therefore understandably, aggressively protected, though often at the cost of their own peril. Despite its challenges, migration is ultimately beneficial to everyone involved if the vision for an era of sustained and more widespread economic development is rooted, as Pope John Paul II said as far back as 1991, “in a keen sense of belonging to the human family, which means sharing in the common dignity of all human beings.”

The euphoria of a demographic dividend, and the promise it holds for working age-employable manpower-surplus countries in the immediate future, has been heavily emphasised and even hyped upon, as manpower-surplus countries envision themselves as skills hubs of the world. This excitement, however, could well fade away and result in an elusive dividend and even a demographic disaster if that manpower surplus is not appropriately skilled to standards that are nationally acceptable for employment and entrepreneurship and internationally accepted for migration of skills. For that promise of a demographic dividend to become reality, it is prudent therefore that a national policy on vocational education and skills training
is synchronised with foreign trade policy and harmonised through international protocol by incorporating migration governance which would necessarily include adherence to transnational vocational qualifications frameworks and internationally accepted quality assurance, validation and certification. Aiming for and meeting internationally accepted benchmarks will also result in a welcome domestic upgrading of the quality of skills.

While high-quality pre-primary, primary, secondary, higher and vocational education and training are fundamental to a country’s success, in a rapidly changing world lifelong learning has to be a national priority as it is the key to continued employment, entrepreneurship, economic success and enabling people to participate fully in society as empowered citizens. Vocational education, skills and training are therefore crucial to a country’s broader education agenda and essential to the development of a knowledge society, economy and democracy. Despite this unequivocal acceptance of the need, despite much debate and even more discussion, if it has yet to take firm root and if all countries cannot claim adequate success within the time frames needed, we should be challenged to ask ourselves why this is so. Why is it that vocational education, skills and training continue to be perceived as an inferior option to academic education, even if the latter at times is nothing more than a paper chase giving rise to the problem of not just the educated unemployed but the bigger problem of the educated unemployable. Answers to this vexing question should help us make that most important shift in perception of vocational education, skills and training from prejudice to pride.

Educators have long considered how to make schools relevant to students’ lives. Many have believed that integrating academic and vocational learning is the most promising approach as it provides students with the necessary transferable, employable and entrepreneurial skills that are needed; provides a mechanism for engaging those who have not thus far been engaged by academic learning and offers learners an early opportunity to sample whether future career options are suitable and practical and will be of interest to them, without preventing them from also pursuing future academic pathways. Vocationalisation of the secondary school curriculum has had wide endorsement from international organisations, governments, industry and academia. Education policy makers and planners in developing countries often hope that the diversification of the secondary school curriculum will motivate changes in attitudes towards self-employment and further education, and even ease the transition to work, and countries have adopted different approaches to vocationalisation of the general education curriculum to suit their own unique needs. Why then has this not taken root and borne the results sought? There can be several reasons for this. To be effective, integration must accomplish the one important, well-defined educational objective of helping students to achieve. Integration is not an end in itself and because an integrated curriculum emphasises connections and context, it is often easy to lose focus and clear meaning. Effectively integrating academic and vocational curricula also depends on much more than simply identifying work-related applications of academic knowledge and skills. It must engage students and this brings in the dimension of effective teaching-learning processes that many of today’s technologies can enable. Even if a teacher succeeds in keeping integration sharply focused on clear, well-defined educational objectives, and finds legitimate
applications that really engage students, doing this day after day, week after week in a fashion that builds systematically on previous activities is not only challenging but requires very high levels of motivation and dedication, bringing back the argument that teaching is not just a job or career option but a vocation that hinges on uncompromising commitment and unconditional dedication. Nevertheless, only when the status of teachers is given national pride of place with accompanying compensation, rewards and benefits will teaching be a preferred, revered and valuable option. Again, constructing a rich, complex, cumulative integrated curriculum that simultaneously helps students master an academic discipline and apply it in a coherently defined domain of the world of work demands time, expertise and resources that are, more often than not, beyond the reach of most teachers. To succeed, therefore, integration of academic and vocational education must be dealt with in a holistic manner and as a long-term educational reform strategy. This strategy must be conceptualised by both academic and vocational educators, supported by the business community and articulated by policy makers and planners with funding prioritised for programmes that integrate academic and vocational education through a coherent sequence of courses so that students achieve both academic and occupational competencies while also giving them flexibility for vertical and horizontal educational mobility.

The variety and divergence of views, theoretical frameworks, empirical evidence, challenges and constraints often raise the question of whether vocationalisation is advisable. More than the divergence of views, however, is the need to first arrive at a common and accepted understanding of the changing and compelling perspectives, context, needs and challenges facing vocationalisation of school education and, just as importantly, the specific opportunities to address these issues. While it is not unusual in addressing opportunities, issues of constraints, divergence and complexity to either create new organisations and institutions so as to begin with a clean slate, or to force-fit changes within existing policy, process, procedure and institutions, if both approaches often end in not meeting expectations, therein lies the problem. A change in mindset, understanding of the reality of what one cannot change and the will to change what is possible can enable far more lasting outcomes that are realistic, tangible, measurable and far-reaching. Far too often, policy fails to achieve the desired results because the focus is not on measurable outcomes. As Lewis Carroll put it so well in Alice in Wonderland, “If you don’t know where you are going, any road will get you there.”

Let us therefore consider the outcome of vocational and skills training that we are focusing on today — which is to empower citizens. A citizen’s life is not lived in isolation but in the midst of society, which unhappily is unequal. There will, therefore, always be significant areas where a citizen must confront the challenges that an unequal society presents. Regrettfully, in a world that is divided, an unequal society compromises the basic dignity of the human person to live life abundantly, which is grounded in human freedom and realised and protected in relationships with others. Empowerment must therefore be integral and include increasing the physical, spiritual, emotional, aspirational, political, social, educational, gender and economic strength of individuals and communities. This involves developing confidence in their own capacities, and what better than enhancing personal skills? Vocational skills and training
programmes have made and can continue to make a real difference to the lives of countless young people as they enhance self-confidence by building upon and utilising their unique gifts, talents, motivation and aspiration to contribute as an equal partner in society. Empowered citizenship therefore requires a person to have the resources and knowledge to participate in society and in matters that affect their lives; have a sense of attachment that reinforces participation; be provided with the opportunity for participation; and finally see evidence that their participation makes a difference. The reality, though, is that we live in a world of divides and these divides are growing day by day — between the endowed and the marginalised; the educated and the illiterate; the urban and the rural; the successful and the unemployed; the organised and the unorganised; the trained and the untrained; and this is further compounded by digital, financial, opportunity and social divides that permeate society, widening the gap between individual aspiration and reality. Apart from the ethical and moral issues involved, no nation can progress fast and effectively enough with the burden of divides and until there is enough homogeneity and mobility across society in terms of education, skills, talent, capability and opportunity. Powerlessness, which results from such divides, leads to alienation and history is full of examples that establish that continued divides lead to social unrest and social uprising towards a more socially just and fair nation. The achievement of greater equality only comes through the action of empowered citizens and empowered citizens are what make a democracy work. This is the foundation of inclusive policies that enlightened democracies realise are fundamental to their democracy and therefore strive towards.

There can be no argument that skills and training are an opening to a better job and a better life, provide opportunity and give hope, and while there are many examples from every country in the world, Africa presents an interesting case study. It is now well documented that technical and vocational education and training (TVET) is back on the development agenda of many African countries after years of benign neglect, prompted by a complex set of reasons that included budgetary constraints and criticisms of the World Bank in the early 90s on their direction and focus. The World Bank had argued at the time that the cost of technical and vocational education was too high compared with the returns to the economy, that the quality of training was poor and that there was a considerable mismatch between training and the needs of industry. Simply put, the delivery of vocational education and training was neither cost nor outcome effective. However, since the beginning of the new millennium, a fresh awareness of the critical role that TVET can play in economic growth and national development has received fresh impetus among policy makers in many African countries and within the international donor community and TVET is increasingly recognised as an effective means of empowering young people to engage in productive and sustainable livelihoods. It is globally accepted that skills development increases the employability and earning potential of young men and women, improves the competitiveness and productivity of enterprises and economic sectors and expands the inclusiveness of growth. The ILO highlights that without skills the working poor remain trapped in low-skilled, low-productive, low-wage jobs and that workers without the right skills cannot participate in economic growth — especially those in rural areas and the informal economy. However, it draws hope that this vicious circle can become a virtuous circle as skills development makes it easier to innovate, adopt new technologies, attract investment, compete in new markets, diversify
the economy and respond to external shocks — thus boosting job growth and improving productivity, quality and income. Putting this into practice, the ILO accordingly outlined their strategy for promoting skills development in Africa to include taking skills development to where people are viz rural areas and the informal economy; matching training to employers’ needs and to self-employment opportunities; upgrading the technical capacity of trainers; making training available to disadvantaged groups and easing the transition for youth from training into wage- and self-employment. This strategy is especially relevant to countries where vastly increased numbers will be completing primary and secondary education in the years ahead as the Education for All (EFA) process, for which UNESCO is the lead agency, yields results. In these countries, governments are faced with the challenge of providing further learning opportunities for young people or preparing them for the world of work. Hence, TVET programmes that respond to the demands of the labour market, both local and global, are viewed as central to the effort to equip the young with the work skills that will enable them to escape the trap of poverty and contribute to their community’s economic wellbeing, and must find their foundation in secondary schools.

The success in improving participation in primary schooling in the context of Education for All and the Millennium Development Goals has further placed the need and challenge to find sustainable methods of supporting the dramatic demand for expanded access to secondary schooling. Access to and successful completion of secondary schooling is a major mechanism for improving both life choices and life chances in most developing countries and if national pools of talent are to be fully accessed, equality of educational opportunities must improve to enable social mobility. Similarly, competitiveness, especially in higher-value-added and knowledge-based sectors of the economy, depends on a foundation of knowledge, skills and competencies associated with abstract reasoning, analysis, language and communication skills, and the application of science and technology which is widely accepted as being most efficiently acquired through secondary schooling. Secondary and higher secondary education have traditionally been considered important terminal stages in the system of general education because it is at these points that youth decide on whether to pursue higher education, opt for technical training or vocational trades or join the workforce, and in the absence of alternatives and opportunities, drop out or get added to the unemployed. Educationists and experts have consistently recommended that education at these stages should be given a vocational bias to link it with the world of employment. The vocationalisation of education at the secondary stage of schooling has, however, achieved only partial success despite a large number of educated unemployed youth on one hand and industry on the other in need of skilled workers with their refrain that such students are skills-deficient and not job-ready. This situation is often further compounded by a lack of a well-defined pathway, flexible qualifications framework and national, regional and state-level policies for vocational education and training that are far from enabling. To appreciate this dilemma, findings of a 2007 UNICEF regional study on education in Central and Eastern Europe and the Commonwealth of Independent States and lessons in reforming vocational education are almost universal and relevant to our discussions today. These findings emphasise that the old model of narrowly specialised vocational education aimed at producing ready-to-work recruits for industry no longer works and it would be neither feasible nor advisable to invest in re-equipping schools for this narrow purpose. There is acknowledgement
that parents and students prefer general education over vocational education, that reform needs to support convergence in content of general and vocational education aimed at generating new skills and that several of the measures that would help to promote equity and efficiency are also likely to reduce expenditures and include offering a converged curriculum to all in a single type of upper secondary school that would help increase the upward mobility of the less advantaged and improve outcomes at lower costs.

In fact, having realised the problems of separate-track vocational education at the secondary level, in the late 1970s international organisations and several governments began to shift their emphasis from separate-track vocational education to diversifying general secondary curricula through the introduction of vocational subjects. As early as 1976, a conference of African Ministers of Education, held in Lagos, adopted vocationalisation of secondary education as a major policy in education on the continent. It was then announced that “African states should provide a new form of education so as to establish close ties between the school and work: such an education based on work and with work in mind should break down the barriers of prejudice which exist between manual and intellectual labour, between theory and practice and between town and country.”

Recent macro trends are also contributing to a renewed interest in TVET. Prefacing a very recent UNEVOC Network survey, for instance, it was stated that the globalisation of the world’s economic systems and the rapid integration of information and communication technologies have significantly altered the world of work. Other macro trends, such as demographics, economics, geopolitics, sustainability and changing social attitudes, are also having dramatic effects on the workplace. If, in the nineteenth century, capital investment in infrastructure and equipment was considered as the single most decisive factor driving economic growth and human capital only played a supporting role, in today’s new work environment human capital is increasingly being perceived as the only sustainable source of competitive advantage. There is a general emerging consensus that a well-educated workforce is the key to competitiveness and prosperity. The conclusion reached by the G20 leaders during the recent Toronto Summit was that a skilled workforce is essential to ascertain a strong, sustainable and balanced growth. The important contribution that human capital makes in development was also echoed in the conclusion of the International Labour Conference of 2008: “it fuels innovation, productivity, increase in enterprise development, technological change, investment, diversification of the economy, and competitiveness that are needed to sustain and accelerate the creation of more and better jobs.”

A recent OECD report noted, however, that although TVET has the potential to play an important role in workforce development to meet the labour-market needs of the economy, it “has been oddly neglected and marginalized in policy discussions, often overshadowed by the increasing emphasis on general academic education and the role of schools in preparing students for university education. It has also often been seen as low status by students and the general public.” The UNEVOC Network survey itself put forward trends that could have several implications for policy formulation. Several experts in that survey contributed to the identification of mega trends that they perceived are likely to have an impact on TVET in the next ten years. These included, along with integration of academic and vocational education, trends such
as the global financial meltdown; the continued recession in the UK, Europe and most of the rest of the world; the continued rise in global unemployment; the continued reluctance for employers to commit to long-term training; integration of TVET with information and communication technology; training costs shifting to the individual rather than the state or the employer; technological change affecting the way we work, and what work is available and where; migration and disappearing differences between villages and cities; increased women participation; changing learning situations and environment, suitable on-demand learn-work assignments oriented on work and business processes; unification of education standards and levels to gain a better comparability of education and work systems; permeability of education systems to reach higher levels of education through TVET and vice versa. Suffice it to say that after years of stagnation and neglect at the expense of general education, TVET is back on the national development agenda of both developed and developing countries and is now perceived as an important tool to develop the skilled workforce that all nations need to facilitate economic development, national prosperity, social progress and environmental protection. Examining the validity and relevance of trends such as those mentioned can help shape national policy.

Interesting insights from national examples where context has driven change are also useful to consider — be it, amongst others, Australia, Canada, the UK or New Zealand. For instance, a booming economy closely tied to the growth in Asia, growing skills shortages and an ageing population have combined to put pressure on the Australian VET system — not only to deliver more skills, but also different skills sets tied to structural changes in the economy with key features of the successful publicly funded Australian vocational system being strong industry leadership, national quality assurance including registration of training providers and qualifications, national training qualifications developed by industry, industry-determined competencies for each qualification and a strong federal system. Similarly, New Zealand identified the ageing of its workforce and the low skill levels of many existing workers as major concerns when setting a goal to “build an education system that equips New Zealanders with 21st Century skills.” The aim was to increase the percentage of the working-age population involved in training and achieving qualifications, including through industry training with a further goal to “reduce systemic underachievement in education” with a specific strategy to have more adults with “good levels of literacy, numeracy and other foundation skills.” Likewise, Canada, while highlighting the importance of a well-skilled and educated workforce, also identified the consequences of slow rates of labour force growth, in terms of ageing and the fact that too many Canadians are outside the education system, pointing to growing skills shortages in many skilled trades and providing a framework for goal and priority setting for negotiation with the Canadian provinces, which have legal and financial responsibility for education and training. A similar significant and comprehensive approach was taken by the UK government in its Skills Strategy identifying the need to address the gap between the skills-rich and the skills-poor as essential to both a competitive productive economy and fairer, more inclusive society with specific recognition of the adult retraining and specific initiatives targeted at adults without the foundation skills for employability and to help employers secure the skills they need and influence what skills are required and how they are provided — what is now widely recognised as an “industry-led demand-driven system.” What is significant with all these countries
is the important shift in policy preoccupation from concentration almost entirely on initial education and the transition of young people to the world of work to a growing recognition of the importance of continuous access to learning and skills acquisition not just for employment but for entrepreneurship. A perfect case, I might add, for cost- and outcome-effective open and distance learning (ODL) and an unparalleled opportunity for Open Schools to be the foundation and focus for a similar shift in the developing world.

Against this contextual background, with specific problems and challenges related to limited access, inadequate equity, perception of vocational training and education as an inferior option, unsatisfactory quality, mismatch between demand and supply, relevance of courses, high drop-out and poor retention rates, inadequate planning, management and resource constraints, some very clear priority areas emerge with regard to policy imperatives of vocational skills and training within the broader scope of integrating vocational education with academic education in secondary schools. This must begin with a well-articulated national and sectoral context and a needs assessment and analysis for vocational education and skills, which should map emerging vocational patterns, employment scenarios and entrepreneurial opportunities. Then there must be clarity and a shared vision among stakeholders on the need to integrate vocational education into academic education without losing focus on the central purpose, which is to increase student achievement and improve their life choices and opportunities. The question to be addressed is: how can we improve the quality and excellence, relevance and responsiveness, efficiency and effectiveness and the overall utility of vocational education and skills training, while ensuring access, equity, quality and affordability, employability and entrepreneurship? All this while facing challenges of inconsistent and insufficient data, insufficient and inadequate financing, school infrastructure and quality, inadequate supply of dedicated high-quality teachers, trainers and enlightened school administrators, inefficiencies in utilisation of current resources, high ratio of school dropouts, a limited focus on skill development and insufficient collaboration between industry and academia.

Answering these questions and facing these challenges will lead to determining the most appropriate forms of integration — be it course-level, cross-curriculum, programme or school- or academy-level integration. Each form of integration would correspondingly determine the appropriate competencies and foundational skills that students need for their future. Generic skills are assuming increasing importance and significance in the TVET sector with employers preferring employees who have a variety of skills, personal attributes as well as technical skills. Industry considers employability skills as a key requirement for recruitment and seeks persons who are self-directed, dependable, ethical, having effective communication skills, willing to work and learn and having a positive attitude, and literature suggests that “hard skills” contribute to only 15% of one’s success while the remaining 85% is made by “soft skills.” One of the subsets of generic skills is a set of skills collectively termed as “soft skills,” which include people-related skills such as interpersonal skills, teamwork, customer-service skills, communication skills, negotiation skills and personal skills and attributes which include behavioural traits and attitudes such as a sense of responsibility, resourcefulness, flexibility, motivation and time management. These are often identified and reflected in national employability skills and competencies. For example, it is almost universally accepted that
basic skills, thinking skills and personal qualities are recognised as the “foundations” deemed necessary for youth to possess in order to be successful upon graduation from high school. These foundations were identified in the United States’ Secretary’s Commission on Achieving Necessary Skills report, and the five workplace competencies related to resources, interpersonal, information, systems and technology together have sought to be developed on a daily basis in the classroom by integrating vocational and academic learning.

Similarly, key competencies identified for employability in Australia, referred to as the Mayer key competencies, include collecting, analysing and organising information; communicating ideas and information; planning and organising activities; working with others and in teams; using mathematical ideas and techniques; solving problems; using technology and the later added cultural understandings. Similarly, Canada’s Employability Skills Profile is not significantly different with its list including thinking skills; communication skills; responsibility skills; positive attitudes and behaviour; adaptability and ability to work with others; understanding and solving problems using mathematics; problem-solving and decision-making. Almost mirroring the United States, Australia and Canada, the United Kingdom’s (NCVQ) core skills include communication skills; personal skills: improving own performance and learning; ability to work with others; numeracy skills; problem-solving; information technology skills and modern foreign language skills.

Significant findings from very recent research conducted by WDM-Consultants under funding assistance from Human Resources and Skills Development Canada to define digital skills needed for the Canadian workplace highlighted that while digital skills are essential survival skills for the twenty-first century, it is not merely about operating digital systems and tools, but involves more complex cognitive and metacognitive skills for processing different types of information quickly, effectively and efficiently. Taking a cue from this, we should recognise and emphasise that secondary schools, through an integrated curriculum, must build the foundation needed to ensure necessary cognitive digital literacy skills.

In recent years, the concept of a “green economy” has become central to the global agenda, and an important focus of the world community. Spearheaded by international organisations like UNESCO and UNEVOC, there have been efforts to find ways of living and working sustainably so that the reasonable needs and wants of people from all walks of life, and in all countries, can be satisfied without so over-exploiting the natural resources upon which all life depends that the ability of future generations to meet their needs and wants is threatened. The growing significance of sustainability is having major impacts upon business, industry and society as a whole. Many new industries and employment opportunities are being developed, for instance, in ecotourism, environmental monitoring, sustainable community development, eco-design, recycling, alternative energy sources, land rehabilitation, pollution control, wastewater treatment and reuse. All require skilled workers who have knowledge of and commitment to sustainability, as well as the requisite technical knowledge and this is creating new roles and courses in TVET. The challenge for TVET is to reorient and redirect its curricula to instil in students and trainees respect for the conservation and sustainable use of resources, social equity and appropriate development, along with
competencies to practise sustainable tasks at the workplaces of today and tomorrow. An enlightened and contemporary policy on vocational skills and training must therefore put sustainability on its agenda. Curriculum design and development will necessarily require a broad-based definition and development of skills and competencies. A conceptual format must cut across vocational skill areas with provision of flexibility in content to take into account evidence-based recognition of prior learning and experience whether acquired formally, non-formally or informally; a correlation with a national vocational qualification framework and systems and a provision of horizontal and vertical mobility. Attention will therefore necessarily be on competencies and multi-skills, a modular-based vocational curriculum, and a credit system for curriculum flexibility, work experience and training. Issues of curriculum material, methodology and multimodal, multilingual and multilocation delivery must also be addressed.

It is also imperative that issues of costs, financing, funding arrangements and judicious use of public-private partnerships (PPPs) form an integral part of any policy. The traditional and dominant model used by governments has been one of public funding, public delivery and public regulation and the question that needs to be asked is whether this model can meet today’s challenges and tomorrow’s needs. Answers to this would require a changed role for government as the alternative approach is to shift the balance of instruments away from government while retaining reasonable regulation. Too much time has been spent debating the respective merits of public versus private education. This distinction becomes of less significance if there is agreement that the overall goal is to attain the public good for all, that the rules of the endeavour shall be equal for all stakeholders and that the result is contingent upon all stakeholders building upon their respective strengths and being measured on their outcomes, efficiency and effectiveness. Many developed and developing countries are making use of a range of public-private partnerships in the education sector and while there is no size that fits all, there have been several innovations in this area. A word of caution is necessary. While public-private partnerships are often confused with collaborations, co-operation and strategic arrangements with private parties, it is not uncommon that they sometimes end with frustration, a perception and perhaps also reality of an unequal partnership. It is therefore important to recognise that key obstacles to successful public-private partnerships include difficulties in negotiating and reaching agreement between the parties; achieving political will and public support for the participation of the private sector and business community; agreeing on key performance targets and transparency and accountability within the boundaries of partnership. This therefore requires clarity about the objectives, equal sharing of benefits as well as responsibilities and transparency in terms of which party is doing what, with whom, how and to what effect. There is a need for a well-defined governance structure allowing for a proper distribution of responsibilities between all stakeholders and a clear accountability framework specifying the roles, their relationships and the areas of co-operation. I would highlight here what is necessary but not generally included and that is a provision for periodic review to renegotiate, if necessary, the terms and conditions of the agreement if, in deployment, it tends to be biased in favour of one party. Towards this end, it is important that policies and practices address issues of lack of trust and mechanisms upon which to build such trust. What are needed therefore are structural conduits between stakeholders that support dialogue and ongoing debate both among members as well as between
the stakeholders. Finally, if PPPs are to be effective, policy and procedure must specifically address issues of accountability for the quality and equity of service provisions; means of distributing information with regard to institutional performance and mechanisms that enable ongoing involvement of all stakeholders.

One must avoid the pitfall of uncontrolled mushrooming of institutions eager to cash in on the unquestionable opportunity in vocational education, skills development and training, and provide safeguards against those institutions that can be questionable in meeting requirements of quality, equity and access and result in exploiting vulnerable parents and students. This requires a reasonable regulatory and participatory framework that must include transparent accreditation guidelines that should include private, non-governmental and peer evaluation of educational institutions and programmes. Such a framework could include educational associations to oversee accreditation at institutional, programme or course levels. It must also extend to ensuring that vocational education and skills training is demand driven, so that new and relevant courses are regularly introduced to ensure that skills are available in employable and emerging areas and that unpopular, outdated and not so relevant courses to the market needs are reviewed, renewed and, when necessary, dropped. This would need systemic, periodic reviews and updating of course curricula involving experts from business and industry at every stage for assessment of needs development of courses and curricula, selection of students, testing of trainees and assisting in placement. This regulatory and participatory framework with active participation of stakeholders, in accordance with market needs, must extend to articulation and mobility pathways with multi-entry and exit systems for flexibility and aspiration needs. As the notion of a vocational education pathway implies passage through a series of educational experiences or employment-related competency formation, aimed at progressing through to an occupational destination, pathways should lead a way to alternative occupations.

It is widely acknowledged that a majority of students in schools are unable to make connections between what they are taught or learning and how that knowledge will be used. This is because the way students process information and their motivation to learn are not always touched by traditional methods of classroom teaching that do not provide for the flexibility needed for the different styles of learning of students. In this regard, use of ICT in the teaching-learning process can address the needs of students who otherwise have a difficult time understanding academic concepts, as they are commonly taught, using abstract, lecture methods. Integrating appropriate technology in classrooms, curriculum and administration, which can also deal with the challenges of time, space and distance, must be an integral part of policy whereby collaboration can leverage co-ordination, co-operation and connection among teachers, students and institutions. Students also need to understand the concepts as they relate to the workplace and to the larger society in which they will live and work. In this regard, the concept of career and business clusters must be part of a nationwide education initiative designed to link what students learn in school with the relevant knowledge and skills they need for future success. They would help to connect career and business exploration at a lower level to in-depth exposure to a cluster at a higher level, laying the base for specific and appropriate skills in secondary and post-secondary education or training with career and business pathways representing a grouping of occupations within a cluster based on commonalities. To ensure relevance and
linkage, these clusters must dovetail at a broader national level to sector skills councils. These sector skills councils should ideally be state-sponsored, employer-led organisations that cover specific economic sectors in the country. Their role would include the identification of skill development needs; development of a sector skill development plan and maintenance of skills inventory; determining skills and competency standards and qualifications; participation in affiliation, accreditation, examination and certification; planning and executing training of teachers and trainers; promotion of academies of excellence and establishment of a labour market information system to assist planning and delivery of training. Adequate attention must also be given to assessment, evaluation and certification. These would need to include both formative and summative assessment, a clear profile of assessors, a system for recognition of prior learning, and competency-based assessment and certification processes and systems. Finally, to be continuously relevant, a policy must address issues of policy implementation, evaluation and review.

No policy on vocational education and skills training can be complete without addressing the informal economy, which forms the largest pool of employment and is consequently a significant catchment for potential training. In developing countries people work and trade predominantly in the informal economy and these groups of self-employed workers in micro-enterprises, domestic help, casual workers, home-based workers, migratory workers, out-of-school youth and adults in need of skills, farmers and artisans in rural areas, among others, are target populations requiring a renewed look at how to develop skills in adequate numbers and in an accelerated mode. Open schooling with its focus on flexibility, potential for recognising prior learning and building on that base, to my mind, presents a unique opportunity for appropriate vocationalisation of school education. The formal economy cannot provide employment in such massive quantities as is needed and most school leavers who do not pursue higher education make a living in the informal economy. With little access to formal vocational training, the vast majority resorts to makeshift mechanisms in the informal economy (on-the-job training, self-training or traditional apprenticeships). This clearly requires a careful consideration of the use of informal training systems that must be carefully assessed when reforming education and vocational training. The use of voluntary and professional organisations to structure training demand, to recognise the ability of workers in the informal economy who have experience in training and their use as skilled trainers in vocational training programmes can make a significant contribution to addressing a large but unorganised sector that contributes significantly to a country’s development.

A key area, mentioned but not adequately addressed in policy documents, is the importance of quality assurance to improve all systems and processes of services, to encourage institutions to continually reflect and transform themselves and to remain contemporary and relevant to changes in society. One of the main challenges of schools that integrate vocational education with academic education is to convince the public that their offerings are comparable to those of conventional schooling. It is important in these contexts to demonstrate quality by maintaining robust quality assurance systems that are transparent and contribute to producing quality graduates. It is a well-accepted management principle that what gets measured is done, and in this regard, the role of standards must be highlighted as critical to policy.
In considering policy imperatives, we must also recognise that policies give rise to structures. Too often, academic institutions build structures that are unwieldy, irrelevant or unfit for purpose. We must keep in mind that the structure of an organisation influences the efficiency, effectiveness and agility of its operations. A policy must therefore include periodic organisational audit or review of existing structures, people and the manner in which work is done. To determine future needs, existing organisation needs must be assessed in terms of its effectiveness and efficiency. Structure must follow strategy, and restructuring that follows as a result of an objective audit must take into account existing organisational synergies, motivate and facilitate behaviour in aligning to the particular strategy that is formulated.

Finally, let me conclude with the obvious — policy alone will not make things happen. It is a change in mindsets and the management of change that enables change. The process of managing change must address the challenges and opportunities of integrating vocational education and skills training with general education with specific respect to access and equity; quality and excellence; relevance and responsiveness; and efficiency and effectiveness. This management of change must be a strategic, structural process and people oriented, and encompass use of technology, teaching-learning processes, content creation and delivery, programme management, process re-engineering and developing innovative and flexible models. We must also recognise that no change takes place without resistance to change and we would do well to remember the saying “you can’t make an omelette without breaking an egg!” Managing change must therefore deal with resistance and this requires strong leadership at all levels — institutional, regional and national — that must play a critical role as change agents in the transformation process.

As we have covered so many areas of policy imperatives, let me summarise them by stating that within national, state and institutional contexts a sustainable policy framework for vocational skills and training to empower citizens must be student-focused, industry-led and cover a regulatory, delivery, certification and placement framework that will be enabling. Outcomes of such a framework must include: expanding access; increasing flexibility; enhancing affordability through innovative financing, funding and public-private partnerships, ensuring relevance and responsiveness; broadening equity; extending provisions for the marginalised; eradicating gender imbalances; assuring quality; creating lasting partnerships and networks; using technology for curriculum and materials development and delivery and improving the teaching and learning process and providing effective well-in-time student-centred support; increasing efficiency and effectiveness; strengthening management; sharing best practices and building credibility, including effective branding at national, sectoral and institutional levels to enhance acceptability of vocational skills and training, through direct engagement with all stakeholders can help reposition and transform TVET to overcome social attitude and prejudice and increase its equity and public acceptance.

Such a comprehensive, integrated and enabling framework will require a reasonable regulatory framework with a redefined role of government; new initiatives, programmes and offerings across the spectrum of learners; training of teachers and trainers; sharing of infrastructure and access to resources and networking, co-ordination and partnerships. Finally, the overarching structure to focus policy and initiatives must provide for standardisation, to ensure that there is consistency in activities, courses and outcomes;
scalability, to move from successful pilot projects to models that will enable large-scale interventions; and sustainability, to maintain long-term continuity. It is only by addressing all these policy imperatives in a holistic manner that we can achieve the objective of educating skilled employable and skilled deployable individuals and, in doing so, shift the perception of vocational education, skills and training from prejudice to pride.

If all this seems like a long, arduous and exhausting journey ahead for us, let us take comfort in the fact that the longest, most arduous and exhausting journey begins with the smallest step.

Thank you

Guilherme Vaz
The origin of this research study can be traced back to the first meeting of the Commonwealth Open School Association (COMOSA) in 2010 when an agreement was reached on a global open schooling research agenda based on priorities identified by participating open schools. Five members volunteered to participate in a research project on Integrating Vocational Education with General Education in Open Schools; the Commonwealth of Learning (COL) facilitated the process by providing a consultant to support the research project. I wish to express my gratitude to the Commonwealth of Learning for undertaking this research project, and for facilitating, funding and overseeing it.

To the participants — Dr Mamta Srivastava and Koushalya Barik of NIOS (India); Dr Anwar Islam of BOU (Bangladesh); Dr Wilberforce Meena (Tanzania); Masego of BOCODOL (Botswana) and Paul Henry and Lystra Sampson-Ovid of NOSTT (Trinidad and Tobago) — I owe a special word of appreciation. Participating in a project while continuing in full-time employment is no easy task at the best of times and this project presented an additional challenge with the participants being not only in different places but also in different time zones, but all the participants rose to the challenge. The sharing amongst the members raised the awareness level of the topic and, more important, was a participative experiential learning experience for all.

In particular, I am indebted to Ms Frances Ferreira, Education Specialist, Open Schooling, COL, under whose charge this project was undertaken. Frances displayed an extraordinary ability to allow the freedom necessary for leading such a process-based experiential research project while ensuring that the objectives were always kept in sight. Assisting her ably was Carol Walker, Programme Assistant, COL, who had the unenviable task of monitoring the project and encouraging the participants, several thousand miles away and across several time zones, to meet difficult deadlines.

Finally, I need to acknowledge many who will remain unnamed because this research is rooted in over 35 years of personal learning and experience. Beginning with the advantage of a post-graduate qualification in Human Resource Management with Specialization in Large Scale Change Management, over the years I have benefitted from my broad and in-depth experience in the corporate world — from being a junior management executive to director of the board — and have put into practice, from operation to policy and strategy, the theories and practices I both learned and developed. To a great extent, my ideas and views have also been shaped by more than 35 years of voluntary and passionate involvement across the entire spectrum of the education sector at institution, board, national and international levels. I am therefore obligated to the many individuals and institutions that have enriched my experience and contributed to my knowledge.
Of particular relevance to this project has been my involvement as a board member of the National Institute of Open Schooling (NIOS), India, as it helped me appreciate at a different level the issues, concerns, constraints and successes of open schooling.

My involvement with the Commonwealth of Learning, exceeding ten years and in different capacities, must also be specially acknowledged as it is the only international intergovernmental agency that focuses exclusively on using technology to expand the scope and scale of human learning. In sharing its vision and success, I have added substantially to my own learning, development and commitment to make a continued contribution to its efforts.

Finally, my intense involvement with the Catholic Church and the Vatican has enhanced a global perspective as well as a profound and unparalleled understanding of the reality of human development issues from the perspective of human dignity, integral development, social justice and human rights at regional, national and local levels through transformative education.
1
Background of this study

Integrating vocational education (VE) with academic/general education not only provides learners with the necessary transferable skills that employers want, it also provides a mechanism for engaging those who have not thus far been engaged by academic learning. It offers them an early opportunity to look into which future career options are practical and will be of interest to them — all while keeping open their academic options.

Open schooling — with its objective of reaching the unreached through flexible, distributed and multimode learning — has its own distinct issues and challenges in fulfilling its role of providing value and relevance to its learners through integrating vocational education with academic/general education. Therefore, it was proposed to explore the context, potential, challenges and implementation of integrating vocational education with academic/general education in the following open schools:

- National Institute of Open Schooling, India;
- Bangladesh Open University;
- Institute for Adult Education, Tanzania;
- National Open School of Trinidad & Tobago; and
- Botswana College of Open and Distance Learning.

Specific issues to be explored within the national context and at specific open school levels were:

- Access
- Equity (including inclusivity, gender and marginalised populations)
- Quality
- Cost/financing
- Credibility
- Curriculum development
- Materials development
- Learner support
- Management
- Best practices
The above issues will be further explored with regard to the enabling environment, policy and courses; existing and required skill sets; capacity-building; availability and use of infrastructure; networking and partnership with industry and employers; and the efficiency and effectiveness of delivery, assessment and certification.

Typical questions to be addressed included:

- What steps are needed to bring students into the VE stream?
- How does the open school ensure that it offers the skills required by a continuously changing market?
- What collaboration is there with industry — demand estimation, curriculum development, training, assessing, placement?
- Are there any examples of effective and successful public-private partnerships?
- What steps have been taken to integrate VE with general education?
- What steps have been taken to encourage and attract students to VE?
- What mechanisms are needed for the vertical and horizontal mobility of VE for skill enhancement?
- What adaptations to existing models are needed?
- Should there be differences between rural and urban schools regarding an integrated curriculum in general/vocational education?
- What strategies and programmes are offered for the unorganised workforce in the context of size, heterogeneity, age range, geographical coverage, educational and income status, and gender and social disparity?
- Most unorganised sector artisans have traditional skills, but there are few mechanisms to ensure the certification of such traditional skills. What needs to be done to address this?
- What are the challenges in training of trainers (ToT), keeping in mind languages/dialects, social characteristics, issues of pedagogy?
- What are the modalities of imparting emerging skills, keeping in mind limitations of the workers, their theoretical knowledge and their traditional skill sets?
- What mechanisms and institutions are needed to ensure certification and accreditation of courses in the informal and unorganised sectors?
- Are there any innovations like cost-sharing between training providers and trainees, and rationalising the cost-to-beneficiary; cross-subsidisation; or income generation by selling goods and services as a “by-product” of the training process?
1.1 PROCESS AND METHODOLOGY

In order to engage the participants of the five open schools, and to enable them to own and take responsibility for the above-mentioned study, the process of addressing the typical questions was experiential and interactive. The participants communicated by telephone, email, Skype and a Virtual Base Camp.¹

As with any experiential learning programme, the process included five steps with Do, Reflect and Apply phases:

1. **Experience** the activity by doing it
2. **Share** the results, reaction and observations with other participants
3. **Process** the experience by discussing and looking at the experience and results, and analysing and reflecting
4. **Generalise** to connect the experience to real-world examples
5. **Apply** what was learned

The study evolved with the information and data generated through these interactions and through E-luminate.² Using E-luminate was a unique and innovative learning experience for the participants, as well as an opportunity to use a Web-conferencing technology platform with communication tools that included integrated Voice over Internet Protocol (VoIP) and teleconferencing, public and private chat, quizzes and polling, emoticons and a webcam tool. Participants were introduced to the software, which included several visual tools such as a whiteboard, application-sharing, file transfer and Web tour, as well as a record feature that allowed the moderator to record the class for others to watch later. Uploaded presentations were viewed on the whiteboard for classes or meetings.

Current levels of integration of vocational education with academic/general education in open schools are not sufficient for quantitative research where meaningful data and reliable interpretation can emerge from scores from a data-collection process that used highly structured questionnaires created to confirm hypotheses through eliciting and categorising responses to questions. The participants in this study therefore collected data from their sources and samples through prescribed questions — using a more flexible, iterative style of eliciting and categorising responses — to enable well-founded interpretations that could make the subjective analysis as unbiased as possible. As the study design was iterative, the data-collection and research questions had to be adjusted according to what emerged. This was both time-consuming and labour-intensive, but it provided the broadest and deepest understandings possible within the time constraints and with the knowledge base they could generate and that could lead to action. It was also clearly understood that each participant would be responsible for the country-specific data and responses they could generate. This imposed a limitation on this project as their data or responses were neither

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¹ [http://basecamp.com](http://basecamp.com)
² [www.e-luminate.org](http://www.e-luminate.org)
peer-reviewed nor evaluated by their country experts. However, it did provide experiential learning for the participants.

It was also intended that the process should lead to an action plan for the development of a model to integrate vocational education with academic/general education in open schools.

### 1.2 MATRIX FRAMEWORK

A matrix approach that contextualises each open school was used to explore the integration of vocational education with academic/general education. While some areas overlap, issues in specific contexts for each area were explored within each school and used as the framework for this research. The resulting data, information and clarifications received from each open school were examined for any common issues that could determine future action.

A 10 x 7 matrix (Figure 1) with 70 cells was used to elicit data from each school.

### 1.3 QUESTIONNAIRES

To guide further analysis, two questionnaires were administered by participants in each open school. Questionnaire 1 (Appendix 1) elicited information about the open school, explored the potential of open schooling and access to education, and drew upon education statistics. It also explored technical and vocational education and training (TVET), looking at initiatives that have been introduced and steps that may have been taken in the past five years to:

- develop a national approach to TVET, and
- establish a national body responsible for co-ordinating planning in TVET.

We also sought information to examine ways in which access to TVET may have been broadened in each country, again looking at initiatives and steps that may have been taken in the past five years to:

- increase opportunities in general for more people to have access to TVET,
- increase opportunities for people from disadvantaged backgrounds to have access to TVET, and
- increase opportunities for people to return to/continue vocational education.
With regard to the relevance and quality of TVET systems, we looked at the steps taken in each country to ensure that TVET is seen as excellent preparation to:

- encourage TVET providers to forge stronger links with the world of work,
- structure programmes to better suit the needs of industry and workers, and
- match TVET programmes to the skills needed for salaried employment and self-employment.

In keeping with the Commonwealth of Learning’s focus on gender equity, we looked at information about equal access and opportunity for girls and women with respect to national policy and enrolment information and vocational needs of girls and women and how national policy is used in the development and improvement of vocational guidance programmes. Barriers to girls’ and women’s participation in technical and vocational education were noted, as the vocational guidance programme was designed to reduce such barriers. Each open school was also encouraged to identify its best vocational guidance activities for assisting girls and/or women and disadvantaged or marginalised groups to enrol in and complete vocational and technical education subjects (with a view to gaining employment in these areas) with the objective of building upon such successes.

To understand the profile of vocational education learners of each open school, target learners and their general characteristics — gender, age, cultural and socio-economic background (including whether they come from any marginalised population) and disabilities — were analysed. In addition, their previous learning, skills and knowledge, motivation, support network, learning styles and other relevant information that would help ensure the learning and assessment programme was appropriate for the needs and characteristics of the target group were examined.

Finally, within the national context and at each open school level, participants were guided to identify and describe their best practices with regard to:

- Access
- Equity (including inclusivity, gender and marginalised populations)
- Quality
- Cost/financing
- Credibility
- Curriculum development
- Materials development
- Learner support
- Management
The above issues were considered with regard to the enabling environment, policy and courses; existing and required skill sets; capacity-building; availability and use of infrastructure; networking and partnership with industry and employers; and the efficiency and effectiveness of delivery, assessment and certification.

A second questionnaire (Appendix 2) was developed using the matrix framework and the information collected from the first questionnaire. This questionnaire aimed to identify the specific challenges of each open school with regard to:

- Access and the identification of special groups and appropriate approaches to their learning, the curriculum, the structure of courses and flexibility through recognition of prior learning.
- Quality assurance in course development.
- Delivery with regard to partnerships with industry, use of technology, accreditation, assessment, certification and recognition of certification, integration with the national qualification framework, and horizontal and vertical mobility.
- Organisation/management with regard to a focus on how student- and learner-centric the institute is, and with respect to the use of technology.

In addition, each open school received guidance to consider strategies for success within their school with regard to creating a positive perception of “open” VE, making existing/new courses relevant to the demands of the workplace, enhancing the use of technology-enabled learning, broadening the scope of delivery and establishing a vocational management information system (MIS). The schools were also encouraged to investigate incentives to increase access and guarantee success, and to consider how to increase reliability of trainers through ToT.

Furthermore, the schools were encouraged to consider provisions for training for the informal economy; to investigate what is needed to create a credible regulatory, accreditation and certification framework; and to explore innovative financing/collaborations through public-private partnerships (PPP) and other means. There was discussion of the steps needed to bring students into the VE stream and to ensure that the continuously changing market demands for skills are met by the offerings of the open school. An examination of existing collaborations with industry looked into demand estimation, curriculum development, training, assessing, placement and examples of effective and successful public-private partnerships.

Finally, there was an examination of specific steps that have been taken to integrate VE with general education and to encourage and attract students into VE, and of the mechanisms needed for the vertical and horizontal mobility of VE for skill enhancement, and the adaptations needed to improve existing models. Attention was given to considering whether there should there be differences between rural and urban schools in respect of an integrated curriculum in general/vocational education and the strategies and programmes that are needed for the unorganised workforce (keeping in mind size, heterogeneity, age range, geographical coverage, educational and income status, and gender and social disparity).
Most unorganised sector artisans have traditional skills, but there are few mechanisms to ensure their certification, so this issue was considered alongside challenges in ToT, keeping in mind languages/dialects, social characteristics, issues of pedagogy, modalities of imparting emerging skills (in the context of limitations of the workers, their theoretical knowledge, traditional skill sets and mechanisms) and institutions needed to ensure certification and accreditation of courses in the informal sector. Innovations like cost-sharing between training providers and trainees, and rationalising the cost-to-beneficiary; cross-subsidisation; and income generation by selling goods and services as a by-product of the training process were also explored.

1.4 OUTCOMES

The aims of this study were:

1. to create an awareness and better understanding of what works/does not work in integrating vocational education with the academic/general education in open schools, and
2. to determine strategies that will enhance the reliability and credibility of an integrated curriculum in open schools.

1.5 TIME FRAME

This study was conducted over a four-month period from May to August 2011.
| Institute for Adult Education, Tanzania |
| Bangladesh Open University |
| National Institute of Open Schooling, India |
| Botswana College of Open and Distance Learning |
| National Open School of Trinidad & Tobago |

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Figure 1. Matrix framework for exploring integrating vocational education with academic education in open schools
2 What is TVET?

Educators have long pondered how to make schoolwork relevant to students’ lives, and how to integrate new technologies into the classroom and teach students problem-solving and other lifelong learning skills. Many believe that integrating academic and vocational learning is the most promising approach. The current research explored this issue with a specific focus on open schools, using the direct experiences of five open schools plus the experience of four others in the Commonwealth that participated in a COL workshop in Botswana. Areas of discussion included the potential barriers to an integrated programme and how specific policies, practices and processes can help governments, teachers, businesses, industry, parents and students work together to break down those barriers and build an effective integrated programme.

UNESCO-UNEVOC states that:

Technical and vocational education is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. (UNESCO, 2005, p. 7)

TVET, according to Jon Lauglo, also refers to “deliberate interventions to bring about learning which would make people more productive (or simply adequately productive) in designated areas of economic activity (e.g., economic sectors, occupations, specific work tasks)” (Lauglo, 2006, p. 11). This is the distinctive purpose of TVET. However, it will also have purposes that are not unique to TVET and that also apply to other forms of education — for example, knowledge, skills, insights and mindsets — that are deemed to be generally valuable for the learners, and not only in designated areas of economic activity. Such “other” aims will be especially pertinent for longer and full-time courses for youth, in contrast to short and episodic training events (e.g., for persons already at work in the occupations concerned). In the context of school education, we need to consider adapting the currently academic-focused curricula to embrace vocational or practical subjects — “vocationalisation” — so that students have more options but we must do so without closing the doors to traditional academic options (Lauglo, 2004). Vocationalisation is not the same as school-based vocational education and training where a student’s timetable is dominated by practical skills learning and by directly related theory. Its main goal is to improve the vocational relevance of education.

1 This report is available upon request from the Commonwealth of Learning (see www.col.org)
Vocationalisation of secondary school curricula has been widely endorsed by organisations such as UNESCO and by most governments around the world. Education policy makers in developing countries often hope that diversifying the secondary school curriculum will motivate changes in attitudes towards self-employment and further education, and even ease the transition to work.

Different countries have necessarily adopted different approaches to vocationalisation of the general education curriculum. For instance, the thrust for vocationalisation in growing economies that can sustain job growth — South Korea and China, for example — will be different from that in countries like India with their promise of demographic dividend due to younger populations and potential for inclusive growth. Similarly, in post-independent African countries, a lack of jobs in the formal sector has led to a reorienting of young people towards skills for self-employment through diversified secondary schools with more practical subjects, such as commerce, domestic science and agriculture.

Despite much research and literature on vocationalisation of school education, very little information is available with respect to vocationalisation in open school education, which is based on open and distance learning (ODL) as a paradigm with some elements of shift such as:

- From classroom to anywhere
- From teacher centric to learner centric
- From teacher as an instructor to teacher as a facilitator
- From mainly oral instructions to technology-aided instructions
- From fixed-time learning to anytime learning
- From you learn what we offer to we offer what you want to learn
- From education as a one-time activity to education as a lifelong activity

This paradigm shift refers to an educational process in which all or most of the teaching is conducted by someone removed in space and/or time from the learner, meaning that all or most of the communication between teachers and learners is through an artificial medium, either electronic or print. Instruction is provided by a mode other than the conventional face-to-face method, and is characterised by the physical separation of the teacher from the learner. The instruction is delivered to learners through a variety of media including print and other information and communication technologies (ICT). An advantage of the open learning system is its flexibility of and access to instruction, which ensures broad availability of education opportunities for all. Another is its openness, as the name suggests, which breaks down barriers related to age, location or previous levels of academic achievement, amongst other factors. ODL is also cost-effective and gives learners independence of time, location, space and pace. While the system has been used for a variety of learning situations — basic, primary, secondary, tertiary, vocational and non-formal education, etc. — its challenge lies not just in integrating vocational and academic learning,
but in addressing the issues of openness of learning, and particularly those of recognising prior learning, establishing gaps in learning and building individual learning plans.

Within the context of open schooling, the integration of academic and vocational education must be considered as an educational reform strategy conceptualised by academic and vocational educators, supported by the business community and articulated by policy makers who require government money to be spent on programmes that integrate academic and vocational education through coherent sequences of courses so that students achieve both academic and occupational competencies.

However, there are dissenters. F.G.W. Msiska, for example, wrote an article about vocationalisation in relation to Malawi (Msiska, 1994) in which he argued that vocationalisation should not be relied upon as a solution to youth unemployment, and that the costs of such a programme could be difficult to justify in a relatively poor country such as Malawi. He also expressed concern that job markets can change rapidly and without warning, and that this makes it impossible for schools to fully prepare — that is, train — their students for the world of work. In short, in his opinion vocational training is a specialist area that should be undertaken by specialist institutions rather than by general education institutions. His approach is far from new. Philip Foster expressed a similar opinion in 1965 when he argued that “it might be more fruitful to encourage small-scale vocational training schemes closely associated with the actual ongoing developments and quite divorced from the formal educational system” (Foster, 1965, p. 154). He even recommended that “the burdens of vocational training should be shifted to those groups who are actually demanding skilled labour of various types.”

The variety and divergence of views, theoretical frameworks, empirical evidence challenges and constraints raise the question of whether vocationalisation is advisable. A 2002 World Bank report prepared for Regional Vocational Skills Development Review, Human Development, Africa Region suggests in its Recommendations section that “educational policy on vocationalization must be rooted in what schools are able to achieve rather than what one would like them to achieve under ideal circumstances” (Lauglo et al., 2002). Furthermore, we need to understand the changing perspectives, contexts, needs and challenges facing the vocationalisation of school education and, more important, the specific role that open schools can play and the opportunities they have to address these issues. In an era of globalisation, the changing age profile of the world’s population is now a well-established fact. In the introduction to their paper “Re-skilling for all? The changing role of TVET in ageing societies of developing countries,” Margarita Pavlova and Rupert Maclean quote research by the United Nations Department of Economic and Social Affairs that by 2050 over 20% of the world’s population will be aged 60 or older, compared with 10% in the same age range in 2000. However, they also point out that a closer look at those statistics reveals that the situations in developed and developing countries are quite different: by 2000, 19% of Europe’s population was already aged 60 or over; in Asia the same age group accounted for 8% of the population (Pavlova & Maclean, 2006). Another significant difference is that, in developing countries, the overwhelming majority of workers are employed in the unorganised sector and self-employed, or are workers and apprentices in micro-enterprises, unpaid family workers, casual labourers, home-based workers, peripatetic workers...
and migrant labourers, out-of-school youth and adults in need of relevant job skills, farmers and artisans in rural areas. All these workers, despite their diversity, are target populations for open schools looking to attract learners. Open schooling, with its focus on flexibility and its potential for recognising and building on prior learning, presents an otherwise elusive opportunity for appropriate vocationalisation of school education.

When addressing issues of constraints, divergence and complexity, it is fashionable to think in terms of creating new institutions so as to begin with a clean slate, or to tinker with parts of policy, processes or procedures that may not have worked well. But therein lies the problem. A change in mindset, a realistic understanding of what one cannot change and the will to change what is possible within one’s own sphere of influence are all more likely to produce a realistic, tangible and far-reaching outcome. This is therefore the underlying theme in exploring the integration of vocational education with academic education in open schools.
We live in a world of divides. Every day the divide grows between the educated and the illiterate, the urban and the rural, the employed and the unemployed, the organised and the unorganised, the trained and the untrained. Each divide is further compounded by digital, financial and social divides. In addition to the ethical and moral issues arising from the very existence of such divides, no nation can progress quickly and effectively under the burden of divides and will not do so until there is enough homogeneity, mobility and inclusivity across society in terms of education, skills, talent and capability. While all countries have within their policies and strategies focused on basic and primary education, policies and strategies must go beyond to include skills development for employment and entrepreneurship.

Education for All (UNESCO, 2000) and the education-related Millennium Development Goals (United Nations, 2000) both increased participation in primary school education. They also highlighted the need to find sustainable methods of supporting a resulting increased demand for secondary schooling. Keith Lewin, of the Centre for International Education, University of Sussex, examined this challenge in a paper he presented at the 16th Conference for Commonwealth Education Ministers in 2006 (Lewin, 2006). Although much of his focus was on the challenges faced by those developing Commonwealth countries that participated in the Education for All and Millennium Development Goals projects, he also noted a correlation between level of education and the risk of contracting HIV/AIDS. HIV/AIDS has affected so much of the active labour force in some developing countries that it has seriously jeopardised any prospect of economic growth (Lewin, 2006). Access to and successful completion of secondary schooling are critical for survival and success in most developing countries; if national pools of talent are to be fully accessed, equality of educational opportunities must improve to enable social mobility. Similarly, competitiveness, especially in high-value-added and knowledge-based sectors of the economy, depends on knowledge, skills and competencies associated with abstract reasoning, analysis, language and communication skills, and the application of science and technology — all of which are most efficiently acquired through secondary schooling.

Secondary and higher secondary education are important stages in general education because it is at these points that youth decide whether to pursue higher education, opt for technical training or join the workforce. Educationists and experts have consistently recommended that education at these stages be given a vocational bias to link it with the world of employment. The vocationalisation of education at the secondary stage of schooling has, however, achieved only partial success despite there being both a large number of educated unemployed youth and a need for skilled workers. Over and over we hear that
students are skills-deficient and not job-ready. This situation is further compounded by a lack of a well-defined pathway, qualification framework and national and state-level policy for vocational education and training.

The findings of a 2007 UNICEF Regional Study on Education in Central and Eastern Europe and the Commonwealth of Independent States (UNICEF, 2007) and lessons learned in reforming vocational education are almost universal, making them relevant to the current study.

- The old model of narrowly specialised vocational education was one that aimed to produce students who were ready to step straight into industry. This no longer works and it would be neither feasible nor advisable to invest in re-equipping schools for this narrow purpose.
- Parents and students prefer general education over vocational education.
- The content of general and vocational education programmes should be converged in order to nurture new skills.
- Several of the measures that would help to promote equity and efficiency are also likely to reduce expenditures. For example, if a converged curriculum were offered to all students in a specific upper-secondary school the less advantaged students would have an opportunity to gain the skills required to move up in society and improve their prospects — all at a relatively low cost.

International organisations and African governments recognised the problems associated with separate-track vocational education at the secondary level as far back as the late 1970s when they began to shift their emphasis from separate-track vocational education to a diversified general secondary curriculum through the introduction of vocational subjects. A 1976 Conference of African Ministers of Education held in Lagos, Nigeria, highlighted the vocationalisation of secondary education as a major policy in education on the continent. It announced:

African states should provide a new form of education so as to establish close ties between the school and work: such an education based on work and with work in mind should break down the barriers of prejudice which exist between manual and intellectual labour, between theory and practice and between town and country. (Cited in Sifuna, 1990, pp. 8–9)

The conference’s final recommendations included a specific request that UNESCO, in collaboration with the United Nations Economic Commission for Africa (ECA), assist African Member States in undertaking studies of ways and means of introducing middle-level skill-related technological subjects into secondary school curricula (UNESCO, 1976).

Good examples of vocationalisation exist within the Commonwealth where context has driven change. For example, a booming economy closely tied to growth in Asia, growing skills shortages and an ageing population have combined to put pressure on the Australian VET system to deliver not only more skills,
but also different skills tied to structural changes in the economy. Key features of the successful publicly funded Australian vocational system are:

- strong industry leadership,
- national quality assurance (registration of training providers and qualifications),
- national training qualifications developed by industry,
- industry-determined competencies for each qualification, and
- a federal system.

Similarly, New Zealand’s Workforce 2010 and Education Priorities for 2003 identified the ageing of the country’s workforce and the low skill levels of many younger workers as major concerns when they set a goal to “build an education system that equips New Zealanders with 21st century skills.” The aim was to increase the percentage of the working-age population involved in training and achieving qualifications — including through industry training — with a further goal to “reduce systemic underachievement in education” with a specific strategy to have more adults with “good levels of literacy, numeracy and other foundation skills” (Mallard, 2003, p. 9).

Likewise, Canada’s Knowledge Matters: Skills and learning for Canadians (2010) and Achieving Excellence: Investing in people, knowledge and opportunity — Canada’s innovation strategy (2001) reports² not only highlighted the importance of a well-skilled and educated workforce but also identified the consequences of slow rates of labour force growth — that is, growing shortages in many skilled trades — when set against a context of ageing workers and the fact that too many Canadians are outside the education system. The reports provide the basis for goal and priority setting for negotiation with the Canadian provinces, which have legal and financial responsibility for education and training.

A significant and comprehensive approach was taken by the UK government in its skills strategy 21st Century Skills: Realising Our Potential (Secretary of State for Education and Skills, 2003). It identified the need to address the gap between the skills-rich and the skills-poor as essential for both a competitive productive economy and a fairer, more inclusive society; it noted in particular a need for adult retraining and for specific initiatives targeted at adults who lack the foundation skills they need to be employable. It also highlighted a need to help employers secure the skills they need to make their businesses successful, and to involve them in identifying what skills are required and how they are provided — what is now widely recognised as an “industry-led demand-driven system.”

What is significant in all these examples is the important shift from a concentration almost entirely on initial education and the transition of young people to the world of work to a growing recognition of the importance of continuous access to learning and skills acquisition for adults and the existing workforce — a perfect argument for open distance learning (ODL). The shift presents an opportunity for open schools

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² Both publications are accessible from http://publications.gc.ca
as open basic education within ODL has further assumed considerable significance, particularly against the backdrop of:

- millions of students being outside the purview of conventional schooling;
- a high dropout rate, especially at the primary and elementary levels; and
- the linking of basic education to functionality and skill development.

Against this contextual background, we should now consider the specific impetus, if any, of the five open schools that participated in the current study that might demand attention and action.

### 3.1 INDIA

India has a long history of vocationalisation of education. Wood’s Dispatch of 1854\(^3\) was crucial to changes in the Indian education system, and suggested, amongst other things, a stronger focus on prevocational education. The Indian Education Commission (1882) — also known as the Hunter Commission — suggested introducing practical subjects in secondary schools. In 1937, at the invitation of the Indian government, A. Abbot and S.H. Wood submitted a report on general and vocational education. Their report, *The Abbot Report*, contained a recommendation that practical subjects be integrated into the curriculum. Mahatma Gandhi insisted that education centre around practical and vocational learning (Gandhi, n.d.),\(^4\) and the Education Commission (1964–66), recognising that there was a need for change, suggested the 10+2+3 pattern — the first ten years are general education, the next two years focus on specialised academic or vocational education (according to a student’s interests and preferences) and the final three years are reserved for a degree programme. The Vocational Education Programme (VEP) was introduced in 1976–77 through the Vocationalisation of Higher Secondary Education programme in general education institutions. The National Working Group on Vocationalisation of Education (Government of India, 1985) then reviewed VEP and made several recommendations which in turn led to the setting up of the Centrally Sponsored Scheme (CSS) on Vocationalisation of Secondary Education in 1988. Its purpose was to:

- improve individuals’ employability,
- reduce the mismatch between demand and supply of skilled manpower, and
- provide an alternative for those who had entered higher education but had no real idea about what they planned to do afterwards.

More recently, the Union Budget 2011 allocated significantly more money for the implementation of vocationalisation into secondary education to increase the employability of youth, to help the country to build

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3  See [www.kkhsou.in/main/education/wood_despatch.html](http://www.kkhsou.in/main/education/wood_despatch.html)

4  Nai Talim (New Education), an educational framework initiated and promoted by Gandhi. Interactive session that Mahatma Gandhi had with teacher trainees in Wardha on Nai Talim in 1939.
a working class of youth who are competent and to further balance the supply-and-demand condition while also helping the country to become stable during economic upheavals. The Finance Minister placed this in context by stating that

Our demographic dividend, a relatively younger population compared to developed countries, is as much of an opportunity as it is a challenge. Over 70 percent of India will be of working age by 2025. In this context universalizing access to secondary education, increasing percentage of our scholars in higher education and providing skills training is necessary. (Mukherjee, 2011)

3.2 BANGLADESH

Over the last 30 years Bangladesh has made significant progress in education, which the country sees as an instrument for achieving its social and economic goals. The National Strategy for Accelerated Poverty Reduction identifies the need to promote vocational training and skill development, and vocational and technical training are a major focus of educational reforms in the medium term.

In 1999 the Bangladesh Centre for Advanced Studies (BCAS) worked with the World Bank on a venture to project the course of development up to the year 2020 (World Bank and BCAS). The World Bank’s Education Sector Review for Bangladesh (2000) used this overall development perspective to present a vision for educational development by 2020:

• One of the biggest changes will be a move from the current elitist system of general secondary education for some of the population to a system of mass secondary education that will be accessible by all. Enrolments at each level of secondary education should double, adding a total of 6 million–7 million additional student places and 120,000 teachers. The content of the curriculum will provide relevant and practical preparation for the majority of students who will not progress to post-secondary education. Resources and access will be distributed fairly and evenly.

• For the most part the government will no longer be involved in delivering vocational skills training. Employers will form an organisation to take over the direction, financing and delivery of skills training closely linked to employment opportunities in the formal sector. Instead of providing training directly, the government will concentrate on the development of policies, standards, curricula, teaching materials, instructor training and information systems — all of which are more easily done by the government than by non-government bodies. Public financing of training for the non-formal sector will expand substantially, and will be delivered for the most part through cost-sharing arrangements with non-governmental providers.
A very telling pointer for our COMOSA research is that the same World Bank study contains an interesting comment on the vocational-technical stream that was introduced at the secondary level after grade 8. It was noted that it runs counter to the general experience in this respect that shows that “vocationalising” secondary schools raises the cost of the subsector without corresponding benefit in terms of developing skills and enhancing employability of graduates. However, it also stated that international experience suggests that the most useful vocational/occupational preparation at the secondary level is a solid foundation of communication skills, mathematics and basic science that would enable graduates to take advantage of a range of skill development and training opportunities according to market demands, instead of pursuing a formal course in the secondary school itself.

Almost ten years later, the World Bank 2007 Bangladesh Development Series Paper No. 19, “Learning for Job Opportunities: An Assessment of the Vocational Education and Training in Bangladesh” (World Bank, 2007), stated emphatically that

adding vocational courses to general education in order to improve the options open to students may be useful but it is not a key to success. Such courses run the risk of introducing streaming into schools, with the majority of students being directed to high cost vocational courses as a way of rationing entry to higher education. They could also exacerbate the poor articulation between the levels of education, sending the problem further down into secondary schools. Because of inadequacies of current teaching staff, a decline in standards is just as likely to follow. The introduction of modular courses, however, would allow a best choice to be made as to whether courses should be offered through schools or through training institutes.

### 3.3 Tanzania

In 1967 the United Republic of Tanzania published Education for Self-Reliance, its national policy on education. It was the first African country to publish its policy in this way. The document acknowledged the central role of the education sector in achieving the overall development goal of improving the quality of life of Tanzanians, and marked a breakthrough in several respects. First, it was closely linked with the process of building a new nation. Second, the process of its elaboration involved intensive consultation with a variety of stakeholders. Third, it led to radical curriculum reforms, including the development and use of Kiswahili for basic education, a closer relationship between education and economic growth, and a renewed emphasis on examination-driven curricula. Fourth, every attempt was made to create a learning society, with vigorous promotion of literacy and adult education. Fifth, Tanzania's approach of national consultations leading to the elaboration of a national education policy document spread to other African countries. Since then, the government has initiated several policy and structural reforms to improve the
quality of education and ensure universal primary education to strengthen the link between education provided at all levels and the socio-economic development of Tanzania. The major policy interventions/reforms include:

- Education for Self-Reliance introduced in 1967 to guide the planning and practice of education.
- Universal Primary Education (UPE) and the Musoma Resolution (1974).
- The Education Sector Development Programme (1996).
- Vocational Education and Training Act (1994).
- The Tanzania Development Vision 2025.

As a result of these reforms and the implementation of several programmes, best exemplified in the 2007 Appraisal Report of African Development Funds “Program in Support of the Secondary Education Development Plan” (United Republic of Tanzania, 2007), the education sector registered significant improvements in adult literacy, expansion of education systems at all levels and vocationalisation of secondary education.

### 3.4 TRINIDAD AND TOBAGO

In 1995 Trinidad and Tobago was one of several governments that “pledged to counter the effects of poverty by adopting initiatives which would deliver the objectives of full employment and the fostering of stable, safe and just societies” (All, 1995). Education was highlighted as an important means of combating poverty and therefore became a primary strategy. A National Distance Learning System Secretariat was established to review national programmes and liaise with the International Centre for Distance Education and other international development agencies working in the area of distance learning. While the reform strategy for the TVET system in Trinidad and Tobago is ongoing, the following have been completed to date:

- The Accreditation Council of Trinidad and Tobago (ACTT) for Accreditation and Quality Assurance in TVET was established.
- A “seamless system of education” was introduced.
A multilevel Quality Assurance Framework for vocational education and training was introduced. It drew on:

- labour market reports based on employer surveys to provide demand-led training,
- advice from industry training organisations (ITO) regarding the development of national occupational standards, and
- forecasts about which occupations were likely to be in demand in the labour market.

And delivered results through:

- career guidance sessions and career fairs that included career advice and counselling based on the findings of the employer surveys, and
- the TTNVQ in areas in need of certified, skilled labour as highlighted by labour market reports.

Other priorities for the TVET system include prior learning assessment recognition, a national apprenticeship programme and a “seamless system of learning” within the secondary school system.

### 3.5 Botswana

Botswana’s education policy was developed systematically as part of a series of six-year National Development Plans. The Revised National Policy on Education (RNPE, 1994) has guided the programme activities of the Ministry of Education in terms of curriculum reforms and ongoing improvements in the education system since NDP 8 and its implementation was intended to cover a time frame of 25 years.

The 1997 National Policy on Vocational Education and Training (Ministry of Labour and Home Affairs, 1997) laid out a broad framework for training activities in Botswana, including formal and non-formal skills training, lifelong training for long-term benefits and training outside of traditional educational institutions (i.e., training provided by, for example, employers and training for those in the informal economy, for example, the self-employed).

The policy noted that, at the time,

> access to vocational education and training is very limited ... due to lack of available training places ... [and] Mobility between vocational education and training and academic education is minimal as many of the vocational training qualifications are not recognised as minimum entry qualification to higher level training within the academic system. (p. 6)

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5 The current NDP, NDP 10, spans 2009 to 2015.
It was noted that the challenges to “efficient provision of training” could be attributed to a number of factors, including a lack of a unified policy on training, uneven access to training, lack of standardised equivalencies for qualifications and of standardised curricula, insufficient standards of teacher training and lack of funding (p. 6).

The National Policy on Vocational Education and Training was passed by Parliament in 1997 and the National Training Act was passed in 1998; the Botswana Training Authority (BOTA) was established in 2000.

In 2001 the Ministry of Education published an overview of the education system as it stood at the end of the twentieth century (Ministry of Education, 2001). The report highlighted the components of basic education that are required to provide quality education, including “foundation skills … vocational orientation of academic subjects … practical subjects … readiness for the world of work … [and] careers guidance …”

In 2007 the Botswana Federation of Trade Unions (BFTU) produced a policy paper (Botswana Federation of Trade Unions, 2007) on education which outlined a unified labour perspective on education and proposed policy guidelines for adapting the education system to meet labour demands. Section 3.2.5 of the paper lists the key achievements of NDP 8, including the development of the Botswana Technical Education Programme (BTEP). The paper also highlighted that “non-formal education has also been part of the drive to have lifelong learning” (p. 8), and that during NDP 8 the Department of Non-Formal Education fully achieved the de-linking, expansion and transformation of the Distance Education Programme and the establishment of the Botswana College of Distance and Open Learning and the objectives that specifically addressed the Distance Education Programme were shifted to BOCODOL for implementation.

It also noted that “BOCODOL was established by an Act of Parliament in 1998 and the institution became operational in November 2000” (p. 8).

While recognising the government’s significant efforts to improve the quality and relevance of education to enable children to acquire relevant skills and knowledge, BFTU also expressed its concerns over:

- children completing ten years of education not being able to go on to secondary education;
- children with disabilities and, for example, those living in remote areas not having reliable access to education;
- a lack of both administrative and suitably qualified teaching staff;
- making education relevant to the demands of the workplace; and
- the devastating effects of HIV/AIDS on the labour force.
4

Responses to the matrix framework

Before we look at the responses of the participants, the limitations associated with the responses need to be addressed. This research study was undertaken by members of COMOSA who agreed to participate while continuing with their full-time employment commitments. In addition, the participants were in different countries and several different time zones and therefore were not all accessible at the same time, which presented several challenges to the lead researcher and consultant.

As such, this study would necessarily not meet the requirements of a full-time, in-depth research project and so must be viewed in the context outlined in the background of the study, particularly with regard to process and methodology wherein a more flexible, iterative style of eliciting responses and categorising them was used. Moreover, several of the areas considered in this study are outside the domain expertise of the participants, which would affect their level of understanding, interpretation and perception. Care has been taken to present the responses as submitted without standing in judgement or correcting them as this is their research study. The responses could therefore be at odds with others’ more detailed and in-depth understanding. While such limitations may or may not be significant in the context of a particular open school, it is more important to recognise that the entire study resulted in a better understanding of the issues involved in integrating vocational education with academic education, the need to consider a framework to do so and an identification of the gaps that need further investigation (as is evident from sections of the matrix that are marked “no response”).

A specific limitation pointed out by the Institute of Adult Education, Tanzania, was that the concept of integrating academic with vocational skills in open schools was new in Tanzania and that the proposed Integrated Post Primary Education (IPPE) programme would not be admitting learners until July 2011. Because it was a pilot programme supported by UNICEF, those responsible could not respond to all the questions contained in the matrix.

It is in this light that the responses to the issues within the context of each open school as considered in the matrix framework are presented.
4.1 ACCESS

4.1.1 National (policy and enabling framework)


Any cost that prevents a child from accessing school will be borne by the State which shall have the responsibility of enrolling the child as well as ensuring attendance and completion of 8 years of schooling. No child shall be denied admission for want of documents; no child shall be turned away if the admission cycle in the school is over and no child shall be asked to take an admission test. [...] Children with disabilities will also be educated in the mainstream schools.

The 11th five-year plan drawn up by the Planning Commission for the Government of India contains the framework for secondary and vocational education (http://planningcommission.nic.in).

BOU (Bangladesh): Bangladesh is a developing country with a population of over 148 million (World Bank, 2010). The constitution of Bangladesh gives all citizens the right to free universal primary education and secondary education for female[s]. Bangladesh is a signatory to the declaration at the [1990] World Conference on Education for All (WCEFA). The government of Bangladesh committed to achieving EFA goals and targets for every citizen by the year 2015. The country is doing well in terms of enrolment numbers and gender equality, from primary to graduate levels; it is also placing more emphasis on vocational and technical education. The Bangladesh National Education Policy 2010 put a stronger emphasis on science, basic skills in the use of ICT, vocational and job-oriented learning for youth to develop the skills and knowledge they will need in the working world (www.moedu.gov.bd/index.php?option=com_content&task=view&id=338&Itemid=416).

IAE (Tanzania): The Education and Training Policy of 1995 guarantees access to pre-primary and primary education to all citizens as a basic right. It also commits to adult literacy.

NOSTT (Trinidad & Tobago): Education remains a major pillar for development in Trinidad and Tobago and as part of the overall policy framework for the reform of the TVET system in the country. Education management is the responsibility of two ministries: The Ministry of Education is responsible for students from early childhood to secondary level and the Ministry of Science, Technology and Tertiary Education is responsible for post-secondary and tertiary education, including technical or Tech Voc (which includes TVET). Both ministries therefore provide the overarching frameworks for TVET.

BOCODOL (Botswana): The focus of both the Revised National Policy on Education (RNPE) of 1994 and the National Policy on Vocational Education and Training of 1997 emphasise access to education. Access
to primary education is close to 100% while access to junior secondary to senior secondary is around 66%. According to the National Policy on Vocational Education and Training (NPVET) only about 10% of all secondary school leavers have access to some form of vocational education but overall the government has made a lot of effort in the last 10 years to increase access to education at senior secondary and technical vocational institutions.

4.1.2 Institutional (policy, practices and offerings)

NIOS (India): NIOS offers credit transfer where credits in a vocational subject can be applied to an academic stream. A student can take four academic and one vocational subjects together. This is applicable at both secondary and senior secondary levels. If the student has completed a vocational subject and wants to do secondary or senior secondary, the credit earned in [the] vocational subject will be transferred. In addition, subjects like painting, word processing, stenography, etc, are also available to students as academic subjects.

BOU (Bangladesh): The [policy] of all educational institutions in Bangladesh, including BOU, is to support the government’s short-term and long-term educational policies. BOU provides education for underprivileged students, including those who have previously dropped out. It especially targets adults, and women in particular. It now offers JSC, SSC, HSC, DYWD, CPFP, CLP, BAgEd, Computer Science and BSc in Nursing programmes, [and] has been partially supported [by] the government’s vocational and technical education policy.

IAE (Tanzania): IAE stresses […] multiple entry and exits. It offers a wide choice of learning areas, meaning that, for example, a learner in the academic stream can take a minimum of three subjects and a learner in the vocational stream can start with one trade. IAE currently follows the national policy of 1995, but it is now under review.

NOSTT (Trinidad & Tobago): The focus is on expanding access. The purpose of the open school is to provide flexible access to educational opportunities to anyone who wants to complete their schooling.

BOCODOL (Botswana): BOCODOL’s mandate is to increase access to education and training for youths and adults. As an open and distance learning organisation, it promotes access to education by offering more flexible methods of delivery and does not have any age restrictions. BOCODOL’s fees are also low compared to those of other institutions offering the same programmes. This is a deliberate effort to help more people gain access to education.

4.1.3 Personnel (expertise: existing and required)

NIOS (India): The successful integration of both types of learning will require a pool of trained personnel for material development, transaction of courses and conducting assessments.
BOU (Bangladesh): BOU has trained some staff members in ODL systems and they are able to produce ODL materials. To integrate national vocational education with academic education in Open Schools, BOU needs a set of specifically trained personnel.

IAE (Tanzania): Material development (ICT), e-learning, curriculum development (competence based) and management are all needed.

NOSTT (Trinidad & Tobago): The current focus is on expanding access to training and certifying trainers, examiners and assessors, etc. Continuous training and retraining are especially required in new skill areas and staff need exposure to integrating technology into programme development and delivery.

BOCODOL (Botswana): BOCODOL has a staff development policy and, as an academic institution, emphasises professional development. There is also an emphasis on recruiting personnel with the appropriate qualifications. Unfortunately ODL in Botswana is a new field so it is difficult to find people with ODL expertise.

4.1.4 Capacity-building

NIOS (India): Training is required in the use of ICT.

BOU (Bangladesh): Training is required in developing audio-teleconferencing, audio-graphic communication, and interactive multimedia computer mediated communication etc.

IAE (Tanzania): Professional development programmes [are] required in terms of curriculum development, material writing, ICT and the overall philosophy of Open Schools.

NOSTT (Trinidad & Tobago): Expand training and certification opportunities through public/private partnerships. Establishment of assessment centres to accredit skills acquired in the workplace. Institutionalisation of [an] apprenticeship system at all levels of the education and training sector is needed.

BOCODOL (Botswana): Staff currently have access to professional development programmes in curriculum development, material writing, ICT and the overall philosophy of Open Schools. They are enrolled annually for in-service, short-term and long-term training. There is [a] major challenge in TVET in terms of a lack of qualified teachers so there is a need to train more teachers in this area.

4.1.5 Infrastructure availability including technology

NIOS (India): Sharing of resources among the institutions, manpower, infrastructural facilities for the expansion and universalisation of the scheme.
**BOU (Bangladesh):** BOU has a countrywide network of 12 Regional Resource Centres (RRC) and 80 Co-ordinating Offices (CO) and 1106 Study Centres. This physical infrastructure is not matched with an ICT-based network which is very limited.

**IAE (Tanzania):** Limited resources, including ICT facilities, create a great challenge.

**NOSTT (Trinidad & Tobago):** There is a need to expand and improve infrastructure in training centres. Partner with industry and the private sector to provide access to real world scenarios and learning experiences for trainees.

**BOCODOL (Botswana):** BOCODOL as a distance education institution has some infrastructure, especially in terms of the headquarters and regional offices, but it is heavily dependent on traditional public schools and colleges for classrooms. The current technology is adequate for internal management of the College but very inadequate for teaching purposes. The TVET sector has a lot of physical structures that are currently underused. Another point worth mentioning here is that almost all junior and senior secondary schools have computers but frequently no Internet connectivity. Access to the computer labs for distance education learners should be explored.

### 4.1.6 Networking and partnership with industry/employers

**NIOS (India):** The networking needs to be worked out with the relevant industry for the appropriate participation at relevant stages like curriculum development, course transaction and assessment etc.

**BOU (Bangladesh):** A Government-Non-Government Organization (NGO) partnership is required to develop the curriculum and study materials. In addition, BOU needs to develop a network with industry/employers to accommodate the vocational learners.

**IAE (Tanzania):** Collaboration is cited in various documents, but it needs to be improved.

**NOSTT (Trinidad & Tobago):** Deepen and improve collaboration between the TVET sector and all major industry stakeholders.

**BOCODOL (Botswana):** The College has a Partnership Policy, which encourages partnership with the appropriate stakeholders. To date the College has had limited partnerships with industry except in a few cases where some companies or institutions had asked the College to develop programmes for them. In general, the College has not been offering very practical programmes and therefore needs to work closely with the industry. The College is open to work in partnership with the industry if such opportunities present themselves.
4.1.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): [No response.]

BOU (Bangladesh): BOU is currently training its faculty to prepare structured questionnaires at the school level. This is part of the requirements for maintaining the equivalency of Open School programmes with the national school programme.

IAE (Tanzania): IAE is accredited by the National Council for Technical Education. Learners in the academic stream sit the National Form Examination (the same examination for formal secondary schools) and those in the vocational stream are assessed by IAE (which can be a challenge when it comes to certification).

NOSTT (Trinidad & Tobago): The introduction of workforce assessment centres to allow for skills assessment and recognition of competencies gained through informal means. The establishment of a National Training Agency with responsibility for all aspects of TVET research and development, monitoring of implementation, certification and accreditation. Central role of industry partners in the entire process is envisaged.

BOCODOL (Botswana): The secondary level programmes are presently examined by the National Examinining Body — the Botswana Examinations Council (BEC) — while the vocational programmes are accredited by the Botswana Training Authority. BOCODOL is accredited to both bodies. For the vocational courses offered by the College, such as Small Scale Business Management, the students write assignments and examinations which are set by BOCODOL; for secondary level programmes the examinations are set by BEC.

4.2 EQUITY (INCLUDING INCLUSIVITY, GENDER AND MARGINALISED GROUPS)

4.2.1 National (policy and enabling framework)

NIOS (India): India's national policy of education puts special focus on the education of female children and the marginalised groups including the tribal groups.

BOU (Bangladesh): The Bangladesh National Education Policy 2010 has emphasised education for female students up to secondary level. It also offers support to street children, disabled children, highly deprived children and tribal children.
IAE (Tanzania): According to the Education and Training Policy of 1995 the government should promote and ensure the fair and equal distribution of educational institutions. The government should also promote and facilitate access to education to disadvantaged social and cultural groups.

NOSTT (Trinidad & Tobago): The national commitment to equality extends to a focus on gender and persons with disabilities.

BOCODOL (Botswana): Various policies promote equity and there has been some improvement since the Revised National Policy on Education (RNPE) [1994], and NPVET [1997], were enacted. Recommendation 1 of the RNPE states that “equity continues to be an explicit goal of educational policy and the Ministry responsible for education and training should introduce appropriate measures to achieve greater equity.” It further goes on to say that they should develop clear indicators and target[s] so that progress can be regularly monitored and reported (p. 13).

For secondary level programmes the focus is on the number of girls taking technical subjects and their performance in Maths and Science. Overall, some level of equity in gender has been [achieved] up to senior secondary level. Some secondary level programmes have as much as 67% female enrolment.

In terms of technical and vocational education, the new Botswana Technical Education Programme has increased the number of women coming into technical vocational education. The Education Policy states that “the goal of increasing female participation in skill training and measures to achieve the goal should be included in the National Training Policy” (Recommendation 56 (i) page 30).

One of the main areas in need of attention is the provision of programmes for people with special needs.

4.2.2 Institutional policy, practices and offerings

NIOS (India): NIOS gives concessions in fees to female students, disabled students and other marginalised groups of society.

BOU (Bangladesh): To cater to those people [who] have previously dropped out of education for various socio-economic reasons; this section of people tends to be very marginalised and poor.

IAE (Tanzania): Currently no policy in place.

NOSTT (Trinidad & Tobago): Policy is guided by national stated and implied policies regarding commitment to equity with a focus on gender equity and persons with disabilities. Current vocational offerings are open to all, but with limited provision for persons with disabilities.

BOCODOL (Botswana): The College has a higher proportion of female students in secondary level courses, while the vocational and tertiary level programmes seem to be more male-dominated. Generally distance education seems to attract more females. Nowadays most new buildings are made accessible to people
with special needs, and institutions are also coming up with policies to cater for people with special needs but finding the resources to implement these changes is a challenge.

4.2.3 Personnel (expertise: existing and required)

**NIOS (India):** Capacity building will be required for training and assessment.

**BOU (Bangladesh):** To be trained in inclusive education at all institutional levels.

**IAE (Tanzania):** Qualified experts in special education are needed as well as training on how to develop teaching and learning material (both printed and ICT) for learners with special needs.

**NOSTT (Trinidad & Tobago):** There is no discrimination against persons with disabilities being employed as tutors. At least one tutor is physically challenged.

**BOCODOL (Botswana):** More expertise is needed to maximise the use of different ICT.

4.2.4 Capacity-building

**NIOS (India):** [No response.]

**BOU (Bangladesh):** Government and institutional support is required for capacity building.

**IAE (Tanzania):** Training staff for working with learners with disabilities can be organised.

**NOSTT (Trinidad & Tobago):** National capacity needs to be developed to re-purpose courses to facilitate/accommodate instructors and learners with disabilities.

**BOCODOL (Botswana):** Training on the use of different technologies to develop, deliver teaching-learning material to support learners is needed.

4.2.5 Infrastructure availability including technology

**NIOS (India):** [No response.]

**BOU (Bangladesh):** Community-level infrastructure is required in general and ICT infrastructure is required in particular.

**IAE (Tanzania):** [No response.]

**NOSTT (Trinidad & Tobago):** Limited access to hardware and software to accommodate persons with disabilities. The infrastructure in some vocational industries and training institutions may have to be adjusted to accommodate all genders and abilities (physical and other).
BOCODOL (Botswana): Significant efforts have been made but there is still a lot to be done. For example, we need to have computers that can be used by people with special needs.

4.2.6 Networking and partnership with industry/employers

NIOS (India): Networking and partnership with industry/employers required in order to implement this scheme.

BOU (Bangladesh): GO-NGO and industry/employers partnerships are required as NGOs are very active in Bangladesh in the vocational educational sector.

IAE (Tanzania): Collaboration is cited in various documents. There is a need to enhance it.

NOSTT (Trinidad & Tobago): May require an incentive scheme to encourage industry partners to avoid gender and other discriminatory practices.

BOCODOL (Botswana): There is potential but it will depend on whether the industry receives this idea since some of them are profit driven and anything new that does not help them achieve their objectives might not be welcomed.

4.2.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): Several socio-economic factors lead to inequity in education. Parents’ income, rural-urban divide, high levels of poverty, and a general lack of awareness are some of the important factors that prevent efficient and effective programme delivery. Social security measures and a creation of awareness among the general public are required. Training of personnel is required to sensitise them to these issues.

BOU (Bangladesh): Gender resistive initiatives are undertaken. Inclusive education is prioritised in the 2010 educational policy.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Developed standards ensure equity in assessment.

BOCODOL (Botswana): Equity in terms of gender is not a serious problem in Botswana but there is a lot that needs to be done for people with special needs.
4.3 QUALITY

4.3.1 National (policy and enabling framework)

NIOS (India): The Indian government has adopted the results framework approach for completion and monitoring of its scheme.

BOU (Bangladesh): To improve the overall effectiveness of the students. It depends on seeking of knowledge, critical analysis and developing positive attitudes in their personal life. These are included in [the] national education policy 2010.

IAE (Tanzania): There is no national ODL quality assurance system.

NOSTT (Trinidad & Tobago): The National Training Agency (NTA) is the quality assurance agency for TVET providers and programmes; the Caribbean Examination Council examines vocational subjects and skills taught at the secondary school level.

BOCODOL (Botswana): Quality is one of the four issues underpinning the Revised National Policy on Education and the NPVET. Recommendation 4 of the RNPE recommended the establishment of quality assurance systems for education and training; this led to the Botswana Examination Council for secondary level and Botswana Training Authority for vocational programmes being established.

Both policies focus on the assurance of the quality of education and its relevance. However, there are still issues around student-teacher ratios, especially in the public schools where at junior secondary the ratio is around 1 teacher to 40 students. For TVET, there is still a shortage of qualified teachers. The government is improving quality by taking over the Brigades, which previously were run by the Communities. [The Botswana Brigades are autonomous, community-based and government-aided school-run enterprises that engage in vocational training, income-generating production, and community development and extension work.]

4.3.2 Institutional (policy, practices and offerings)

NIOS (India): Under the Results Framework Document (RFD) plan, NIOS submits its yearly results to the Ministry of Human Resource Development.

BOU (Bangladesh): BOU’s policy is to follow the national policy.

IAE (Tanzania): A reliable quality assurance mechanism is needed.

NOSTT (Trinidad & Tobago): NOSTT functions as a unit of the Ministry of Education and is therefore regulated by the same standards that govern the delivery of TVET in schools. The curriculum division provides
the first level of quality assurance and certification is administered by the Caribbean Examinations Council (CXC).

BOCODOL (Botswana): BOCODOL has a quality assurance policy and has a quality assurance system in place.

### 4.3.3 Personnel (expertise: existing and required)

NIOS (India): Framework and indicators need to be developed for the quality feedback that needs to be taken at all levels — for example, study centre, students and parents etc.

BOU (Bangladesh): Tutors need sufficient training on the different aspects of the ODL so that they can act on that feedback.

IAE (Tanzania): Expertise on quality assurance and enhancement are needed.

NOSTT (Trinidad & Tobago): CXC and the NTA assure standardisation of training, assessment and certification across the TVET sector. However, there will be a constant requirement for public/private partnerships to provide ongoing skills updates and authentic work experience for instructors, in particular exposure to updated machinery and equipment.

BOCODOL (Botswana): This is a new field and therefore expertise on quality assurance and quality enhancement are needed. Most of those who are there have been given basic training in this area.

### 4.3.4 Capacity-building

NIOS (India): Very much needed to improve quality at all levels.

BOU (Bangladesh): Continuous professional development is required for both teachers and tutors to improve quality at all levels.

IAE (Tanzania): Training on designing monitoring and evaluation systems is needed.

NOSTT (Trinidad & Tobago): Expand and improve accreditation across the TVET sector. Expand and improve training methods and programmes focusing on standardising exit competencies. National Qualification Framework established.

BOCODOL (Botswana): Further training to build expertise is necessary.

### 4.3.5 Infrastructure availability including technology

NIOS (India): [No response.]
BOU (Bangladesh): Infrastructure needs to be strengthened, mainly ICT-enabled.

IAE (Tanzania): There are limited resources to ensure quality delivery.

NOSTT (Trinidad & Tobago): Cost of upgrading infrastructure is prohibitive, hence the need to partner with the private sector and industry to ensure training experiences are up to date.

BOCODOL (Botswana): There are inadequate resources to ensure quality delivery.

4.3.6 Networking and partnership with industry/employers

NIOS (India): Collaborations with industries, organisations, other boards of formal education and technical boards in order to maintain parity and quality.

BOU (Bangladesh): Collaborations with industry/employers, general educational boards, vocational and technical educational board in order to maintain parity and quality.

IAE (Tanzania): To ensure quality, experts from Vocational Education Authority, Agriculture Training Institutes, etc., are involved in curriculum development and assessment.

NOSTT (Trinidad & Tobago): Institutionalising the National Training Agency and Qualification Framework. The national qualifications framework promotes an understanding among stakeholders of the characteristics of different types of institutions, levels of programmes and accreditation status.

BOCODOL (Botswana): There is a need for more involvement of industry in curriculum development and delivery.

4.3.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Implementation of a standardised approach to a common unit of academic currency that will facilitate accreditation and transfer among the institutions and portability and accumulation of credits is needed.

BOCODOL (Botswana): The major requirement would be for the regulatory or accreditation bodies to work together to be able to certify subjects from both academic and vocational streams.
4.4 COST (INCLUDING FINANCING)

4.4.1 National (policy and enabling framework)

**NIOS (India):** Schools in India are of three types: government, private-aided and private-unaided. Government schools are fully funded by the government. In government-aided schools salaries and certain grants are given to schools. Unaided schools do not receive any grant from the government and are run on a purely commercial basis.

**BOU (Bangladesh):** Educational institutes in Bangladesh are of three types: fully government, registered non-government and private. Government institutions are fully funded by the government. In registered non-government institutions, salaries and certain grants are given by the government. Private institutions are run independently.

Government funds are used to finance public sector institutions and to provide subsidies to private providers at the vocational education level. Students also contribute to VET financing by paying tuition and examination fees.

**IAE (Tanzania):** The Education and Training Policy (1995) placed an emphasis on cost sharing measures involving individuals, communities, NGOs, parents and end-users and through inclusion of education as an area of investment in Tanzania’s Investment Promotion Act of 1997.

**NOSTT (Trinidad & Tobago):** The government funds all education. Public/private partnerships: concessions for the private sector for facilitating an apprenticeship programme — on-the-job training. Implementing a system of technical and vocational qualifications is a very costly undertaking. Cost indicators include infrastructure, equipment, material and human resources.

**BOCODOL (Botswana):** Secondary level and vocational education are state funded but there is now pressure on the government because of the current economic climate the Revised National Policy on Education’s suggestion of cost sharing.

4.4.2 Institutional (policy, practices and offerings)

**NIOS (India):** [No response.]

**BOU (Bangladesh):** [Using] existing infrastructures of private and government organisations must be considered especially as BOU is an autonomous organisation.

**IAE (Tanzania):** National policy has been adopted.
NOSTT (Trinidad & Tobago): As a unit within the Ministry of Education, the Open School is fully funded. There is no cost to the learner. It also means that the Open School offers limited vocational programmes in the school, which functions as an open school centre.

BOCODOL (Botswana): BOCODOL follows the RNPE and emphasises cost recovery for tertiary and vocational management programmes while the secondary level programmes charge minimal fees as they are highly subsidised by government.

4.4.3 Personnel (expertise existing and required)

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): The cost of training and retraining all levels of personnel can be prohibitive. Consideration must be given to the value that the use of technology can bring to the training process. Partnerships with the private sector to provide training and support for both instructors and learners will reduce costs. There is a need for standardised training for industry personnel who venture into vocational training. This may require forging a partnership with tertiary-level provider(s) instead of engaging them to provide training. Cross-border partnerships can also be considered.

BOCODOL (Botswana): The college's Finance Department leads issues to do with cost-recovery strategy.

4.4.4 Capacity-building

NIOS (India): [No response.]

BOU (Bangladesh): To train the personnel of BOU and relevant tutors using ODL in a cost-effective manner.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Currently funded by government but consideration should be given to regional or even Commonwealth-wide initiatives to build capacity at all levels.

BOCODOL (Botswana): Both management and staff need to be educated in this area as the economic climate is changing so that the college can sustain itself in the future.

4.4.5 Infrastructure availability including technology

NIOS (India): [No response.]
**BOU (Bangladesh):** The government is implementing its digital agenda.

**IAE (Tanzania):** [No response.]

**NOSTT (Trinidad & Tobago):** The cost of upgrading infrastructure very often results in a mismatch between qualification/certification and readiness for the world of work. Public-private partnerships allow the use of private sector plant and infrastructure to produce work-ready graduates and ensure the currency of instructors’ skills.

**BOCODOL (Botswana):** [No response.]

### 4.4.6 Networking and partnership with industry/employers

**NIOS (India):** [No response.]

**BOU (Bangladesh):** Private-public partnerships are being emphasised.

**IAE (Tanzania):** [No response.]

**NOSTT (Trinidad & Tobago):** Partnerships will reduce overall costs. Funding in the context of providing a database of job vacancies, job opportunities and training is needed. Funding for providing training providers with access to technology and management information system for data collection and information output is also needed.

**BOCODOL (Botswana):** Partnerships with public schools, colleges and industry need to [be] strengthened to maximise the use of existing facilities.

### 4.4.7 Efficiency and effectiveness (delivery, assessment and certification)

**NIOS (India):** [No response.]

**BOU (Bangladesh):** The cost of vocational education is approximately three times the cost of general government secondary school education. However, such a fund will not be feasible if employers are not willing to contribute and if resources are not earmarked for training demanded by employers.

**IAE (Tanzania):** [No response.]

**NOSTT (Trinidad & Tobago):** The government funds the National Training Agency, but there is some cost recovery for some services such as assessor training. Caribbean governments fund the CXC which manages school-based vocational qualifications. For school-based vocational qualifications levels 1 and 2,
teachers are trained as assessors; both teachers and industry personnel are trained as external verifiers. Certification is conferred by the CXC.

BOCODOL (Botswana): [No response.]

4.5 CREDIBILITY AND ACCEPTABILITY OF COURSES AND STUDENTS

4.5.1 National (policy and enabling framework)

NIOS (India): A formal policy on the integration of vocational education with academic education is yet to be introduced. NIOS is in the process of integration.

BOU (Bangladesh): The government’s formal policy on integration of vocational education with academic education has been piloted but is yet to be introduced. BOU Open School only has integration in its JSC programme; and other BOU schools offering DYWD, CPFP, CLP, BAgEd, Computer Science and BSc in nursing programmes have been partially supported by Government funding.

IAE (Tanzania): The IPPE programme, which focuses on the integration of academic with vocational education, has received positive recognition from the government, target learners and the general public. Tanzanian secondary schools are grouped into streams in which vocational/technical education is one of those streams.

NOSTT (Trinidad & Tobago): While [the] Trinidad and Tobago National Vocational Qualification Framework is in place, there is a need for a Regional and National policy for Caribbean and National vocational qualifications as the accepted standard for portable qualifications. In this regard, adoption of a competency-based approach to training in keeping with national, regional and international occupational standards is needed.

BOCODOL (Botswana): The RNPE and NPVET both mention ODL as an alternative method of increasing access [to] education but the emphasis is not strong enough for people to recognise it as a viable alternative. As a result, people continue to see secondary-level programmes offered by ODL as second best. However, this is slowly changing as more and more people study by distance. The same applies to vocational education. Because of the shortage of spaces, more people who have successfully completed their secondary education are going into TVET and this is slowly changing the way it is perceived.
4.5.2 Institutional (policy, practices and offerings)

NIOS (India): NIOS has a large student base. These students, after successful completion of secondary/senior secondary courses, have been employed in various government and private organisations. Many of them have joined other academic institutions for higher studies. Thus, credibility is not a major issue for NIOS, but integration needs to be worked out.

BOU (Bangladesh): The BOU Open School and other schools have a policy to integrate livelihood courses coupled with the general courses, but integration needs to be worked out.

IAE (Tanzania): The Institute of Adult Education operates in various regions. Integration of academic with vocational education (IPPE in particular) theoretically has received a positive response. However, this is a pilot programme in only seven districts. Its success might lead to its expansion.

NOSTT (Trinidad & Tobago): The Open School will adopt the CXC and National Training Agency (NTA) standards for programmes to be offered.

BOCODOL (Botswana): BOCODOL emphasises quality and this has changed the way people look at ODL programmes. The college is recognised worldwide and it even won the COL award for institutional excellence. The students who finish the secondary level programmes are recognised just like those who do them in the conventional system as they write the same examinations and those whose age allow[s] are allowed back into the conventional system. The college also pays attention to issues of articulation to ensure learners can progress to higher levels. There are both external and internal quality assurance measures in place.

4.5.3 Personnel (expertise: existing and required)

NIOS (India): As experimentation is still going on, training of personnel is required.

BOU (Bangladesh): Training of personnel is required.

IAE (Tanzania): Part-time teachers are used. However, the shortage of teachers in Tanzania creates a great challenge in using part-time teachers.

NOSTT (Trinidad & Tobago): Trained teachers, assessors and other personnel currently engaged by the education and other sectors will be used by the Open School system.

BOCODOL (Botswana): Generally the college employs people with the necessary skills but since this will be a new area there might be a need to work with consultants who already know about the integrated system and might be able to convince the policy makers.
4.5.4 Capacity-building

NIOS (India): Research in the areas of programme delivery, efficacy, monitoring and quality assurance is required. NIOS has a capacity building cell which can take responsibility for this.

BOU (Bangladesh): Already experienced in implementing some programmes that integrated general and vocational courses.

IAE (Tanzania): An in-service course for teachers, supervisors and coordinators is planned.

NOSTT (Trinidad & Tobago): Training is provided by CXC and NTA.

BOCODOL (Botswana): There will be a need for workshops and on-the-job training to familiarise people with the integrated system.

4.5.5 Infrastructure availability including technology

NIOS (India): [No response.]

BOU (Bangladesh): Networked with the different GO-NGOs and private institutions.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Schools that function as open school centres are accredited to offer Level 1 and 2 CVQs (Caribbean Vocational Qualification).

BOCODOL (Botswana): [No response.]

4.5.6 Networking and partnerships with industry/employers

NIOS (India): NIOS has a strong network with about 5,000 study centres throughout India. Moreover, it acts as an apex body for the promotion of state Open Schools.

BOU (Bangladesh): BOU has a strong network with about 1,200 study centres throughout the country.

IAE (Tanzania): IAE is accredited by the National Council for Technical Education. In the Integrated Post Primary Education programme the aim is to match learners to prospective employers.

NOSTT (Trinidad & Tobago): There is a need to network and partner with other providers and the private sector.

BOCODOL (Botswana): The college is accredited by all the necessary national regulatory bodies to ensure its programmes are accredited. The college uses similar institutions for benchmarking and to validate its programmes.
4.5.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): The Open School will adopt existing school systems thereby ensuring efficiency and effectiveness.

BOCODOL (Botswana): [No response.]

4.6 CURRICULUM DEVELOPMENT

4.6.1 National (policy and enabling framework)

NIOS (India): The central government occasionally formulates national policy on education (1968 and 1986). It includes broad guidelines on content and the process of education at different stages. India follows the 10+2+3 framework of education. The guidelines for curriculum development for 10 years of schooling (secondary) and subsequent two years (senior secondary) are further elaborated by the National Council of Educational Research and Training (NCERT). The framework for graduation and higher studies are within the purview of the University Grants Commission (UGC).

At the secondary and senior secondary levels there are three certifying boards — Central Board of Secondary Education (CBSE), Council for Indian School Certificate Examinations (CISCE) and National Institute of Open Schooling (NIOS) — and 23 state boards. See [http://en.wikipedia.org/wiki/Boards_of_Education_in_India] for the list, year of establishment and their set up. The state boards either adopt or adapt the NCERT curriculum keeping regional cultural aspects in view.

NIOS has a national jurisdiction and offers academic programmes through ODL. There are 14 state open schools offering secondary and senior secondary education in the ODL mode at state levels. A major issue here is the use of English as a medium of education. All private unaided schools offer education in English in the hope that it gives students a competitive advantage. There is a lot of heterogeneity across states regarding the introduction of English. Some states have introduced English from grade one.

BOU (Bangladesh): According to the National Educational Policy 2010, Bangladesh follows [(5 (Class 1-5) + 3 (Class 6-8)) Primary] + [4 (Class 9-12) Secondary] + 4 (University higher education) framework of
education (www.moedu.gov.bd/index.php?option=com_content&task=view&id=338&Itemid=416). National Curriculum and Textbook Board (NCTB) is the apex body for developing a curriculum of eight years of primary schooling plus four years of secondary education in Bangladesh. The Bangladesh Technical Education Board (BTEB) is responsible for developing vocational and technical education curricula, especially SSC (VOC), HSC (VOC) and HSC (BM), etc. The framework for graduation and higher studies are within the purview of the University Grants Commission (UGC).

The Board of Intermediate and Secondary Education (eight boards), Technical Education Board and Madrasa Education Board issue various types of certificate for primary, secondary, vocational and technical education.

The national curriculum is customised for the BOU Open School.

IAE (Tanzania): The Education and Training Policy 1995 provides ODL institutions with the mandate of designing and developing curricula.

NOSTT (Trinidad & Tobago): A harmonised (industry-NTA) approach to the development of standards ensures that training is relevant to the world of work. A modular curriculum design allows for flexible approaches to delivery.

BOCODOL (Botswana): The act that established the college gives it the mandate to develop new programmes in line with that mandate. This would include having to develop a curriculum where no national one exists.

4.6.2 Institutional (policy, practices and offerings)

NIOS (India): The schools get affiliation to one of the certifying boards (central or state level) and follow the curriculum of that board. There is mutual recognition of the certificates issued by the boards, so students do not face problems if they switch institutions and can migrate from one board to another. Differences in performance across schools are largely due to teacher quality, teaching aids and teaching environment. There is [a] lot of competition between unaided schools. Their business depends on their students' results.

BOU (Bangladesh): All Bangladesh educational institutions offering primary and secondary levels of education follow the national curriculum and are governed by the respective educational boards of Bangladesh.

There may have been some differences observed in the quality of education and performance of students. These are due to the lack of infrastructure facilities and to the quality of teachers. The same situation is found in technical and vocational education, and is also due to a lack of monitoring and proper guidance.

IAE (Tanzania): IAE is guided by the national Education and Training Policy 1995.

NOSTT (Trinidad & Tobago): National standards guide the development.
**BOCODOL (Botswana):** College policies support the development of curricula by the college where necessary. The college has a number of programmes that it started on its own and developed curricula for them.

### 4.6.3 Personnel (expertise: existing and required)

**NIOS (India):** There is a shortage of teachers in schools in India, especially at primary level. According to Kapil Sibal, Minister HRD, Government of India, India is short of 1.2 million teachers; 42 million children aged between 6 and 14 do not go to school; roughly 16% of all villages do not have primary schooling facilities and 17% of schools have only one teacher. Uttar Pradesh doesn’t have a single teacher in more than 1,000 primary schools and roughly 15% [of] teaching posts lie vacant in schools across Maharashtra. This figure rises to 42% in Jharkhand. Only Kerala, with an average of six teachers per primary school, is the exception to the rule.

The big picture is bleak. India’s average [teacher to student] ratio is 1:42, a high figure by international standards. In Bihar, the ratio is as high as 1:83 in places. Though student enrolment has increased in recent years, the dropout rate has kept pace. Lack of adequate facilities, large-scale teacher absenteeism and a lack of qualified teachers are some of the reasons for the high drop-out rate. (See [www.echarcha.com/forum/showthread.php?t=36088](www.echarcha.com/forum/showthread.php?t=36088).)

**BOU (Bangladesh):** There are shortages of well-trained, quality teachers from the primary to secondary levels, especially in rural and remote areas. All the quality, experienced teachers are in the urban areas, which may have created a huge gap between urban and rural areas. BOU faculty have been exposed [to] and trained in developing curriculum.

**IAE (Tanzania):** In general there is a shortage of qualified curriculum developers in Tanzania.

**NOSTT (Trinidad & Tobago):** [No response.]

**BOCODOL (Botswana):** The college has staff with some experience in developing curricula but they are not experts in this area.

### 4.6.4 Capacity-building

**NIOS (India):** According to HRD Minister Kapil Sibal there is a shortage of quality institutions to train teachers. The problem is that not enough students are enrolling for Bachelor of Education (B. Ed.) courses and there are not enough quality training institutions. Across the world, the best minds opt for teaching profession but this is not happening in India. There is a need to give them more incentives. (See [www.echarcha.com/forum/showthread.php?t=36088](www.echarcha.com/forum/showthread.php?t=36088).)

**BOU (Bangladesh):** Staff have to be trained in pedagogy.
IAE (Tanzania): To ensure relevant curricula are in place, [...] practical training on curriculum design and development is required.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Training and working with consultants will be necessary for the college to develop a curriculum for an integrated programme.

4.6.5 Infrastructure availability including technology

NIOS (India): There is a general shortage of teachers and school buildings in government-run schools in many states. (See www.doccentre.org/docsweb/Education/infrastructure.html.)

The government of India declared 2010-2020 the decade of innovation. Reasoning and critical-thinking skills are necessary for innovation. The foundation for these skills is laid at the school level. Affordable ICT tools and techniques should be integrated into classroom instructions right from the primary stage to enable students to develop the requisite skills. The National Curriculum Framework 2005 (NCF 2005) also highlighted the importance of ICT in school education.

As a first step in this direction, all CBSE-affiliated schools are advised to have at least one classroom in their schools equipped with technology to enable usage of digital instruction materials in the classroom. Teachers wishing to teach a topic with multimedia resources can take their class to this classroom. (See www.icbse.com/2010/ict-schools-education-india.)

BOU (Bangladesh): As Bangladesh is a developing country there have been some limitations on developing a well-equipped and well-furnished educational institution including technology. Teacher training facilities are minimal, but plans are in place for setting up training for staff development.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Office space and computers are available for the existing staff and with time the college will able to make arrangements for additional staff if necessary.

4.6.6 Networking and partnership with industry/employers

NIOS (India): School education in India is offered by both the public and private sectors. Many [corporate organisations] have opened up schools in cities. These schools offer the best infrastructural facilities but their fees are quite high. The government offers subsidised land and tax breaks to the education sector.

BOU (Bangladesh): [No response.]
IAE (Tanzania): Working with the Tanzania Institute of Education which is responsible for designing and developing curricula for formal education.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Industry will have to be heavily involved to drive the development of this curriculum for it to be relevant to their needs. In the past their involvement was limited at best.

4.6.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): Teacher training, as mentioned above, is a weak point as many teachers are untrained. This often affects the quality of teaching. Many private coaching centres have opened up and are doing very good business in India. Most parents make it a point to send their children for private tuition.

BOU (Bangladesh): A shortage of skilled teachers and lack of infrastructure facilities means that students’ education suffers in some areas. Assessment and certification is equal to the national level.

IAE (Tanzania): Curriculum documents are found in all centres.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.7 MATERIALS DEVELOPMENT

4.7.1 National (policy and enabling framework)

NIOS (India): The NCERT develops and markets textbooks that mirror its curriculum. Similarly, state boards develop textbooks according to their syllabus needs.

BOU (Bangladesh): The NCTB developed textbooks according to the curriculum and syllabus. These text materials are distributed to learners by the Ministry of Education for free from class 1 to class 10. BTEB developed text materials for vocational education.

IAE (Tanzania): The Education and Training Policy 1995 states that the government should provide an enabling environment for the production, distribution and availability of instructional and learning material, equipment and libraries.

NOSTT (Trinidad & Tobago): [No response.]
BOCODOL (Botswana): The different institutions are expected to provide all the necessary resources to support learning. The write-up for the policy mentioned the need for the college to have an expanded material production capability for print and audio material.

4.7.2 Institutional (policy, practices and offerings)

NIOS (India): The government-funded schools in the states use the textbooks developed by the affiliating state board. In the case of schools affiliated to the CBSE or CISCE, students follow the textbooks developed by the NCERT. Some of the unaided schools prescribe textbooks written by specific authors on the grounds that NCERT books are of inferior quality. Government-aided schools usually do not have an option but to follow prescribed textbooks.

BOU (Bangladesh): To maintain equity amongst all schools in Bangladesh, they follow the text materials produced by NCTB. BOU’s customised national curriculum is formally approved by the Academic Council and [it] produced the text materials by using its own and national resources and experts.

IAE (Tanzania): Guidelines for writers of materials are in place.

NOSTT (Trinidad & Tobago): The Open School uses a collaborative model for materials development. Occupational standards will guide this activity for a blended learning delivery mode.

BOCODOL (Botswana): Guidelines for materials development are in place.

4.7.3 Personnel (expertise: existing and required)

NIOS (India): [No response.]

BOU (Bangladesh): There is some expertise to produce text materials at a national level. BOU’s staff produced their text material with the help of external experts.

IAE (Tanzania): Experts on writing printed materials are available, although writing interactive material has been very challenging. Experts on ICT materials are required. Experts in Science (e.g., Biology) and Mathematics are required.

NOSTT (Trinidad & Tobago): Content developers will be practising instructors who will be trained in instructional design.

BOCODOL (Botswana): The college has experts on writing printed and audio materials who have also had some experience in writing online and video materials. Experts to consolidate skills in writing online and video materials are needed.
4.7.4 Capacity-building

NIOS (India): The NCERT has been a large depository of resources for material development at the school level. It has developed textbooks for all subjects at secondary and senior secondary levels. Very few books on vocational education are developed by NCERT. NIOS has been another institution which developed textbooks in all subjects for secondary and senior secondary students. NIOS has textbooks on vocational education on a wide spectrum of subjects.

BOU (Bangladesh): To produce good quality ODL text materials for formal and vocational education BOU’s staff need more training in instructional design, quality assurance, etc.

IAE (Tanzania): Workshops for material writing are organised. However, experience shows that provision of long training and enough practical experience is important. Writing material for Science subjects (e.g., Biology) is a great challenge. Training is needed.

NOSTT (Trinidad & Tobago): There is a need to enhance and expand the continuous capacity building activities that are internally and externally facilitated.

BOCODOL (Botswana): Workshops on handling practical courses are required.

4.7.5 Infrastructure availability including technology

NIOS (India): Use of computers and ICT in material development is widespread in India. Infrastructural support for material development is not a problem in India. The printing and publishing industry is very competitive and so there are many publishers and printers who will do the job for a reasonable price.

BOU (Bangladesh): Text materials are currently developed electronically. In Bangladesh there are many printing and publishing industries, so good quality text materials can be produced at a competitive price.

IAE (Tanzania): IAE has to ensure that ICT is used in teaching and learning.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Most of the infrastructure is in place. The college has computers with the necessary software and the infrastructure required to produce video and audio materials.

4.7.6 Networking and partnership with industry/employers

NIOS (India): Involvement of industry and prospective employers in curriculum design is a weak point in India. The curriculum is usually taken care of by academics but policy makers are slowly becoming more aware of the need for outside involvement in curriculum development. Institutions like NIOS have made some progress in this direction.
BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Partnerships with the publishing companies.

**4.7.7 Efficiency and effectiveness (delivery, assessment and certification)**

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Feedback from the field shows that the materials have to be constantly reviewed to amend any errors in the materials. However, some think that the materials are very good and some students enrol in BOCODOL just to have access to the materials before going back to the conventional system. Generally the BOCODOL students compete very well with those in the conventional system in terms of performance.

**4.8 LEARNER SUPPORT**

**4.8.1 National (policy and enabling framework)**

NIOS (India): [No response.]

BOU (Bangladesh): The national government distributes course books free of cost from class 1 to class 10. The government also provides some sorts of stipend for girls who are enrolled in public institutions.

IAE (Tanzania): The Open and Distance Learning Service Provider’s Guide is in the final stage of development.

NOSTT (Trinidad & Tobago): Standards for face-to-face contact and skills/competencies development are stipulated in operational manuals.
BOCODOL (Botswana): Recommendations 79 and 83 advocate a strong support system for students studying secondary level programmes by distance.

4.8.2 Institutional (policy, practices and offerings)

NIOS (India): NIOS has a fully functioning student/learner support department as well as a 24/7 call centre managed by five or six executives. All queries related to admission, examination, etc., are answered by this department. NIOS develops self-learning materials, practical guidelines, and audio/video, CDs and online content. It also provides personal contact programmes (PCP) at study centres.

BOU (Bangladesh): BOU has a wide-ranging network all over the country through its 12 regional resource centres (RRC) and 80 coordinating offices (CO). Learners can get all kinds of information related to admission, tutorial services, examinations, etc., from RRCs and COs. Self-learning materials are provided for the learners through RRCs and COs. BOU has made an audio-visual programme that is broadcast through national television and radio. BOU organises fortnightly face-to-face tutorial supports for the learners.

IAE (Tanzania): Expected to adopt a national guideline.

NOSTT (Trinidad & Tobago): The Open School will adapt/modify/extend its learner support structure and system to accommodate vocational learners.

BOCODOL (Botswana): The College, in the National and College Strategic Plans, emphasises the strengthening of its learner support services. The College uses decentralised learner support services in order to bring its services closer to the learners. Five regional centres are strategically placed to serve different parts of the country. Each region has several learning centres where learners meet for tutorials and can access most other services.

4.8.3 Personnel (expertise: existing and required)

NIOS (India): [No response.]

BOU (Bangladesh): Tutors are outsourced on a part-time basis.

IAE (Tanzania): Education counsellors are required.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): The college has staff in the various regions who are responsible for the delivery of programmes and have the necessary expertise to support learners. Among them are Learner Tutor Coordinators who are professionals in guidance and counselling, part-time tutors and content specialists.
4.8.4 Capacity-building
NIOS (India): NIOS has recently developed a capacity-building cell to undertake training programmes.

BOU (Bangladesh): Tutors should be trained in ODL systems, but very few of them are.

IAE (Tanzania): Training on tutoring and counselling is required.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Further training on how to support practical or vocational courses would be needed.

4.8.5 Infrastructure availability including technology
NIOS (India): A model training institution needs to be established to assist learners in making the transition from services to employment and further education training.

BOU (Bangladesh): At BOU, in-house training facilities are minimal. BOU is in the process of establishing a model training centre for staff development.

IAE (Tanzania): At the moment IAE is not using ICT to support learners in their learning.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Some available especially public schools and colleges. The college also has a big regional centre in Maun, which will allow the college to offer a lot of new programmes.

4.8.6 Networking and partnership with industry/employers
NIOS (India): A placement cell needs to be established to create links with potential employers. This would provide a comprehensive range of the skills needed in growing industries. The vocational courses should combine centre-based training and on-the-job training with selected industry partners.

BOU (Bangladesh): In vocational education industry-based or employers’ need-based learning support would be provided at their premises. The vocational courses should combine centre-based training and on-the-job training with selected industry partners.

IAE (Tanzania): In the IPPE learners will be in apprenticeship training.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Partnerships with the industry will have to be established.
4.8.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): A proper system for distribution of study material is in place. Study material along with question papers, assignments and prospectuses are available on the NIOS website.

BOU (Bangladesh): Texts contain self-assessed problems and solutions; mid-term assessment and terminal examinations are also provided by BOU.

IAE (Tanzania): Printed materials are delivered on time.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.9 MANAGEMENT

4.9.1 National (policy and enabling framework)

NIOS (India): [No response.]

BOU (Bangladesh): Management is ensured as per the requirements laid out by the Ministry of Education.

IAE (Tanzania): Guidelines for managing open schools are in the final stage of development.

NOSTT (Trinidad & Tobago): The management structure to include personnel with specific responsibility for TVET.

BOCODOL (Botswana): The Revised National Policy on Education (RNPE), 1994 stated that BOCODOL should be established as a parastatal organisation of the Ministry of Education governed by a board; the act that established the college stipulated the organisations that should be represented on the college board.

4.9.2 Institutional (policy, practices and offerings)

NIOS (India): [No response.]

BOU (Bangladesh): BOU is run by the requirements of the act that established it. All its academic and administrative activities are directed by the rules and regulations which are approved by the Academic Council and Board of Governors.
IAE (Tanzania): Guidelines for managing Open Schools (ODL Centres) are in place. They describe the functions of centre supervisors, coordinators and teachers.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Guidelines for managing Open Schools (ODL Centres) are in place. They describe the functions of centre supervisors, coordinators and teachers.

4.9.3 Personnel (expertise: existing and required)

NIOS (India): [No response.]

BOU (Bangladesh): Personnel management has been increasing day by day.

IAE (Tanzania): Managers who can meet the demands of a changing society are required.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): In place but would need grooming to handle vocational courses.

4.9.4 Capacity-building

NIOS (India): [No response.]

BOU (Bangladesh): Proper training is required in human resource management.

IAE (Tanzania): IAE is planning to organise short courses on management of Open Schools.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.9.5 Infrastructure availability including technology

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Some in place.
4.9.6 Networking and partnership with industry/employers

NIOS (India): [No response.]

BOU (Bangladesh): Already partnered with KOICA for launching e-learning.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): Benchmarking with institutions that have successfully implemented the integrated system.

4.9.7 Efficiency and effectiveness (delivery, assessment and certification)

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.10 BEST PRACTICES

4.10.1 National (policy and enabling framework)

NIOS (India): Yet to be established.

BOU (Bangladesh): There are thirteen national bodies that coordinate TVET in Bangladesh with the objective of increasing job-oriented skilled manpower who are engaged in different sector[s], industries and self-employment.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): The NTA has a proactive and structured system for development, implementation, monitoring and evaluation of TVET training.

BOCODOL (Botswana): [No response.]
4.10.2 Institutional (policy, practices and offerings)

NIOS (India): Yet to be established.

BOU (Bangladesh): Bangladesh has 3,116 vocational and technical education and training institutes where 453,375 students were enrolled in 2008. BOU has some programmes that offer some vocational courses.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.10.3 Personnel (expertise: existing and required)

NIOS (India): Yet to be established.

BOU (Bangladesh): Students who take vocational education and training are contributing a lot to their families, society and the country (economically).

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.10.4 Capacity-building

NIOS (India): Yet to be established.

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]

4.10.5 Infrastructure availability including technology

NIOS (India): Yet to be established.

BOU (Bangladesh): Yet to be established.
IAE (Tanzania): [No response.]
NOSTT (Trinidad & Tobago): [No response.]
BOCODOL (Botswana): [No response.]

4.10.6 Networking and partnership with industry/employers
NIOS (India): Yet to be established.
BOU (Bangladesh): Yet to be established.
IAE (Tanzania): [No response.]
NOSTT (Trinidad & Tobago): [No response.]
BOCODOL (Botswana): [No response.]

4.10.7 Efficiency and effectiveness (delivery, assessment and certification)
NIOS (India): Yet to be established.
BOU (Bangladesh): Yet to be established.
IAE (Tanzania): [No response.]
NOSTT (Trinidad & Tobago): [No response.]
BOCODOL (Botswana): [No response.]
5

Further exploration through Questionnaire 1

Questionnaire 1 aimed to elicit more detailed information about the context, potential and challenges of integrating vocational education into academic education so that it could be more deeply understood. A selection of the questions is reproduced below. The responses provide insights into each participant country’s open schooling and were used as the basis for a workshop at which each participant would ultimately have it as a checklist. Note that care has been taken to present participant responses as submitted.

5.1 EXPLORING THE POTENTIAL OF OPEN SCHOOLING

5.1.1 Section A: Background

Q 13. What is the highest priority educational need in your country?

NIOS (India): Primary and secondary education along with vocational education and training are India’s top priority.

1. Education of girls has been a high priority for the Government of India. The national commitment to provide free and compulsory education to all children in the 6–14 age group is now a fundamental right of every child in India after the passing of the Constitution Act. The Constitution (86th Amendment) Act, 2002, enacted in December 2002 seeks to make free and compulsory education a fundamental right for all children aged 6–14 by inserting a new Article 21-A in Part III (“Fundamental Right”) of the Constitution.

2. Rashtriya Madhyamik Shiksha Abhiyan (RMSA), which is the most recent initiative of Government of India to achieve the goal of Universalisation of Secondary Education (USE).

BOU (Bangladesh): Develop the infrastructure, increase the number of schools, increase the number of trained teachers, continuous monitoring of the performance of teachers and schools to ensure quality education.
IAE (Tanzania): In Tanzania today there are several efforts to make secondary education compulsory. The government is also expanding higher education through partnership with private providers. Expanding vocational education and training more teachers to meet the expansion of primary and secondary education are also priorities.

NOSTT (Trinidad & Tobago): Increasing the participation of post-secondary students in vocational/tertiary-level education.

BOCODOL (Botswana): I think the country’s priority is for everybody to acquire a basic education.

5.1.2 Section B: Access to education

Q 1. What factors prevent students from continuing their education from primary to secondary school?

In addition to the answers below, with respect to why students drop out of secondary school (Q 3), IAE (Tanzania) identified dropout due to early pregnancy and marriage; economic status of parents (some parents failed to provide their children with basic requirements); deviant behaviour — for example, drug abuse, drinking alcohol, etc. — and home responsibilities, while BOU (Bangladesh) pointed out that with respect to girls, additional factors were early marriage, distance of school from home, co-education in rural areas and bad associations. BOCODOL (Botswana) identified reasons as mainly pregnancy, lack of motivation, poor performance or shortage of places at senior secondary level.

Additional comments were provided by NIOS (India) with respect to the open schooling system being recognised by the government as an agency for the assessment of adult learners in its flagship programme Sakshar Bharat, also known as the National Literacy Mission. IAE (Tanzania) pointed out that in Tanzania the concept of open schools is uncommon, although occasionally mentioned. The concept of ODL centres is used instead. In my opinion there is a need to emphasise the notion of open schools because “ODL centre” is a generic term.

NIOS (India): Needed at home to participate in the basic tasks of the household economy; relegated to tasks such as caring for their siblings, tending grazing cattle, failure to pass examinations as their reason for discontinuance of education; parents are “not interested” in education because of lack of awareness; schools being far away from home, especially for girls; not enough female teachers in schools to teach the females/girls.

BOU (Bangladesh): Poverty; child labour; parents’ education and perception of education; cost of education; migration; death or disability of parents; economic constraints; parents remove them to earn money by any means to help the family; association of evil activities; influence of naughty friends.
**IAE (Tanzania):** Limited opportunities in secondary schools; low achievement in primary school leaving examinations; dropout due to early pregnancy and marriage; multiple responsibilities — for example, supporting infants, especially for girls; disadvantaged/marginalised groups, including nomads, pastoralists.

**NOSTT (Trinidad & Tobago):** Poverty, need to work to provide for siblings/family, teenage pregnancy, lack of ability to cope with secondary school system, lack of interest in education (boys), lack of a supportive home/school environment, bullying.

**BOCODOL (Botswana):** At primary and junior secondary level many girls drop out of school because of pregnancy but the government has a policy where they are able to come back to school. The other factor which contributes to dropout at primary level is poverty and distances from the schools. The main reason that affects students from continuing to senior secondary is the shortage of places in the schools. The schools are only able to accommodate about 75% of those who finish junior secondary.

### 5.2 EXPLORING TVET

**5.2.1 Section A: Policy, planning and management of TVET systems**

In this section we were interested in learning about ways in which policy, planning and management of TVET systems have been improved in each country. Participants were asked to think about initiatives that have been introduced and steps that may have been taken in the past five years to:

- develop a national approach to TVET, and
- establish a national body responsible for co-ordinating planning in TVET.

NIOS (India) pointed out that the government introduced a national skill policy and in its 11th five-year plan suggested that vocational education and training (VET) should be provided to those who need skills for a sustainable livelihood and to meet the challenges of the world of work. The concept of Vocational Education and Training to All should be promoted through both the formal and non-formal education systems. It should cater to the needs of different target groups, with special provisions for disadvantaged groups such as girls/women, scheduled castes, scheduled tribes, persons with disabilities and persons living in difficult circumstances.

VET may be implemented as a Central Sector Scheme (with 100% central government funding) with an outlay of Rs.7070 crore.

In 2008, the government established a National Skill Development Council under the chairmanship of the prime minister. An umbrella body named the National Vocational Education and Training Commission (National VET Commission), involving all stakeholders, may be set up for providing overall vision...
and co-ordination in planning and delivery of VET by different agencies. Amongst other things, it should undertake key systemic tasks, lay down guidelines and broad approaches and mobilise support and cooperation from different stakeholders.

BOU (Bangladesh) indicated that, in 2007, the country took on a major project with the help of the ILO to review TVET policies, strategies and systems (TVET Reform Project, 2008). In recent years, Bangladesh has made considerable progress in the reforms of the TVET system from its outdated curriculum and delivery strategies. The Reform Project ended its activities with the following outcomes:

- New national TVET policy that will allow the TVET system to function more effectively at central and decentralised levels.
- New national qualifications framework for TVET.
- New skill standards and curriculum in priority occupations.
- New quality assurance arrangements for training organisations.
- Enhanced links between industry and TVET.
- Strengthened TVET institutions through improved knowledge and skills of managers and teachers.
- Improved skills development resulting in enhanced productivity and competitiveness in key growth and export-oriented industries in the formal industrial sector.
- Increasing access of underprivileged groups to TVET.

(See Technical and Vocational Education and Training (TVET) Reform Project in Bangladesh at www.ilo.org/dhaka/Whatwedo/Projects/WCMS_106485/lang--en/index.htm.)

BOCODOL (Botswana) pointed out that the country is still working on a National Qualification Framework which, once established, will provide a standardised framework for TVET and other sectors.

The Ministry of Labour and Home Affairs has overall responsibility for vocational education and training. Under this ministry, the Botswana Training Authority (BOTA), a regulatory body, was established in 2000 to co-ordinate and monitor the training provided by vocational training institutions and to ensure that quality skills are supplied to industry. Under the Ministry of Education and Skill Development, the Department of Vocational Education and Training (DVET) is the main organ charged with co-ordinating TVET. It is directly responsible for the public institutions offering TVET in the country.

Specific responses to questions follow.

**Q 1. Has your country developed a national strategy, or national plan of action, for TVET?**

**Q 2. If so, could you please attach a copy of the strategy/plan, or attach a summary of the strategy/plan?**
NIOS (India) and BOCODOL (Botswana) answered yes, and BOCODOL further explained that there is a National Development Plan where all the ministries in Botswana submit their five-year plans. TVET is involved in this under the Ministry of Education and Skills Development and under the Ministry of Labour and Home Affairs.

**Q 3.** *Was the skills development strategy/plan developed within the context of an overall national development plan? Or maybe as part of your country’s Education for All (EFA) plan?*

While NIOS (India) indicated that it was part of the overall national development plan, BOU (Bangladesh) pointed out that the nation has a vision of “an integrated, peaceful, prosperous Bangladesh, driven by its own people to take its rightful place in the global community and the knowledge economy.” In its Plan of Action, Bangladesh recognises the importance of TVET as a means of empowering individuals to take control of their lives. BOCODOL (Botswana) indicated that the skills and development plan is guided by the policies already mentioned — that is, the National Policy on Vocational Education and Training (NPVET), the Revised National Policy on Education (RNPE) and EFA.

**Q 4.** *Has your country established a national body to co-ordinate TVET?*

**Q 5.** *If so, please provide details.*

NIOS (India) indicated that the following agencies were involved in the formulation and implementation of TVET in the country:

- Central Government
- National Skills Development Council ([www.nsdcindia.org](http://www.nsdcindia.org))
- Ministry of Human Resource Development ([www.education.nic.in](http://www.education.nic.in))
- Department of School Education and Literacy (for TVET programmes in senior secondary schools)
- Department of Higher Education (for Technical Education)
- Ministry of Labour and Employment, Directorate General of Employment and Training (for Vocational Training) ([www.labour.nic.in](http://www.labour.nic.in))
- Central Ministries and Departments run small TVET programmes
- State Government
  - Directorate of Technical Education
- Private sector
- NGOs
5.2.2 Section B: Access to TVET

Over the past five years there has been a substantial increase in the funding of TVET to increase opportunities for training and technical and vocational education. Training has also become more organised.

BOU (Bangladesh) affirmed that Bangladesh had established a national body to co-ordinate TVET. The TVET policy guidelines and implementation strategies are decided by the National Council for Skill Development and Training (NCSDT) and the Bangladesh Technical Education Board (BTEB), which has jurisdiction over the entire area of Bangladesh to organise, supervise, regulate, control and develop technical and vocational education.

National bodies that co-ordinate TVET in Bangladesh are:

- National Skills Development Council (NSDC)
- The Bangladesh Technical Education Board (BTEB)
- Directorate of Technical Education (DTE)
- Bureau of Manpower, Employment and Training (BMET)
- Department of Youth Development (DYD)
- Directorate General of Health Services (DGHS)
- Bureau of Non-Formal Education (BNFE)
- Department of Women Affairs (DWA)
- Department of Textiles (DOT)
- Department of Agriculture (DOA)
- Ministry of Industries (MOI)
- Industry Skill Committees
- Division Skills Development Consultative Committees

(See www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-dhaka/documents/publication/wcms_121310.pdf.)

The Bangladesh National Technical and Vocational Qualifications Framework (NTVQF) will include two pre-vocational levels to introduce additional pathways in general education and to cater for underprivileged and low-educated groups in society. It will also include five vocational levels and one level for diploma-level qualifications. Under the NTVQF, training organisations will also be able to issue a Statement of Attainment for specific units of competency when only parts of the full programme have been completed.

Vocational education programmes in schools — such as the SSC (VOC), HSC (VOC) and HSC (BM) — will be revised to ensure that the vocational components are based on industry competency standards and that students only receive NTVQF qualification if they are assessed as competent.
The TVET is provided at the secondary level. For the large number of non-formal trade courses, the TVET starts after eight years of schooling and, for a few selected trades, after secondary level. The TVET programmes run by the government agencies, NGOs and private institutions are not standardised and are non-formal except for those programmes provided by the vocational training institutes of the MOE and Technical Training Centres of the MOLM.

The Bangladesh Open University was established in 1992 to produced skilled, educated manpower in the country. It provides education for underprivileged persons and learners, especially for female and adult learners, who had previously dropped out of education. Now it is offering SSC, HSC, DYWD, CPFP, CLP, BAgEd, Computer Science and BSc in Nursing programmes, partially funded by the Government.

Resources have always been a constraint in the delivery of the TVET. The Asian Development Bank (ADB), through a loan project, trained about 68,200 people in Bangladesh between 2007 and 2012. The project identified the following problems: the TVET system is poor and the needs of the employment sectors are mismatched as the practical component of the curriculum is not taught effectively; a majority of the teachers lack training and practical skills and have no industrial experience; the TVET institutions have poorly equipped workshops; and there is a lack of both teaching and training materials, and adequate classrooms and workshops.

While wages for graduate teachers are not higher than wages for those with a general education, TVET is very expensive compared to other education subsectors. Calculations, based on data provided by the DTE, show that the annual unit cost of vocational education is approximately Tk16,000 — nearly three times the cost of general government secondary schools. The unit cost in public vocational training institutions is Tk13,530 a year.

ICT-based technical education depends on the availability of computers and Internet facilities, and the use of computers in research work. It has been observed that any improvement in students’ learning is facilitated through introducing more ICT facilities, as well as increasing the number of ICT-expert teachers. At least one study has shown that learners do not have enough access to ICT. (See www.academicjournals.org/IJVTE/PDF/Pdf2011/Feb/Jinnah%20et%20al.pdf.)

As of 2001, the Ministry of Science & ICT, in co-operation with the Directorate of Secondary Education and the Directorate of Vocational Education, has been developing an e-learning programme. The objective of this programme is to improve the quality of education at high school and vocational school levels through the use of the Internet. However, due to a lack of co-ordination and government initiative, the programme is being delayed. The plan is to bring 360 upazilas into the programme and set up 360 institutes, one in each upazila.

The Bangladesh Bureau of Educational Information and Statistics notes that

the students whose interest is not strictly academic may find technical-vocational programmes more interesting and more valuable for their future. Government tries to ensure that the course curriculum should be relevant to students' interest and aspirations while at the same time it should address the needs of the job market. (BANBEIS, 2010)
IAE (Tanzania) indicated two bodies: Vocational Education Authority (VETA), and National Council for Technical Education. VETA is an autonomous government agency charged with the overall task of co-ordinating, regulating, financing, promoting and providing vocational education and training in the country. VETA performs quality assurance activities to ensure provision of quality vocational education and training. The activities include:

- setting training standards,
- curriculum development,
- labour market surveys,
- competence assessment,
- registration of centres, and
- certification of competence.

The National Council for Technical Education (NACTE) is a corporate body established by the National Council for Technical Education Act, 1997. The scope of NACTE covers all tertiary education institutions (excluding universities and their affiliated colleges), delivering courses at technician, semi-professional and professional levels that lead to awards of certificates, diplomas, degrees and other related awards.

The key issues that NACTE is required to address include:

- ensuring overall co-ordination of technical education and training; establishing a national system of awards;
- ensuring the relevance of technical education and training to labour market demands;
- instituting systems of quality control and quality assurance in technical education and training;
- registering and accrediting both public and private technical education and training institutions capable of delivering courses; and
- establishing a central database on technical education and training.

In Trinidad and Tobago:

1. SITE has established The TVET Control Centre.

   The National TVET Control Centre is an online integrated database solution designed to manage TVET information. This is in line with the government’s plan to create a more coherent training system to facilitate the assessment and reorganisation of existing skills training programmes.

   The objectives of the National TVET Control Centre are to provide and manage information on TVET training, TVET skills, job vacancies, job opportunities and training needs. It creates a Web-based environment that allows controlled access by different types of users. Users would include
Further exploration through Questionnaire 1

students, training providers, employers/industry, government ministries and the general public. For the first time, Trinidad and Tobago would be exposed to real-time TVET information. The NTATT scheduled the development of the National TVET Control Centre to be completed over a 12-month period of eight phases. This allows for customisation, testing and the resulting modifications. The functionality proposed for each phase is outlined below:

- Phase 1: Management of TVET institutions and providers
- Phase 2: Competency and certification documentation
- Phase 3: Learner management
- Phase 4: Learner support functionalities
- Phase 5: Formal on-site assessment
- Phase 6: Certification content management system
- Phase 7: Gap filling and productivity-enhancement training
- Phase 8: Labour exchange information tracking mechanisms

2. In 2011 SITE signed a memorandum of understanding with the UWI St Augustine for the development of a Centre for Workforce Research and Development (CWRD). The three-year project “will track, monitor, analyse and forecast labour market trends, skills gaps and training needs within the government and the private sector.” (See www.stte.gov.tt/MediaCentre/PressReleases/MemorandumsforEDFprojects.aspx.)

The skills development strategy involved a national context and included the following major stakeholders:

- Organisations that are represented on the Advanced TVET Control Centre Implementation Team:
  - Accreditation Council of Trinidad and Tobago (ACTT)
  - Atlantic LNG Company of Trinidad and Tobago
  - Distance Learning, Ministry of Science, Technology and Tertiary Education (MSTTE)
  - Hightower Hydraulic Ltd
  - Life Skills Unit, MSTTE
  - Metal Industries Company (MIC) Ltd
  - Higher Education Services Division, MSTTE
  - Ministry of Education
  - Multi Skills Training (MuST), MSTTE
  - National Centre for Persons with Disabilities (NCPD)
  - National Energy Skills Center (NESC)
Further exploration through Questionnaire 1

• National ICT Company Ltd, Ministry of Public Admin
• On-The-Job Training, MSTTE
• Retraining Programme, MSTTE
• SERVOL
• The Kenson School of Production Technology Limited
• Youth Training and Employment Partnership Programme (YTEPP) Ltd

• The National Training Agency, which co-ordinates TVET and has the mandate to:
  • develop, implement and maintain a National Technical and Vocational Education and Training (TVET) Plan that will create a workforce that is competent, certified, innovative, enterprising and entrepreneurial.
  • establish and maintain a National TVET System to harmonise, standardise, monitor and evaluate all formal and non-formal national training efforts in TVET.
  • continually assess and provide relevant information on TVET and workforce development, including the demand for and supply of human resources in collaboration with state and other agencies.
  • assist, support and encourage the development of training programmes designed to develop innovation, enterprise and entrepreneurship in the nation’s human resources.
  • develop a structured and active system of communication and partnership with stakeholders to ensure continued relevance and value of the agency’s products and services.

Trinidad and Tobago has invested approximately US$2 billion in tertiary education and TVET over the past decade. The country has reported significant increases in enrolment in tertiary education, from approximately 7% in 2001, to 15% in 2004 and 40% in 2008. Government incentives should help it continue to rise gradually until it achieves the target participation rate of at least 60% by 2015.

BOCODOL (Botswana) pointed out that a national committee responsible for approving TVET policies and programmes is composed of the heads of governments departments, the private sector, industry and the regulatory bodies — that is, all the important stakeholders are represented. The private sector also provides vocational education and training.

It was further emphasised that the Botswana Training Authority (BOTA) and the Tertiary Education Council (TEC) are responsible for regulating training between the public and private providers. Botswana is still developing its National Qualification Framework but once this is in place it will harmonise TVET in the country.

New colleges have been built in Francistown and Oodi, and three existing colleges were expanded to offer more programmes. The government is also in the process of taking over the Brigades, which were previously run by the Communities. The DVET has been exploring ways of increasing access to TVET using ODL...
but unfortunately nothing substantive has come out of the efforts made. Further, one of the challenges facing the country is the availability of qualified teachers.

Q 3. Have any new programmes been developed to increase the participation of women and girls?

NIOS (India): Yes. Under the Ministry of Labour more new centres for women's training have been opened and separate women's training divisions and programmes are operational under the national council for vocational training under the Ministry of Labour. (See www.dget.gov.in.)

BOU (Bangladesh): Yes. We have programmes on housekeeping for women and girls for exporting man-power to the Middle Eastern countries.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Inclusion: Issues of gender awareness and sensitivity and support for the differently abled are key aspects of the government’s broader commitment to widening access.

Gender: In the quest for sustainable growth and development, the issue of the continuing under-representation of females in the technical-vocational programme areas, in spite of their growing ascendancy in mathematics and the natural sciences, must be addressed. A related issue is the trend of under-representation and underachievement of males at almost all levels of the educational system.

Persons with disabilities: The development of our human capital requires that our perspective on access be broadened to include support for the differently abled so that each individual can develop to his/her fullest potential, in order to fulfil individual goals and contribute to the economic, social and cultural development of the society.

BOCODOL (Botswana): New programmes came with the Botswana Technical Education Programme (BTEP) and generally there are more women enrolled in BTEP. The enrolment for women is about 58%. It has programmes such as Hairdressing, Health and Beauty which attract more women.

Q 4. Have any new programmes been developed to increase the participation of poor people from rural areas?

NIOS (India): Yes.

BOU (Bangladesh): Yes. TVET Centres are located near to learners’ homes and most of them are subsidised.

IAE (Tanzania): There is not any special attempt.

NOSTT (Trinidad & Tobago): [No response.]
BOCODOL (Botswana): This is addressed in the policies but it is difficult to evaluate the implementation because it is difficult to get the statistics. This might be an indication that this is not given the attention it deserves.

Q 5. [Have any new programmes been developed] to increase the participation of people with disabilities?

NIOS (India): Yes.

BOU (Bangladesh): Yes. There are lots of organisations, including public and private, doing some activities for them.

IAE (Tanzania): There is not any special attempt.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): The Ministry of Education and Skills Development is developing a policy on inclusive education and once this is in place it will bring on board people with disabilities. However, there are efforts going on to make preparations for this group. All the new buildings in the colleges are made accessible to people with disabilities. There is a Brigade in one of the semi-urban villages, which caters for people with disabilities and also has a centre for the blind.

Q 6. [Have any new programmes been developed] to increase the participation of war-affected individuals?

[All the participants indicated No, but perhaps the question should have been reworded to read “strife- or local conflict-affected individuals.”]

Q 7. [Have any new programmes been developed] to increase the participation of ethnic minorities?

NIOS (India): [No response.]

BOU (Bangladesh): Yes. Tribal people have privileged quotas for any kind of education provision in Bangladesh.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): It is addressed in the policies but what needs to be given more attention is the implementation as it is difficult to get statistics on this.

Q 8. Does your country have an equity policy for education and training?

NIOS (India): Yes.
BOU (Bangladesh): Yes, we have. As per the constitutional provision articulated in Article 17 that every citizen has the right to education and the state has to provide equal opportunities for everybody, but there are some inconsistencies in some sectors.

IAE (Tanzania): Yes. The main attempt is to increase access to all levels of education.

NOSTT (Trinidad & Tobago): Education is free and everyone is able to access available programmes.

BOCODOL (Botswana): There is no specific policy on equity but this is addressed in the RNPE and NPVET.

Q 9. What policies/programmes does your country have to allow adults to move in and out of training over time? In particular, programmes which allow for the acceptance of skills acquired previously or through life experience.

NIOS (India): [No response.]

BOU (Bangladesh): Many citizens acquire skills and knowledge through work and other life experiences without access to formal education or training. In order to recognise the skills and knowledge acquired and provide enhanced pathways into further education and training, a system for the recognition of prior learning (RPL) will be introduced.

The RPL system will officially recognise prior learning (skills and knowledge) so that individuals can enter or re-enter education. The government, in the very near future, will come out with a national vocational qualifications educational framework (NVEQF) which will allow multi-entry and multi-exit. It will give due weighting to prior learning in formal training institutions and thus enhance [learners’] employability. The RPL system will ensure that:

a. All people have the opportunity to have their knowledge and skills formally recognised;

b. The recognition process acknowledges job-related knowledge and skills that were gained through formal or informal training, through paid or unpaid work, or via life experience or any combination of these;

c. Wherever possible, the recognition should be conducted against the competencies and qualifications embedded within the National Technical & Vocational Qualifications Framework (NTVQF);

d. To obtain formal recognition, applicants must show a sufficient variety of evidence of his/her knowledge and skills. This evidence can include:

   i. samples of work;

   ii. certificates;

   iii. portfolios; and

   iv. references and referee reports.
e. The RPL process will recognise knowledge and skills when the evidence provided is judged to be sufficient, reliable and valid enough to meet the assessment requirement of the programme for which recognition is being sought.

f. Most recognition is likely to involve a series of assessments or challenge tests. When successfully completed, an equivalent qualification or a Statement of Attainment for individual unit/s of competence under the NTVQF may be awarded.

g. Reasonable accommodation will be made to cater for those who are illiterate, [or] have a disability or low education level, provided they demonstrate the skill to the required level.

h. Those who are awarded recognition and/or certification of their skills should have the opportunity to enter a formal training programme if they wish in order to complete a qualification or formally upgrade their skills.

To implement the RPL system, the government will ensure that:

- all skills training delivered by government training institutions will provide opportunities for RPL; and
- private providers affiliated with BTEB will be required to offer RPL to all prospective students.

The government and its partners will also explore the potential for introducing assessment-only centres for RPL to be regulated by the same quality standards applicable to accredited training institutions. (See [http://planipolis.iiep.unesco.org/upload/Bangladesh/Bangladesh_Skills_development_policy_2009_eng.pdf].)

IAE (Tanzania): Informal sector training programmes (VET) in which enrolment is not based on age. Tanzania is planning to introduce a prior learning assessment policy.

NOSTT (Trinidad & Tobago): This facility is now available via the Workforce Assessment Centre where individuals can get their prior learning/experience tested and certified using the Prior Learning Assessment and Recognition (PLAR) process. A modular approach to programme design is being introduced which facilitates that flexibility.

BOCODOL (Botswana): The BTEP Programme was developed on a modular approach to allow students to take modules and bank credits but this flexibility has not been implemented as yet. Students have to take one level (e.g., certificate level) and finish it before they can move out and come back to continue with a higher level. In terms of recognising prior learning, the Botswana Training Authority has started something in some of the areas but there is still a lot that needs to be done in this area.
5.2.3 Section C: Relevance and quality of TVET systems

Q 1. Have new initiatives been introduced to encourage structured dialogue between training providers and industry?

NIOS (India): Yes. Establishment of sector skill councils.

BOU (Bangladesh): Yes. The TVET policy guidelines and implementation strategies are decided by the National Council for Skill Development and Training (NCSDT) and the Bangladesh Technical Education Board (BTEB), which has jurisdiction over the entire area of Bangladesh to organise, supervise, regulate, control and develop technical and vocational education.

IAE (Tanzania): All the programmes offered in technical and vocational institutions are market driven. The curriculum is approved by recognised bodies (VETA and NACTE).

NOSTT (Trinidad & Tobago): This is co-ordinated by the National Training Agency.

BOCODOL (Botswana): The National Policy on Vocational Education and Training was developed in order to address this very issue and was itself developed by consulting widely with all stakeholders. The reference group responsible for drawing up the policy drew its membership from employers, employees, government and other organisations that have a stake in training.

Q 2. To what extent can learners choose between day release, sandwich or block release programmes?

NIOS (India): No flexibility.

BOU (Bangladesh): Demand for job markets, become a skilled manpower, life-long learning, leisure period learning.

IAE (Tanzania): Apprenticeship is among the mode of delivery.

NOSTT (Trinidad & Tobago): Choice is not available at the moment, but is being considered.

BOCODOL (Botswana): Currently there is no choice. There used to be evening classes in some of the technical colleges but these were cancelled because of lack of resources. However, the RNPE itself is an advocate for these.

Q 3. Are some programmes available through radio, television, Internet or through other distance learning modes?

NIOS (India): Yes, through distance learning mode.

BOU (Bangladesh): Yes, we have some programmes at a national level and at BOU.
IAE (Tanzania): There are a few radio and television programmes. For example, cookery, nursing.

NOSTT (Trinidad & Tobago): Programmes use a blended learning delivery mode.

BOCODOL (Botswana): No.

Q 4. For people combining work and learning, are evening or part-time programmes commonly available?

NIOS (India): Yes.

BOU (Bangladesh): Yes, a few programs are part-time.

IAE (Tanzania): Yes, people are learning while working and there are evening programmes.

NOSTT (Trinidad & Tobago): All programmes are delivered on afternoons, weekends and vacation periods.

BOCODOL (Botswana): Currently there is no choice. There used to be evening classes in some of the technical colleges but these were cancelled because of lack of resources. However, the RNPE itself is an advocate for these.

Q 5. What steps have been taken to take account of the importance of “new” competencies — for example, communication skills, teamwork skills and technology skills?

NIOS (India): Curricula are revised frequently and finishing schools are coming up to enhance communication skills and personality development.

BOU (Bangladesh): In-service training, life-long learning, adult education, co-ordination between private and public sectors, disaster training, especially on environmental issues and climate change.

IAE (Tanzania): The curriculum for TVET is competence based. Skills such as communication, teamwork innovativeness, initiative, and independence among others are developed in TVET institutions.

NOSTT (Trinidad & Tobago): Incorporated in the curriculum design and in the delivery of the course. Also, all national programmes offer modules that cater for “new competencies.” For example:

- Retraining Programme
- OJT — The On-the-Job Training Programme
- Must —The Multi-sector Skills Training Programme
- The National Apprenticeship Programme
- YTEPP — The Youth Training and Employment Partnership Programme

BOCODOL (Botswana): All these are in the BTEP curriculum and they are regarded as key skills so all students take them regardless of the programme they are following.
Q 6. To what extent do programmes preparing people for micro-business, farming and artisan trades include entrepreneurship and technology training?

NIOS (India): National-level bodies like Entrepreneurship Development Institutes (EDI) are being set up with state chapters.

BOU (Bangladesh): There are enterprise development programmes in both formal and non-formal settings countrywide.

IAE (Tanzania): Entrepreneurship is mainstreamed in the curriculum. In Tanzania today entrepreneurship and technology training have dominated the national debate.

NOSTT (Trinidad & Tobago): Current programmes do not prepare individuals for employment as tradesmen. However, entrepreneurship and its relevance and use of ICTs are included in the curriculum. The Business Development Co Ltd and the National Entrepreneurship Development Company (NEDCO) focus on the needs of small and micro business in terms of training and finance. Many graduates of the vocational programme go to these companies for help to set up small businesses.

BOCODOL (Botswana): [No response.]

Q 7. Is there anything else you would like to tell us about the capacity of TVET in your country to prepare people for an occupational field?

NIOS (India): India is a nation of young people. Out of a population of above 1.1 billion, 672 million people are in the age group 15–59 years, which is usually treated as the “working-age population.” It is predicted that India will see a sharp decline in the dependency ratio over the next 30 years, which will constitute a major “demographic dividend” for India. In the year 2001, 11% of the population was in the 18–24 age group which is expected to rise to 12% by the end of XI Five-Year Plan. This young population should be considered as an invaluable asset which, if equipped with knowledge and skills, can contribute effectively to the development of the national as well as the global economy. Our vision is to realise India’s human resource potential to its fullest in the education sector, with equity and inclusion.

BOU (Bangladesh): NGOs also provide continuing education which is known as open non-formal education (ONFE) where a large portion covers livelihood courses with a vocational emphasis. Animated CDs as ICT materials are being used by the large NGOs for ONFE, targeting groups comprising students who are mostly from underprivileged backgrounds. Although Bangladesh at the moment has an encouraging atmosphere for ICT-enabled vocational education through open schooling, there are some challenges.

IAE (Tanzania): The TVET system is facing a shortage of resources, both fiscal and human.

NOSTT (Trinidad & Tobago): There is a heightened attention by the government to the importance of the technical/vocational sector together with the re-organisation of the sector to meet the requirements of the
local economy. The Ministry of Science, Technology and Tertiary Education has been charged with the responsibility of managing the efforts at reform. This ministry works in conjunction with the Ministry of Education. Other stakeholders from industry are also involved in this effort.

BOCODOL (Botswana): The need to train more teachers as there is a shortage in this area.

5.3 EQUAL ACCESS AND OPPORTUNITY FOR GIRLS AND WOMEN

5.3.1 Section A: National policy and enrolment information

Q 1. Does your country have legislation or a formal policy related to equal educational access and opportunity for women?

NIOS (India): Yes. The Right of Children to Free and Compulsory Education Act or Right to Education Act (RTE), passed by the Indian parliament on 4 August 2009 provides for free and compulsory education to all children from the age of six to fourteen years. (See www.mhrd.gov.in and www.rteindia.com.)

BOU (Bangladesh): Yes. (See www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-dhaka/documents/publication/wcms_126053.pdf.)

IAE (Tanzania): No.

NOSTT (Trinidad & Tobago): No.


Q 2. Does your country have legislation or a formal policy related to technical and vocational education for girls and women?


BOU (Bangladesh): Yes.

IAE (Tanzania): Yes.

NOSTT (Trinidad & Tobago): No.

BOCODOL (Botswana): No, except for NAPVET which is inclusive.
Q 3. Does your country have legislation or a formal policy related to vocational guidance for girls and women?

NIOS (India): Vocational Guidance and Employment Counselling Programme under Directorate General of Employment and Training in Ministry of Labour.

BOU (Bangladesh): Yes.

IAE (Tanzania): Yes.

NOSTT (Trinidad & Tobago): No.

BOCODOL (Botswana): No.

Q 4. How is vocational guidance funded in your country?

Check all that apply.

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NIOS (India): The Directorate General of Employment & Training in the Ministry of Labour is providing the necessary guidance and employment counselling services to the job-seekers and the students through the network of 938 Employment Exchanges functioning under the administrative control of the respective States/Union Territory Governments in general and specialised services by trained personnel through 360 Vocational Guidance Units set up in the District Employment Exchanges and 82 University Employment Information and Guidance Bureaux functioning in the Universities in particular. The programme includes rendition of different Vocational Guidance and Employment Counselling Services to the Job-seekers visiting Employment Exchanges and University Employment Information and Guidance Bureaux, on an individual and group basis.

IAE (Tanzania): Not available.
Q.5. Please check any of the following that are required in your country’s legislation or formal policies for girls and women.

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<th>Requirement</th>
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<td>ᵇ</td>
<td>ᵇ</td>
</tr>
<tr>
<td>Articulation between technical and vocational education and higher education</td>
<td>ᵇ</td>
<td>no</td>
<td>We have</td>
<td>ᵇ</td>
<td></td>
</tr>
<tr>
<td>Public awareness (for parents, employers and others) of technical and vocational educational opportunities for women</td>
<td>ᵇ</td>
<td>Little</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td>ᵇ</td>
</tr>
<tr>
<td>Vocational guidance to encourage the participation of girls and women in technical and vocational education programmes</td>
<td>ᵇ</td>
<td>Not known</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td>ᵇ</td>
</tr>
<tr>
<td>Legal recourse if rights are not granted</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td>ᵇ</td>
</tr>
<tr>
<td>Active recruitment of girls and women into technical and vocational education</td>
<td>Few</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td></td>
</tr>
<tr>
<td>Penalties for violation of legislation or policy</td>
<td>By law</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding to implement law or policy</td>
<td>Little</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td>ᵇ</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q.6. Please list all of the vocational and technical education programmes in which girls and women are enrolled (for example, homemaking, building trades, business education, business management, nursing).

NIOS (India): In NIOS there are numerous vocational courses which are female targeted. Bakery and Confectionary, Cutting and Tailoring, Dress Designing, Early Childhood Care and Education, Toy Making and Joyful Learning, Housekeeping, Paripurna Mahila, Gram Sakhi, Beauty Culture, Embroidery, Play Centre Management, Preservation of Fruits and Vegetables are some of these. These will aim at acquiring skills which will help them earning their livelihood.
To put special focus on the skill training development of women, the DGE&T has set up a Women’s Training Directorate, which aims at promoting participation of women in skill training. Various courses have been designed and introduced under different schemes for a target group of young women with a basic education of class X or XII.

**BOU (Bangladesh):** [No response.]

**IAE (Tanzania):** [No response.]

**NOSTT (Trinidad & Tobago):** [No response.]


**Q 7.** [Responses not provided.]

**Q 8.** Please check any of the following that have direct responsibility for administering vocational guidance for girls and women in your country.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department (or ministry) of education or vocational training</td>
<td></td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Department (or ministry) of labour and employment</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Joint efforts of education and labour</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Special agencies dealing with the rights of women</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Other</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Q 9.** Have the vocational needs of girls and women been identified for use in the development of vocational guidance programmes? If yes, can you include a description in the original language and/or an English-language summary?

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the national level</td>
<td>*</td>
<td>*</td>
<td>In Tanzania vocational guidance is not common</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At the local or regional level</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning to conduct in future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q 10. Please check all of the following groups that were included in the needs assessment.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Counsellors</td>
<td>✗</td>
<td></td>
<td>✗</td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Parents</td>
<td>✗</td>
<td></td>
<td>✗</td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Employers</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counselor/teacher educators</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women’s groups or association</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
</tbody>
</table>

Q 11. Please check those barriers (that have not yet been reduced) to the participation of girls and women in technical and vocational education that the vocational guidance programme is designed to reduce.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Parents’ attitudes</td>
<td>✗</td>
<td></td>
<td>✗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School staff attitudes</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employers’ attitudes</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>Social role assigned to girls and women</td>
<td>✗</td>
<td></td>
<td>✗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shorter school attendance for girls</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited funding to attend programmes</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited family/child care support</td>
<td></td>
<td>✗</td>
<td>✗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited programme offerings for girls and women</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>Distance from home, security for girls, cultural and religious bindings (Muslims)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q 12. Please check the settings in which vocational guidance programmes to help girls and/or women are available.

<table>
<thead>
<tr>
<th>Setting</th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary schools</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment or career centres</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private women’s advocacy organisations</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employer-based programmes</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (Please list)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q 13. Please check any of the following who provide vocational guidance programmes for girls and/or women.

<table>
<thead>
<tr>
<th>Source</th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance counsellors</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary teachers</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary teachers</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Labour staff</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q 14. Please describe how vocational guidance counsellors are trained at the pre-service level in your country.

NIOS (India): [No response.]

BOU (Bangladesh): The concerned ministry organises the TOT programme in the designated centres.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): BEd (Guidance and Counselling at University of Botswana (UB)).
Q 15. Please describe how vocational guidance counsellors are provided [with] continuing education in your country.

NIOS (India): [No response.]

BOU (Bangladesh): Through the government’s accreditation training programme.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): In-service workshops.

Q 16. Please describe how other staff (for example, teachers) are trained in vocational guidance at the pre-service level in your country.

NIOS (India): Short-term course offered by NCERT, IGNOU.

BOU (Bangladesh): Through ministerial interventions; normally face-to-face session, not through ODL.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): All teachers receive pre-service education and training.

BOCODOL (Botswana): Guidance and counselling is part of their training.

Q 17. Please describe how other staff (for example, teachers) receive continuing education in vocational guidance in your country.

NIOS (India): [No response.]

BOU (Bangladesh): Through face-to-face sessions, not through ODL.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Tertiary-level institutions responsible for vocational education, National Training Agency, Caribbean Examination Council, Curriculum Division and the private sector all contribute to training staff.

BOCODOL: In-service workshops.
Q 18. Please indicate which of the following types of technical assistance is provided by the national or provincial levels to local sites.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum materials</td>
<td>⚫</td>
<td>⚫</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
</tr>
<tr>
<td>Careers and educational information resources</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
<td>⚫</td>
<td>⚫</td>
</tr>
<tr>
<td>Counsellor training</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher training</td>
<td>⚫</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-site assistance</td>
<td>⚫</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fund university faculty to assist local sites</td>
<td>⚫</td>
<td></td>
<td></td>
<td>⚫</td>
<td></td>
</tr>
<tr>
<td>Fund regional or state staff to assist local sites</td>
<td>⚫</td>
<td></td>
<td></td>
<td>⚫</td>
<td></td>
</tr>
<tr>
<td>Others (Please list)</td>
<td></td>
<td></td>
<td></td>
<td>⚫</td>
<td></td>
</tr>
</tbody>
</table>

Q 19. Please list specific benefits that vocational guidance programmes have produced.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits to girls and women</td>
<td>⚫</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits to local communities</td>
<td>⚫</td>
<td>⚫</td>
<td>⚫</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits to broader society</td>
<td>⚫</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits to vocational guidance</td>
<td>⚫</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits to technical and vocational education</td>
<td>⚫</td>
<td></td>
<td></td>
<td>⚫</td>
<td></td>
</tr>
</tbody>
</table>
Q 20. Please indicate which of the following is responsible for evaluating the vocational guidance programme.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>National staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Local staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Other (please describe)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q 21. Are evaluation results used to improve the programme?

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>At a local level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>At a national level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>At the programme level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not now but planned in the future</td>
</tr>
</tbody>
</table>

5.3.2 Section B: Description of vocational guidance programme model

Q 1. Do you have national guidelines for vocational guidance?

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The details are available at www.dget.gov.in/dex/vgec.htm

Q 2. Please indicate which of the following programme structures are addressed in your national vocational guidance guidelines.

<table>
<thead>
<tr>
<th></th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship of vocational guidance to total education programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Guidelines for qualified leadership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines for staff qualification and staff/student ratios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>
Further exploration through Questionnaire 1

Q 3. Please indicate which of the following vocational guidance programme components are recommended in your guidelines.

<table>
<thead>
<tr>
<th>Component</th>
<th>NIOS</th>
<th>BOU</th>
<th>IAE</th>
<th>NOSTT</th>
<th>BOCODOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about careers and education/training</td>
<td></td>
<td>*</td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Vocational assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advising</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counselling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Enabling activities (for example, career days)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women mentors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3.3 Section C: Best vocational guidance activities

Q 1. Please describe the best vocational guidance activities for assisting girls and/or women, disadvantaged or marginalised groups to enrol in, complete and secure employment in vocational and technical education areas.

NIOS (India): [No response.]

BOU (Bangladesh): Area-based enabling activities and lifelong learning.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): [No response.]
5.4 PROFILE OF VOCATIONAL EDUCATION LEARNERS OF EACH OPEN SCHOOL

5.4.1 Target learners

Q 1. Who are the target learners?

NIOS (India): Anybody from anywhere within the country can seek admission to the various courses offered by NIOS. However, the prioritised client groups are out-of-school children; girls and women; scheduled castes and scheduled tribes; rural people and urban poor; unemployed/partly employed; differently abled children; and minorities. (See www.nios.ac.in.)

BOU (Bangladesh): Learners who cannot take part in education in the conventional system.

IAE (Tanzania): Note: focusing on a new programme (IPPE) which has a vocational aspect.

- Complementary Basic Education (COBET) graduates
- Primary school leavers
- Secondary school leavers (who wish to take vocational and generic skills components)
- Secondary school drop-outs
- Youth: Experts in various professions, businessmen/women, farmers
- Adults: Experts in various professions, businessmen/women, farmers
- Integrated Community Base Adult Education (ICBAE) graduates
- Learners with special education needs
- Disadvantaged/marginalised groups, including nomads, pastoralists and prisoners
- VETA graduates
- VET drop-outs

NOSTT (Trinidad & Tobago): NOSTT targets out-of-school individuals who may be school drop-outs, persons who never had an opportunity to access secondary school, those who graduated from high school with no or incomplete certification, anyone from anywhere who is desirous of attaining qualifications for employment, upgraded status at work or access to higher learning. Another category of learners attend to satisfy personal aspirations.

BOCODOL (Botswana): Currently the college does not have a lot of vocational education programmes but the few that it offers are Certificate in Small Scale Business Management (SSBM), English for Professional Purposes — which was targeted at the Botswana Police Service — Interactive Communication for the
Industry — targeted at workers for Volvo Buses Manufacturers — and basic computer courses. The majority of learners for SSBM were women, some of whom were either employed or self-employed. Those employed prepare themselves to start their own businesses when they retire while those who are self-employed hope to improve their business management skills. There are also young people who are unemployed and hope to be able to get youth grants to start their own businesses. The majority of learners come from cities and semi-urban areas.

5.4.2 General characteristics

Q 1. What is the gender and age range of the learner group?

NIOS (India): More girls take vocational courses at NIOS. The age range is 14 years +.

BOU (Bangladesh): Both genders and above 14 years old.

IAE (Tanzania): Above 14.

NOSTT (Trinidad & Tobago): There is no gender differentiation in any programme offered, and there are equal percentages of registered male and female learners — a 50:50 ratio.

BOCODOL (Botswana): BOCODOL’s learners taking secondary level education consist of two broad main groups with an age range of around 16–60 years.

Q 2. What is the cultural/socio-economic/marginalised background?

NIOS (India): Learners from all sectors of the society enrol in NIOS.

BOU (Bangladesh): All cultural and ethnic groups; job seekers who want to become skilled workers.

IAE (Tanzania): Those who join the Open School come from families with low income, nomads and pastoralists. There is gender discrimination among school-age girls, especially in pastoralist wards.

NOSTT (Trinidad & Tobago): A great percentage of the learners who access OS programmes are in the lower socio-economic bracket since there is no cost to the learner. The programme offerings, which range from primary school completion through secondary level and especially the ICT programmes, appeal to the learners.

BOCODOL (Botswana): There are adults who have their own families, occupations and various life experiences and out-of-school youths who are young and in need of more guidance and support as compared to the adult group.
Q 3. Will the learner have any disabilities?

NIOS (India): Yes.

BOU (Bangladesh): Possibly.

IAE (Tanzania): Yes, it is possible. The curriculum provides a room for persons with disabilities such as the visually impaired, deaf and those with physical disabilities.

NOSTT (Trinidad & Tobago): Generally, individuals with disabilities do not access the programmes. However, we have accommodated at least one physically handicapped learner through video-conferencing.

BOCODOL (Botswana): Currently most of the learners enrolled with the college do not have any recognisable disabilities because the college is still working on its policy for learners with special needs.

5.4.3 Previous learning

Q 1. What formal qualification(s) will the learner have?

Q 2. What informal learning will the learner have?

Q 3. What is the likely level of literacy and numeracy?

Q 4. What is the likely level of IT skills?

NIOS (India): NIOS caters to a diverse group. The entry level of the target group varies from literate to class 12th Pass. Most of them are computer literate.

BOU (Bangladesh): Grade 5 (for JSC programme), SSC and HSC (for vocational and technical education). Informal learning takes place through radio, TV and video programmes. Students are literate and have limited access to technology and that too at a very basic level.

IAE (Tanzania): Students have primary school education, are drop-outs from secondary education and have beginner-level IT skills.

NOSTT (Trinidad & Tobago): Most learners would have completed at least three to five years of secondary school. They would have work experience without any formal training and would usually be literate and functionally numerate. Younger learners are more comfortable using technology but may not have formal training or certification. Most of the older learners are willing to learn.

BOCODOL (Botswana): The educational background and needs of these groups differ significantly. Some have experience of secondary education while others left after primary school. For instance, there are the primary school leavers (both youth and adults with Standard 7 certificates of Grades A, B and C who for some reason did not pursue their education in the formal schools even though they had passed well),
adults (with the old Standard 6, which was then the terminal point for primary school) and secondary education certificate holders (both youth and adults, some of whom are beginners and some of whom want to improve). As already indicated, most of them can read and write very well (see [Q 1] above). If they are working they would have had exposure to IT in the workplace; those who have just left school would have had some limited exposure to computers in the schools. With the advent of the cellphone, more people are exposed to IT in one form or another.

5.4.4 Skills and knowledge

Q 1. Will the learner be working in a workplace relevant to the programme?

Q 2. What skills and knowledge will the learner have of the content in the programme?

Q 3. Will the learner have any knowledge or practical skills that are out of date or inappropriate? Provide examples.

Q 4. What generic skills (for example, communication skills, teamwork skills and problem-solving skills) are considered important for this learner group?

NIOS (India): [No response.]

BOU (Bangladesh): Learners might be working in a workplace. Job-demand skills and knowledge desired by employers would be sought.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Very often learners will participate in programmes to gain employment or for upward mobility in the workplace. They may or may not have the required skills and knowledge of programmes dependent on their life or work experiences. They may not have any skills and need to be trained in an area in which they are interested. For example, Business Studies or ICT students bring to the classes practices and experiences that may be inappropriate and they would therefore need to “unlearn” and “relearn” current practices. All generic skills are important but a learner may or may not be trained in all of them.

BOCODOL (Botswana): For those taking the vocational courses already mentioned above, most of them would be in the area relevant to the programme or intending to switch to a career related to the programme whereas those taking secondary-level programmes could be in any area. Some of them would have a general education only or a general education with some experience or some lower qualification and some experience or even higher qualifications in a different area. Not sure of generic skills, but most likely, especially if they just practised without a strong theoretical background.
5.4.5 Motivation

Q 1. Why will the learner undertake the training and assessment programme?

NIOS (India): [No response.]

BOU (Bangladesh): For life skills and to earn a livelihood and to become a good performer in their relevant respective field.

IAE (Tanzania): To raise academic qualifications, to get a certificate that will ensure employment or further studies, to use the knowledge and skills acquired for personal employment.

NOSTT (Trinidad & Tobago): To be certified and to be able to get promoted on the job.

BOCODOL (Botswana): The main aim of many learners who enrol with BOCODOL is to complete their secondary-level education, which was interrupted, and to improve their academic qualifications, while those who enrol for vocational programmes want to acquire knowledge and skills that can make them competitive in the labour market or enable them to make a livelihood. Some of the specific reasons:

- to get promotion at work
- to get a qualification and be able to get a job for those who are not working
- to get a better qualification and be able to change their career

Q 2. What expectations is the learner likely to have of the programme?

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): Enable the learner to join the world of work and enable the learner to proceed with further education.

NOSTT (Trinidad & Tobago): That it offers opportunities for self-improvement and increased training options.

BOCODOL (Botswana): That it will be relevant to their needs, flexible enough to allow them to study while continuing with other components of their lives. They expect it to be of high quality.

5.4.6 Support

Q 1. Where is the learning and assessment likely to take place?

Q 2. What support will the learner have from their workplace for their learning and assessment programme?
Q 3. **What technology (for example, Internet, email and telephone) will the learner have access to?**

**NIOS (India):** At the study centre. Not all learners have access to Internet and telephone facilities.

**BOU (Bangladesh):** Workplace and well-established learning centre; curriculum-based, all sorts of learning aids. They are allowed to undertake the programme as part of their continuous professional development (CPD). Telephone and limited Internet.

**IAE (Tanzania):** Learning will take place in study centres; permission to attend lessons; telephone (mobile) and Internet.

**NOSTT (Trinidad & Tobago):** Learning takes place at learning centres, at home using self-study courseware and at worksites accredited for apprenticeships and hands-on training. This support varies. Some employers afford flexibility. Government policy is to accommodate (reasonably) individuals’ educational pursuits. At study centres learners will have access to computers and Internet, but most learners own at least one mobile phone and approximately 30% will have access to a computer at home or at a community facility. Radio, television and audio/video equipment are also commonplace in many homes.

**BOCODOL (Botswana):** Both at home and at the identified institutions in their communities. Those in the cities and semi-urban areas are likely to have access to all listed while those in the rural areas might have access to the cellphone.

### 5.4.7 Learning styles

**Q 1. What study skills and abilities is the learner likely to have?**

**Q 2. What is the learner’s preferred method of learning (for example, practical or technology based)?**

**NIOS (India):** Learning combines postal tuition print packages. Multimedia material, personal contact programmes and practical work along with a supplement of programmes on Doordarshan and Gyan Darshan television channels. Practical training is the preferred method of learning.

**BOU (Bangladesh):** Learners have to be eager to acquire new knowledge in their field. Hands-on practices concurrently with face-to-face learning and some technology-based learning is preferred.

**IAE (Tanzania):** Self-motivated; set goals; select relevant areas of study/make choices. Preferred method is active participation with enough learning resources and examination-oriented learning.

**NOSTT (Trinidad & Tobago):** Poor study habits, hence the inclusion of study skills seminars. Preferred method of learning is instructor led, practical and with class notes.

**BOCODOL (Botswana):** Most learners with lower qualifications demand to be taught as in the formal schools. It is their belief that they can only learn when a teacher is teaching them. Otherwise, most like the print with
face-to-face support. I guess they would also like a mixture of methods with practicals and technology even though those who have not had a lot of exposure to technology would most likely be afraid of it.

5.4.8 Other

Q 1. **What other relevant information will help to ensure the learning and assessment programme is appropriate for the needs and characteristics of the target group?**

NIOS (India): [No response.]

BOU (Bangladesh): [No response.]

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Competency-based assessment with minimal written component.

BOCODOL (Botswana): [No response.]

5.5 BEST PRACTICES

Within the national context and at your Open School level, please identify and describe your best practices with regard to:

- Access
- Equity (Including inclusivity, gender and marginalised communities)
- Quality
- Cost/financing
- Credibility
- Curriculum development
- Materials development
- Learner support
- Management

The above issues should be considered with regard to the enabling environment, policy, courses; existing and required skill sets; capacity-building; availability and use of infrastructure; networking and partnership with industry and employers and the efficiency and effectiveness of delivery, assessment and certification.
NIOS (India): The National Institute of Open Schooling’s three-fold mission is to assist the government of India in achieving its goal of universal education, in promoting greater equity and justice in society and in helping in the evolution of a learning society by providing relevant, continuing and developmental education up to the pre-degree level through the open distance system in its role as an alternative arrangement to [the] formal school system. In short, its one-line charter is to reach the “unreached,” comprising school drop-outs, rural youth, urban poor, Scheduled Castes and Scheduled Tribes, minorities and other sections of society who have been left out of the mainstream formal school system. Another step towards increasing the access is through online admission and the flexible examination system started by NIOS. NIOS works in both complementary and supplementary roles in relation to the formal school system.

BOU (Bangladesh):

- Access: Learners have the scope to study in various fields.
- Quality: The Bangladesh government has a policy to provide quality education for all.
- Cost/Financing: BOU [...] has collaborated with COL. GO-NGO partnerships have helped share costs.
- Credibility: Would need to be improved to be on par with the national curriculum.
- Curriculum development: Follow national curriculum.
- Materials development: Self-learning materials (SLM) are developed through teamwork with BOU staff and external experts.
- Learner support: Provides relevant support according to the curriculum; face-to-face tutorial supports are provided at weekends.
- Management: There may have [been a lack of management] when co-ordinating the learners and the employers.

IAE (Tanzania):

- Access: Open to all categories of learners and flexible.
- Equity (including inclusivity, gender and marginalised): Open schools are found in nomadic areas, evening programmes provide opportunities for girls and women to study.
- Quality: Experienced experts are used to develop study material.
- IAE is collaborating with UNICEF in Integrated Post Primary Education.
- Curriculum development: A competence-based curriculum framework and modularised syllabus are used. Curriculum was developed in response to a needs analysis.
- Curriculum for national formal secondary education has been adopted to meet the demands of learners in Open Schools.
- Materials development: There are current efforts to develop competence-based materials/task-based material. A guideline for this is in place.
NOSTT (Trinidad & Tobago):

- Access: The distribution of learning centres throughout urban, semi-urban and rural communities; the availability of learning resources in print, electronic and online formats, use of social media and mobile technology by individual tutors all increase access to learning opportunities.
- Equity: ALL are invited to participate regardless of age, gender, social status, ethnicity.
- Quality: NOSTT adheres to the same quality standards as the conventional system. Materials developed are utilised in the conventional system. Programmes are locally, regionally and internationally benchmarked.
- Cost/financing: Model yet to be developed. Currently the entire programme is state funded.
- Credibility: Programme and certification are equivalent to [the] traditional system. Local, regional and international certification.
- Curriculum development: Curriculum same as for in-school population.
- Materials development: Materials designed for self-study and integrate technology.
- Learner support: Learner-centred materials, low learner to tutor ratio, academic and other counselling, life and study skills are part of a comprehensive system to support learners.
- Management: Central, regional and centre management systems in place.

BOCODOL (Botswana):

- Access: Botswana has already established an open and distance learning institution in order to increase access to secondary, vocational management and tertiary-level programmes. The government also encourages the private sector to participate through collaborations.
- Curriculum development: The Botswana Secondary School Curriculum has a strong vocational and technical education component. Even though this does not equip students with skills that they use for certain vocations, it lays a good foundation for students to be able to follow careers of their choice in vocational and technical education. Unfortunately, so far it has not been possible to introduce the technical and vocational subjects in the Open School because of the limited resources. When the curriculum is developed or reviewed, there is a wider consultation with all the major stakeholders in order to try to take into account the needs of all.
- Materials development: The use of different forms of media and methods in the delivery of content, especially those that promote interactivity.
- Learner support: BOCODOL's philosophy of decentralising and taking services as close as possible to where the learners are is good practice. BOCODOL also has a strong learner support system where opportunities for interaction between tutor and learner and between learners and other learners are created so that learners do not feel isolated. There is also a strong guidance and counselling component to help learners even with non-academic challenges.
6 Challenges of each open school: An exploration through Questionnaire 2, Part 1

Note that care has been taken to present participant responses as submitted.

6.1 SPECIFIC DETAILED CHALLENGES OF YOUR OPEN SCHOOL

6.1.1 Access

Q 1. Identification of special groups

NIOS (India): Increasing educational access through online admissions. Learners from all parts of the country could at any time (24x7) gain admission through the online process.

The National Institute of Open Schooling (NIOS) has been mandated by the government of India to provide educational access to all those who are outside the formal school system, to “reach the unreached.” Within the “unreached” group NIOS has prioritised target groups comprising marginalised groups; namely rural youths, girls and women, SCs/STs, differently abled learners, etc.

For the purpose of personal contact teaching, special study centres were established. They are known as Special Accredited institutions for the Education of the Disadvantaged (SAIED). There are a total of 35 centres for the vocational courses and 83 for the academic courses. These centres are for persons with disabilities and other disadvantaged categories such as street children.

BOU (Bangladesh): Students who previously dropped out, especially female students and job holders.

IAE (Tanzania): [No response.]
**NOSTT (Trinidad & Tobago):** Although access is available to ALL, special focus is placed on “youth at risk,” single mothers, young men, school drop-outs and adults who for some reason did not access primary- or secondary-level education.

**BOCODOL (Botswana):** So far the only special groups that the college is serving are inmates, children in refugee camps and those in remote areas. Otherwise the college is still in the process of finalising its policy for people with special needs and once this is in place it will guide the identification of the different groups that the college would serve and also guide on how to serve them.

**Q 2. Appropriate approaches to their learning**

**NIOS (India):** [No response.]

**BOU (Bangladesh):** Technical and vocational education through open and distance learning. The appropriate learning approaches would be instructive and constructive.

**IAE (Tanzania):** In Tanzania today there is an emphasis on shifting from a teacher-centred to a learner-centred teaching approach. However, teaching is still teacher-centred.

**NOSTT (Trinidad & Tobago):** This cohort requires flexible approaches to learning, lack basic study skills and time management skills, may not have access to technology and connectivity at home and employment or family responsibilities may restrict their ability to attend face-to-face sessions.

**BOCODOL (Botswana):** For the three groups mentioned above the college has arranged special support. For the inmates there are special tutorial sessions arranged for them with the involvement of the prison staff. In the case of remote learners there is a dedicated office that provides services to the remote area learners through the satellite centres where a primary school is identified and a supervisor appointed to help organise learners in the area and assist them as necessary.

**6.1.2 Curriculum**

**Q 1. Structure of courses**

**NIOS (India):** The same curriculum is followed, but more emphasis is put on the mode of the delivery of the content at the special centres as per the requirement.

**BOU (Bangladesh):** Since BOU follows the national curriculum the structure of courses is based on the national curriculum. BOU offers all of its programmes as credit-based. One credit hour equals the content of delivery of 15 formal classes of 45-minute duration.
IAE (Tanzania):
- The curriculum comprises three learning areas: academic, vocational skills and generic skills.
- It is a modularised curriculum.
- Learners take a minimum of three academic subjects, one vocational trade and three generic themes.

NOSTT (Trinidad & Tobago): Courses are modular, with units of instruction and sessions/lessons for each unit. Practical hands-on sessions are scheduled. For part-time learners, it may be challenging to schedule hands-on sessions at times convenient to all. Several alternate sessions will result in an increase in cost which may not always be feasible in a state-funded programme.

BOCODOL (Botswana): The course content is structured in small manageable chunks and the learners are allowed to take a maximum of four courses at a time as long as they finish the programme in five years if they intend to earn a certificate.

Q 2. Flexibility through recognition of prior learning

NIOS (India): At present in NIOS there is no framework for the recognition of prior learning.

BOU (Bangladesh): Job-related knowledge and skills could be gained through formal and non-formal education which could enhance wages.

IAE (Tanzania): Not yet implemented.

NOSTT (Trinidad & Tobago): Learners repeating their course of study can use their school-based assessment grades for as long as they are valid (this is determined by the certifying body). Nationally, the skills assessment centres will assess prior learning for the more vocational/skills-based qualifications. The National Training Agency has developed a system for Prior Learning Assessment and Recognition (PLAR).

BOCODOL (Botswana): For open schooling this does not apply. The requirement is that learners should have passed the lower level with a minimum of a C but for the other BOCODOL programmes the college is still working on an RPL policy.

6.1.3 Quality assurance

NIOS (India): [No response.]

BOU (Bangladesh): No set framework for QA, but maintained in-house style.

IAE (Tanzania): Quality indicators are needed for Open Schools. We need to consider whether we should use the same indicators as formal schools. There are a limited number of experts of Open Schools in Tanzania.
NOSTT (Trinidad & Tobago): Curriculum officers and a learner support system provide the first level of quality assurance. NOSTT is currently developing a comprehensive QA strategy.

BOCODOL (Botswana): For the open schooling programmes the learners sit the same examinations as those in the conventional system. The examinations are done by the National Examination Body (the Botswana Examination Council).

6.1.4 Delivery

Q 1. Partnership with industry

NIOS (India): In a few of the vocational courses there is a partnership with industry. For example:

1. To enable the learners to work in a networking environment and to develop skills and competencies in computer hardware assembling, NIOS has signed an MOU with CISCO for an IT Essentials: PC Hardware and Software course.

2. NIOS has signed another MOU with the Ashok Institute of Hospitality and Tourism Management (AIH&TM). AIH&TM is a part of the HRD Division of the India Tourism Development Corporation Ltd. It has a substantial reputation and goodwill in providing professional training in the field of international hospitality, airlines, aviation, cruise, travel and hotel management. AIH&TM has been conducting the Bachelor's Degree in International Hospitality. The ITDC and NIOS will jointly award Diploma/Certificates in Hospitality to the students in this programme, delivered through infrastructure created/provided by ITDC.

3. NIOS will work together with the Indian Medical Association (IMA) to offer paramedical courses.

BOU (Bangladesh): Open School, BOU, would partner with some GO-NGO training organisations and also some industries according to course structures.

IAE (Tanzania): Not yet established.

NOSTT (Trinidad & Tobago): NOSTT is currently offering vocational programmes for academic qualifications that do not require industry partnerships. However, as we embark upon the delivery of National or Caribbean Vocational Qualifications, working with and through the National Training Agency and the MOE Curriculum Division, partnerships already developed can be leveraged.

BOCODOL (Botswana): The only partnership that we have had was in situations where the industry had approached the college to develop programmes. These programmes are usually delivered in partnership with the industry as was the case with Volvo Buses Manufacturers, the police service and the Department of Teacher Training and Development. In [the] case of the open schooling programmes the college uses the physical infrastructure from the government and the community.
Q 2. Use of technology

NIOS (India): ICT represents a set of technological tools used to create, store, communicate and manage information. These technological tools include computers, telephone, Internet and broadcasting technologies (radio and television). These tools help us in several information-related activities such as accessing, retrieving, storing, organising, modifying, producing, presenting and exchanging information by electronic and other automated means.

NIOS has a dedicated media unit for the production of its audio and video programmes. The video programmes are telecast on DD-I from 05:02 a.m. to 05:25 a.m. every Friday and on the Educational Channel — Gyan Darshan — every day from 6:30 p.m. to 7:00 p.m. The audio-video cassettes are also sent to AIs, AVIs, SAIEDs and regional centres of NIOS.

Teleconferencing: In open and distance learning institutions, teleconferencing is a useful tool for providing instructions and learner support. At present NIOS is using this technology frequently for interacting with the co-ordinators of its study centres and also for training the teachers.

An effort is being initiated by NIOS to convert more and more academic and vocational courses to e-learning platforms.

Use of mobile phones for dissemination of information to learners from time to time. It also uses this technology for publicity and dissemination of examination results.

Community radio: Community radio has become an effective and economical means of reaching out to persons in far-flung areas as well as to those who have a common area of interest. In this case learners of NIOS can easily be connected to each other and to NIOS through the community radio network. A community radio will be operational shortly.

Open Educational Resources (OER) is a new initiative by NIOS to provide information to learners in an interactive way.

One of the significant initiatives of NIOS is the provision of On-Demand Examination throughout the year. The National Institute of Open Schooling (NIOS) conducts two examinations during April and October every year. While trying to enhance flexibility in the timing of summative assessment, NIOS came up with the innovative concept of ICT-based On-Demand Examination (ODE), where assessment takes place when the learner considers himself/herself ready to sit an examination in one or more subjects. This facility is available at the headquarters and all the regional centres.

Online, round the year admission for both academic and vocational programmes. 24x7 LSC.

BOU (Bangladesh): Printed material, flow charts, hands-on training, booklets, mass media such as radio and television, interactive CDs.
IAE (Tanzania): Not yet used.

NOSTT (Trinidad & Tobago): Availability of hardware and software can be a challenge for learners. For example, industry software for technical drawing is expensive and even institutions/organisations delivering this programme may not have access to the software, thereby offering training that may be irrelevant to the “real world.”

Every attempt is made to utilise digital resources in the course materials and provide access at learning centres, on website[s], Learning Management System (LMS) and on CD/DVD.

BOCODOL (Botswana): The college uses print, radio and CDs, and is slowly beginning to use computers. Will also be using TV and smart boards.

Q 3. Accreditation, assessment, certification and recognition

NIOS (India): NVQF is not yet established in India.

BOU (Bangladesh): Accredited body is BOU. BOU assesses the learners by TMA, examination and practical experience. After evaluation BOU provides certificates to the learners. This certificate would be equivalent to the national certification status.

IAE (Tanzania): Developing levels of awards and linking them with the formal system.

NOSTT (Trinidad & Tobago): Programmes/courses offered are locally, regionally or internationally accredited. The national qualification framework assures horizontal and vertical mobility. There are limitations to the programmes that can be offered by the MOE (NOSTT is an MOE programme) given the limited ability to provide world-of-work experiences in a school environment. Special arrangements will have to be negotiated with the National Training Agency.

BOCODOL (Botswana): The open schooling programmes are examined by the Botswana Examination Council (BEC), and for the Vocational Management Programme and tertiary programmes the College is registered with the Botswana Training Authority (BOTA) and the Tertiary Education Council (TEC).

Q 4. Integration with national qualification framework

NIOS (India): [No response]

BOU (Bangladesh): Formal programmes of the Open School (OS) of BOU have similar integration with the national quality framework, but OS don’t have any vocational programmes.

IAE (Tanzania): Developing levels of awards and linking them with the formal system.

NOSTT (Trinidad & Tobago): Programmes/courses offered are locally, regionally or internationally accredited. The national qualification framework assures horizontal and vertical mobility. There are limitations
to the programmes that can be offered by the MOE (NOSTT is an MOE programme) given the limited ability to provide world-of-work experiences in a school environment. Special arrangements will have to be negotiated with the National Training Agency.

**BOCODOL (Botswana):** Botswana is still developing its NQF and BOCODOL is represented in the committee that is working on it.

**Q 5. Horizontal and vertical mobility**

**NIOS (India):** [No response]

**BOU (Bangladesh):** It improves the quality of learning as well as increasing the quantity of the skilled learners which may have an impact on the individual, society and the country.

**IAE (Tanzania):** Graduates proceed to other levels of education, for example, if they have passed secondary education examinations.

**NOSTT (Trinidad & Tobago):** Programmes/courses offered are locally, regionally or internationally accredited. The national qualification framework assures horizontal and vertical mobility. There are limitations to the programmes that can be offered by the MOE (NOSTT is an MOE programme) given the limited ability to provide world-of-work experiences in a school environment. Special arrangements will have to be negotiated with the National Training Agency.

**BOCODOL (Botswana):** Those who finish open schooling can cross back into the conventional system without any problems since they write the same examinations as those in the conventional system. They can also progress to higher levels in the conventional system (vocational and technical training or tertiary).

**6.1.5 Organisation/management**

**Q 1. Learner centric**

**NIOS (India):** [No response.]

**BOU (Bangladesh):** Organisation/management system for delivery of all components of programmes to the learners is learner centric.

**IAE (Tanzania):** In the proposed programme most of the materials will be available online.

**NOSTT (Trinidad & Tobago):** Support for learners is central to the operations of NOSTT.

**BOCODOL (Botswana):** Most of the services are taken closer to where the learners are. BOCODOL operates through five regional centres, which are spread throughout the country. Each of the regional centres in turn has several learning centres under it. Some of the services provided at the learning centres include
registration, marking and distribution of materials, and tutorials, and is where the exams are done. The content of the programmes is also written in an interactive manner.

**Q. 2. Use of technology**

**NIOS (India):** [No response.]

**BOU (Bangladesh):** Now it is manual and very soon it will be converted into office automation.

**IAE (Tanzania):** [No response.]

**NOSTT (Trinidad & Tobago):** Technology supports administration, learner support, content development and, to a limited extent currently, content delivery.

**BOCODOL (Botswana):** In addition to those already mentioned the college also uses SMS (cellphone) to support the vocational and tertiary-level programmes.
7
Strategies for success: An exploration through Questionnaire 2, Part 2

Note that care has been taken to present participant responses as submitted.

7.1 SPECIFIC DETAILED STRATEGIES FOR SUCCESS IN YOUR OPEN SCHOOL

Q 1. How to enable positive perceptions of “Open” VE?

NIOS (India):
- By having proper links with industry.
- Having appropriate collaborations with government bodies and schemes.
- Advocacy programmes.
- More industry-relevant courses and programmes.
- Employment-linked programmes and courses.

BOU (Bangladesh): To enable positive perception of “Open” VE Open School, BOU should offer job-oriented multidimensional and skilled development programmes such as merchandising, automobile maintenance, electronics, textiles, etc. OVE will be successful through partnering with government vocational bodies and NGOs.

IAE (Tanzania):
- Link the programmes with learners’ needs and interests.
- Ensure recognition of awards offered in VE institutions.
NOSTT (Trinidad & Tobago):
- Alert students to the range of VE subjects available.
- Provide advice to learners about these new pathways to certification.
- Use successful students to influence their peers.
- Expose learners to the modes (face-to-face/blended) available for courses.
- Work with other stakeholders in the education sector to market existing and new courses.

BOCODOL (Botswana): There is a need for strong links with industry; currently the courses provided are too theoretical. In terms of open schooling the college has to introduce practical subjects as now the learners are disadvantaged as the college does not offer these.

Q 2. How to provide a foundation for work in your existing/new courses?

NIOS (India): [No response.]

BOU (Bangladesh): We should introduce promotional activities of VE that can be included in the text materials and also promote the prospects of VE that would be offered by Open Schools.

IAE (Tanzania): We have a foundation course for unqualified learners.

NOSTT (Trinidad & Tobago):
- Integrate appropriate technologies in the development of interactive materials.
- Expose tutors and learners to our online platform and technology-mediated/integrated content.
- Encourage the use of the above.
- Provide continuous training/retraining for tutors in ICT integration using technology-integrated content.

BOCODOL (Botswana): Start by offering all the practical and technical courses offered in the schools. This would need strong links with the schools.

Q 3. How to enhance use of technology enabled learning?

NIOS (India): A 24x7 Vidya Darshan educational channel will be started in the month of November and will be monitored by NIOS. Recordings have already been started for this.

BOU (Bangladesh): Despite limitations of advanced technology and availability of power supply we can use mobile technology. We can also produce learning CDs; mainly animated and high-resolution video can be used.
IAE (Tanzania):
- Not yet started to use technology.
- The plan is to introduce Moodle.
- The plan is to develop ICT materials.

NOSTT (Trinidad & Tobago):
- Expand the online delivery.
- Expand the technology capacity/capability of the NOSTT programme.
- Focus on the targeted cohort as directed by the Ministry of Education.

BOCODOL (Botswana): Increase the broadband so that the college can develop online courses and have computer labs in all the regions resourced.

Q 4. How to broaden the scope of delivery?

NIOS (India): [No response.]

BOU (Bangladesh): By promotional activities about the prospects of VE through radio, television, newspapers and campaigns. Private-public partnerships (PPP) will enhance the range of delivery.

IAE (Tanzania): We are starting. However, experience shows that availability of simplified learning materials, accreditation, using qualified teachers, using ICT and changing culture practices such as keeping girls indoors or use of traditional dance can broaden the scope of delivery. On the other hand, some traditional practices can be included in the curriculum.

NOSTT (Trinidad & Tobago):
1. Expand the online delivery.
2. Expand the technology capacity/capability of the NOSTT programme.
3. Focus on the targeted cohort as directed by the Ministry of Education.

BOCODOL (Botswana): Introducing online and use of other technologies such as TV as already mentioned.

Q 5. How to establish a Vocational MIS to link demand with supply from your open school?

NIOS (India): [No response.]

BOU (Bangladesh): We can establish a counselling cell at the Open School. BOU is also making [an] MoU with the government and other industries.
IAE (Tanzania):
- Establish Management Information Systems (MIS).
- Conduct situational analysis or market survey.

NOSTT (Trinidad & Tobago):
1. Collaborate with the Ministry of Science Technology and Tertiary Education.
2. Utilise the vocational assessment centres/National Training Agency infrastructure to show the demand/supply needs in the vocational sector.

BOCODOL (Botswana): Not sure.

Q 6. What incentives do you need to provide in your Open School to increase access and guarantee success?
NIOS (India): [No response.]

BOU (Bangladesh): Those who are engaged in the counselling cell would be rewarded financially and academically.

IAE (Tanzania): Teaching and learning materials which are relevant.

NOSTT (Trinidad & Tobago):
- The major incentive is cost: our programmes are free to the learner.
- Access: our NOSTT Centres are located at secondary schools in the various educational districts.
- ICT facilitation: NOSTT has provided online resources/content in the various subjects.

BOCODOL (Botswana): Provide the necessary resources in terms of the infrastructure, recruit specialists in the identified areas and build capacity.

Q 7. How can you increase reliability of trainers through training of trainers?
NIOS (India): [No response.]

BOU (Bangladesh): By continuous monitoring and evaluation of the trainers.

IAE (Tanzania): We have started to educate trainers of trainers but since we engage them on a part-time basis it is not easy to maintain them. To address this challenge in IPPE we have engaged experts from seven pilot districts. These are the districts in which the programme will be piloted.

NOSTT (Trinidad & Tobago):
- Most tutors in our programme are trained teachers.
- Our retraining efforts are undertaken in conjunction with other Ministry stakeholders/consultants.
BOCODOL (Botswana): Not sure.

**Q 8. What provisions can you make to train for the informal economy?**

NIOS (India): [No response.]

BOU (Bangladesh): To increase the skilled manpower in our society.

IAE (Tanzania): Organised outreach programmes based on identified needs.

NOSTT (Trinidad & Tobago): Provide opportunities for all [to] access educational/training (education is free in T&T).

BOCODOL (Botswana): Not sure.

**Q 9. What do you need to do to create a credible regulatory, accreditation and certification framework?**

NIOS (India): [No response.]

BOU (Bangladesh): We can adopt the national certification framework and do some modification for Open Schools.

IAE (Tanzania): National policy for ODL.

NOSTT (Trinidad & Tobago):
- This is already available in T&T.
- The Accreditation Council is the authority responsible for accreditation of all institutions/courses both local and international.

BOCODOL (Botswana): It is already there. All that would be needed would be to involve them.

**Q 10. What innovative financing/collaborations through PPP/other means can be explored?**

NIOS (India): [No response.]

BOU (Bangladesh): To promote VE from Open Schools, we should collaborate with the job-related industries and their employers to become a skilled manpower. Moreover, government should make provisions in the annual budget for vocational financing.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Education/training is free in T&T.
BOCODOL (Botswana): Suppliers of different technologies could also be encouraged to assist in resourcing the centres with the technologies they are selling.

Q. 11. What steps are needed to bring students into the VE stream?

NIOS (India):
- New and more needs-based courses.
- Innovative methods of course transactions.
- Short-term employment-linked courses.
- Horizontal and upward mobility needs to be worked out for the learners.

BOU (Bangladesh): To bring students into the VE stream the Open School promotes its activities through mass media.

IAE (Tanzania): We have started to develop a national qualification framework which indicates that the primary school leavers can join either secondary schools or VE institutions.

NOSTT (Trinidad & Tobago):
- Students are pursuing VE as part of the school curriculum.
- NOSTT is offering VE to school leavers who wish to obtain certification in VE subjects.

BOCODOL (Botswana): A strong vocational guidance programme and the availability of VE programmes through ODL.

Q. 12. How does the open school ensure that continuously changing market demands for skills are captured?

NIOS (India):
- By continuous revision of the syllabus.
- Development of new and short-term modules.

BOU (Bangladesh): The Open School should conduct a needs assessment survey of market demands.

IAE (Tanzania): By having a flexible curriculum.

NOSTT (Trinidad & Tobago):
- By collaborating with the industry stakeholders.
- By collaborating with the Ministry of Science, Technology & Tertiary Education.

BOCODOL (Botswana): Enquiries from the public are captured by the Public Relations and Marketing Department and the college secures published reports in this area and also does its own market surveys.
Q 13. What collaboration exists with industry — demand estimation, curriculum development, training, assessing, placement?

NIOS (India): For a few of the courses, there is collaboration with industry for the curriculum design and placement. For example, NIOS has recently signed an MOU with the ITDC (Indian Tourism and Development Corporation) for the hospitality-based courses. Another agreement was also signed with the Indian Medical Association (IMA) for the paramedical courses. An MOU has been signed with CISCO and operationalised for the IT Essential: PC Hardware and Software course.

BOU (Bangladesh): Nothing.

IAE (Tanzania):
- Curriculum development process involves experts from industries.
- Apprenticeship programmes linked with industries are in place.
- Governing boards comprise members from industries.

NOSTT (Trinidad & Tobago): The National Training Agency is the body responsible for such co-ordination.

BOCODOL (Botswana): Whatever collaboration exists is as already mentioned in previous questions.

Q 14. Any examples of effective and successful public-private partnerships?

NIOS (India): The IMA association with NIOS. The IMA is an association of doctors and it offers many paramedical courses. The CISCO partnership with NIOS.

BOU (Bangladesh): JSC programme with NGO coalition.

IAE (Tanzania): Nothing to say.

NOSTT (Trinidad & Tobago):
- CANTA, the Caribbean Association of National Training Agencies, is a major Caribbean initiative among all Caribbean training agencies.
- Prior Learning and Assessment Recognition (PLAR) is a major local initiative among players in the TV sector. Both private industry and government to recognise prior work experience and to certify such experience at the Work Assessment Centres.

BOCODOL (Botswana): Partnerships with the Botswana police and Volvo Buses.

Q 15. What steps have been taken to integrate VE with general education?

NIOS (India): In NIOS the student can take four academic subjects with one vocational course at secondary and senior secondary level. Apart from this there are subjects like painting, typing and data entry operation, which are in the academic scheme at a secondary and senior secondary level.
BOU (Bangladesh): In the Open School of BOU no prescribed step has been taken except the JSC programme, but the School of Agriculture and Rural Development has been offering its programme which might integrate VE with GE.

IAE (Tanzania):
- Formal secondary school in Tanzania is organised in biases [= streams] and technical education is one of them.
- In Tanzania there are formal secondary school[s] specialised in technical education.

NOSTT (Trinidad & Tobago): The integration of VE as part of the normal school curriculum of secondary schools.

BOCODOL (Botswana): Botswana has adopted the vocationalising secondary level education model but as already mentioned, open schooling students do not benefit from this because of the kind of resources needed to implement this and the nature of DE learners who are scattered all over.

Q 16. What steps have been taken to encourage and attract students towards VE?

NIOS (India):
- Regular publicity in national and regional newspapers.
- New short-term courses.
- Encouraging PPP partnerships.

BOU (Bangladesh): Not yet done but inclusion of ICT materials such as video and animated CDs which are highly regarded by the learners. If needed, we can do promotional activities in BOU.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): The Ministry of Education via the Minister has been emphasising the need for expanded education for students, including VE.

BOCODOL (Botswana): Both the schools and BOCODOL have a strong guidance and counselling programme which also includes career guidance.

Q 17. What mechanisms for vertical and horizontal mobility of VE for skill enhancement are needed?

NIOS (India): [No response.]

BOU (Bangladesh): Learners should be informed that they have a lot of job opportunities in various sectors if they enrol in vocational education in OS.
IAE (Tanzania): A national qualification framework.

NOSTT (Trinidad & Tobago): There is now a total reorganisation of the VE sector in light of the new requirements of the T&T economy for skilled workers.

BOCODOL (Botswana): Not sure.

Q 18. What adaptations to existing models are needed?

NIOS (India): [No response.]

BOU (Bangladesh): ICT-enabled; more technology to be adapted and adopted.

IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): There is a seamless transition from the secondary school Caribbean Vocational Qualification (CVQs) to the post-secondary TVET qualification of the world of work.

BOCODOL (Botswana): Not sure.

Q 19. Should there be differences between rural and urban schools in respect of [an] integrated curriculum in general/vocational education?

NIOS (India): Yes, as the demands are different for the rural and urban areas.

BOU (Bangladesh): There should be no differences between rural and urban schools in respect of [an] integrated curriculum in General/Vocational Education.

IAE (Tanzania):
  • Curriculum has to be based on learners’ needs and interests.
  • Curriculum should provide an opportunity for further learning.

NOSTT (Trinidad & Tobago):
  • There is no need for such differences in T&T.
  • As Ministry policy dictates, all schools do the same curriculum based on need and choice of subjects including vocational subjects.

BOCODOL (Botswana): I don’t think so though there might be variations to take care of the context.

Q 20. What are the strategies and programmes offered for the unorganised workforce keeping in view size, heterogeneity, age range, geographical coverage, educational and income status, gender and social disparity?

NIOS (India): [No response.]
BOU (Bangladesh): The Open School does not have any strategies at present but we can offer programmes suitable to [all] age, ethnic group, gender, economical status and geographical distribution.

IAE (Tanzania): Organise integrated programmes, for example we have integrated the entrepreneurship training programme.

NOSTT (Trinidad & Tobago): There are various programmes including on-the-job training (OJT), Civilian Conservation Corps (CCC), YTEPP retraining programme and many others which focus on retraining youths and individuals between 25 and 45 years old.

BOCODOL (Botswana): DVET to assist.

Q 21. Most unorganised sector artisans have traditional skills, but there are few mechanisms to ensure the certification of such traditional skills. What needs to be done?

NIOS (India): In order to recognise the skills of the traditional artisans the only way is to establish a framework for the assessment of prior learning.

BOU (Bangladesh): Provide non-formal education for them with certification so that they can uphold or upgrade themselves academically and financially. On-demand exam provision can be made available for their certification; ICT will be the backbone of this system.

IAE (Tanzania):
  • Conduct prior learning assessment in order to recognise potential competences.
  • Provide basic training to fill the gaps.

NOSTT (Trinidad & Tobago): There is the Prior Learning and Assessment Recognition (PLAR) for such individuals.

BOCODOL (Botswana): Need to use flexible means of enabling them to write exams such as use of ODL.

Q 22. Challenges in training of trainers (ToT) keeping in view languages/dialects, social characteristics, issues of pedagogy?

NIOS (India): [No response.]

BOU (Bangladesh): Teaching in their mother/native language or local/regional language can reduce language barriers, time, economical constraints and social discouragement.

IAE (Tanzania): This is not a problem in Tanzania because we have one national language (Kiswahili).

NOSTT (Trinidad & Tobago): No such challenges like these exist in terms of training trainers in T&T.

BOCODOL (Botswana): Not sure.
Q 23. Modalities of imparting emerging skills keeping in view: limitations of the workers, their theoretical knowledge, traditional skill set?

NIOS (India): [No response.]

BOU (Bangladesh): Piloting required for developing modus operandi.

IAE (Tanzania): Organising short courses.

NOSTT (Trinidad & Tobago): [No response.]

BOCODOL (Botswana): A blended mode is the most suitable for vocational technical education.

Q 24. What mechanisms and institutions are needed to ensure certification and accreditation of courses in the informal sector?

NIOS (India): [No response.]

BOU (Bangladesh): BOU should collaborate with job-related industries to offer VE which should be accredited by BOU with [the] approval of [the] government authority and provide certificates according to the level of the students.

IAE (Tanzania):

- Establish a regulatory body.
- Open Schools should appear in a national qualification framework.

NOSTT (Trinidad & Tobago): The Accreditation Council is the authority responsible for accreditation of all institutions/courses, both local and international.

BOCODOL (Botswana): As long as an RPL policy has been developed and there is a strong link with industry, existing institutions can do the job.

Q 25. Any innovations like cost-sharing between training providers and trainees, and rationalising the cost-to-beneficiary; cross-subsidisation; income generation by selling goods and services as a “by-product” of the training process?

NIOS (India): In NIOS VE courses are offered on a fee-sharing model. The study centres have the freedom to income generate and sell the products and put on an exhibition of the products made by the students.

BOU (Bangladesh): Continuous evaluation with ranking of the students, trainees and the providers of VE. Products made during the learning process can be sold with the collaboration of any industry or any sales centre. The money earned from the sales centre can be distributed as cost-sharing, or to learners, trainees and the providers as stipends or subsidies. BOU has been sharing existing resources for cost reduction; using local venues.
IAE (Tanzania): [No response.]

NOSTT (Trinidad & Tobago): Costs are shared among shareholders in the TV sector with respect to the technical/vocational programmes. The National Energy Skills Centre (NESC) is one such organisation which is funded by companies in the energy sector in T&T. This organisation offers training in a range of technical/vocation subjects for those wishing to be employed in the energy sector as well as other vocational sectors.

BOCODOL (Botswana): [No response.]
This project draws on the responses of the participants who were involved, the work done and researched in different countries over the years and my own experience to suggest a comprehensive framework for the integration of vocational education with academic education.

It must be pointed out that vocational education in the open schools that participated in this COMOSA study is either non-existent or is an “also provided” programme. It has consequently not had the focus and attention it deserves. This is possibly to be expected as the concept of open schooling is relatively new in the participating countries and they are still working on solving the major challenge of “reaching the unreached” for general education.

The reality, though, is that the students in such open schools bring with them a wealth of learning through their life experiences that open schools could tap and should draw upon. These experiences are what make the difference between a traditional school and an open school and the imperative is therefore to weave the flexibility of open schools with the strengths of their participants.

**8.1 MODELS OF INTEGRATION**

It is useful to bear in mind that there are different models of integrating vocational education and general education and all have limitations and degrees of success. One model involves incorporating more academic content in vocational courses, which requires vocational teachers to modify vocational courses to include more academic content. While the benefits include potentially increasing the academic knowledge of students to meet the technical requirements of business, ease of adoption, limited additional expense and remediation, this model does not eliminate the segregation of vocational and academic courses, teachers or students and does not affect the academic or general tracks.

In the model combining vocational and academic teaching to enhance academic competencies in vocational programmes, academic teachers co-operate with vocational teachers in curriculum development
and/or teaching to include more academic content in either vocational courses or related applied courses. The benefits include the presence of academic teachers within a vocational programme to highlight the importance of academic material and to give in-house academic support to students who need it. A limitation of this model is that it requires resources to fund such programmes. It also continues to segregate students in vocational or academic tracks and offers some students a relatively low level of academic skills.

Yet another model involves making academic courses more vocationally relevant. Potentially all students (vocational and general track students) are targeted for this approach that involves academic teachers in modifying courses or adopting new courses to include more vocational content (for example, adopting applied academics). The benefits of this model are that off-the-shelf curriculum materials are available and a coherent sequencing of courses is possible. The limitations of this model are that it changes academic courses but does not touch vocational programmes and does not encourage co-operation between vocational and academic teachers.

In the curricular “alignment” — modifying both vocational and academic courses — the approach is designed to change the content of both vocational and academic courses and to consider the sequence of courses rather than viewing courses as individual and independent offerings. It requires co-operation between academic and vocational teachers and fosters team efforts. The benefits of this model are its flexibility, low cost and potential for co-ordinating existing teachers and courses rather than requiring new secondary school configurations. It is an attempt to create a coherent sequence of courses for vocational education students rather than modifying existing individual courses that are independent of each other. A limitation is that the alignment is vertical, leaving the sequence of academic courses unchanged and failing to require regular contact between vocational and academic teachers.

The project model as a form of integration involves both academic and vocational teachers in organising a curriculum around student projects. Having teachers collaborate in developing new courses or modifying content is its primary benefit; its limitations are that the effects on integration may be small and the vocational content negligible.

In the academy model of integration — the school-within-a-school concept — four teachers typically collaborate and team-teach in Maths, English, Science and the academy’s core vocational subject. Each group of students studies these subjects with the same team of teachers for two or three years in the academy and takes all other subjects in the regular secondary school. The benefits are sustained contact between teachers and students, smaller class sizes, teacher commitment to the academy model and connections with companies that are linked with the programme. This model offers substantial opportunity for both horizontal and vertical alignment as teachers can co-ordinate the topics they teach and adjust the sequence of topics over time. The limitations are that students are frequently segregated in the same ways as they would be through tracking, and the process not only is costly but also requires restructuring.
Occupational high schools and magnet schools have been relatively successful at integrating vocational and academic education, particularly when teachers keep in mind the goals of the school and the ambitions of the students. Magnet schools involve students interested in specific occupational areas, but they have not been conducive to integration in that the schools are often involved in solving problems of racial desegregation. The benefits of having occupational high schools include the potential alignment of all courses with an emphasis on specific occupational areas and the opportunity for academic and vocational teachers to collaborate.

The model of occupational clusters can be used within both comprehensive secondary schools and specialised vocational schools. Teachers usually belong to occupational clusters rather than conventional academic or vocational departments, thus facilitating collaboration. The benefits include the creation of coherent sequences of courses that encourage students to think about occupations early in their secondary school careers and the bringing together of students from very different backgrounds and with varied ambitions. The career paths offer opportunities for contact with potential employers and with educators at post-secondary institutions. A limitation of this model is that it requires a school with a well-developed vocational programme that provides substantial offerings in each of the occupational clusters.

The above-mentioned models in traditional schools provide a good base to determine what could work best in open schools but each open school must explore what works best for them in their enabling environment and regulatory framework that can bring about greater value to each open school. A combination and adaptation of the models is most likely to be the appropriate integration model that would evolve for a given open school.

8.2 WHAT TO INTEGRATE?

The question of whether schools should integrate vocational and academic learning has been universally accepted insofar as basic skills, thinking skills and personal qualities are recognised as the “foundations” deemed necessary for youth to be successful upon graduation from secondary school. These foundations were identified in the 1991 United States Secretary’s Commission on Achieving Necessary Skills (SCANS) report. These and the five workplace competencies identified have to be developed daily in the classroom by integrating vocational and academic learning. The five competencies listed in the SCANS report are:

1. Resources: Identifies, organizes, plans, and allocates resources. Examples would include time, money, material and facilities, and human resources.

2. Interpersonal: Works with others. Examples would include participating as a member of a team, teaching others new skills, serving clients/customers, exercising leadership, negotiating, and working with diversity.
3. Information: Acquires and uses information. Examples would include acquiring and evaluating information, organizing and maintaining information, interpreting and communicating information, and using computers to process information.

4. Systems: Understands complex inter-relationships. Examples would include understanding systems, monitoring and correcting performance, improving or designing systems.

5. Technology: Works with a variety of technologies. Examples would include selecting technology, applying technology to a task, and maintaining and troubleshooting equipment. (Secretary’s Commission on Achieving Necessary Skills, 1991)

Also universally accepted is the need for alternative assessments for teachers to link students’ academic needs/skills with real-world experiences that are required to enter the workforce.

There can be no doubt that the corporate world seeks employees who are creative, open-minded, self-disciplined, flexible, motivated individuals who can take decisions independently, initiate new ideas, solve problems, communicate well and adapt to “industry culture” quickly. This is identified and reflected in various national employability skills and competencies.

For example, key competencies identified for employability in Australia — referred to as the Mayer Key Competencies — include collecting, analysing and organising information; communicating ideas and information; planning and organising activities; working with others and in teams; using mathematical ideas and techniques; solving problems; using technology; and cultural understanding.

Canada’s Employability Skills Profile is not significantly different. Its list includes thinking skills; communication skills; responsibility skills; positive attitudes and behaviour; adaptability and ability to work with others; understanding and solving problems using mathematics; problem-solving and decision-making skills; learning skills; technology skills; managing information; using numbers; ability to work safely and to participate in projects and tasks.

England, Wales and Northern Ireland’s key skills include numeracy skills, communication skills, ICT skills, improving own performance and learning, ability to work with others, and problem-solving skills.¹

In contrast to the above “soft skill” approach to integration is the hands-on vocational skills approach. Jon Lauglo, of the World Bank, in a paper presented to the CIES in 2004, cautioned that integrating vocational training with mainstream secondary education is probably not the best option in countries where only a small percentage of school-age children actually attend school and where the general education on offer is in need of drastic improvement. However, he noted that the following points should be considered if a school decides to proceed with offering practical/vocational subjects:

¹ See www.cityandguilds.com
• How will the new teaching approach fit with current teaching approaches in the school?
• How much work is actually available for students who choose to study the vocational subjects? And what other skills would they need to make them employable in their chosen area?
• Can the knowledge gained from studying a vocational subject be applied in other job areas?
• What resources — facilities, equipment, suitably trained teachers who will stay for the long term, etc. — are required, and how does their cost compare to the costs of traditional, academic education?
• How will the gender balance be managed?

The Rand Report (2008) noted that integration of academic and vocational education at the secondary school level was mandated by the 1990 United States Amendments to the Carl D. Perkins Vocational Education Act (see www.presidency.ucsb.edu/ws/index.php?pid=18860#axzz1uPNkVh1v), and looked at the experiences of eight schools that embarked on integration before it was written into law. The schools improved their curriculum, teaching practice, teacher collaboration and school transition practices by using one of three approaches: enhanced academics, enhanced relevance or enhanced engagement. They all experienced major barriers in their attempts to introduce change, including state and district-level regulations and school-level practices. The keys to success were making integration the central focus of a school improvement plan and specifically allocating resources to curriculum development and creating opportunities for teacher collaboration.

The RAND researchers identified four common themes that, taken together, can be said to define integration as a distinct reform effort:

• Richer, better sequenced curricula that enhance academic and generic skills needed by all workers.
• Facilitative instruction (rather than didactic) that motivates students to learn and provides them with a practical and applied understanding of the world.
• Increased collaboration and coordination among academic and vocational teachers to create a more unified schooling experience.
• More attention to the skills and knowledge students need to transition effectively from school to work and college. (Bodilly et al., 1995)

In short, the best and most effective approach is to take the best practices from academic and vocational education and combine them to create one programme that all open school students can access through inclusion of greater dimensions of openness and flexibility, whether in terms of access, curricula or other elements of structure as provided through open and distance learning. The ODL mode offers structured learning in which the instructor and students are separated by time and space, making use of instructional materials such as print materials, audio and video cassettes, CD ROMs, television and radio broadcasts as well as multimedia components such as computer and satellite transmissions. (Peat and Helland, 2002, cited at www.irrodl.org/index.php/irrodl/article/view/313/494)
TVET and ODL have both been used in the development of national policies to use technical/vocational education and training for the dual purpose of addressing economic issues and offering universal access to education and training. The challenge is to develop a system where the skills taught are not only valid in and valuable to the workforce, but also recognised outside the immediate environment of the school and sufficiently transferrable to be of practical use to the students.

8.3 RECENT TECHNOLOGY INITIATIVES AND THEIR POTENTIAL

The enduring paradox of those with the greatest need for modern tools having least access to them is slowly but surely being addressed through technology initiatives and regional co-operation that could change the delivery strategies in open schooling. Given the regional composition of the open schools in this research study, it is worth looking in particular at India’s experience. Its National e-Governance Plan (NeGP) and dedicated education satellite, Edusat, have been replicated through the Pan-African e-Network Project being funded by the government of India and hold great promise.

Providing adequate educational facilities and affordable healthcare to citizens are two prominent concerns of many developing countries. Technological improvements in terms of communication infrastructure — for delivering quality education and healthcare uniformly across the length and breadth of the country — are a key factor in the progress made by any country. Efforts to deliver education and healthcare from resourceful urban areas/developed countries to inaccessible remote/rural areas have been successful in terms of access to quality services in a prompt and cost-effective manner. The Pan-African e-Network project connects all 53 nations of the African Union by a satellite and a fibre optic network that could provide communication for tele-education, tele-medicine, Internet, video conferencing and VoIP services and also support e-governance, e-commerce, infotainment, resources mapping, meteorological services, etc.

In my experience, it would be relevant to highlight some of the challenges that point to the need to reinvent the way teaching and learning, and their management, take place in an environment of technological breakthroughs. To begin with, there is the issue of content customisation and multilingual delivery through an education services platform built around open educational resources (OER), which introduce new demands. There is the need to create digital repositories for text, audio and video distribution. There is also the need to create and enable communication networks that would facilitate email, discussion forums, voice and video over IP and collaborative group learning and teaching. There is a need for services on demand that would include radio, television, interactive television, Web-casting, and uni-cast, multi-cast and broadcast services. There would also be a need to create education applications that would include simulations, application software for student management, course management and tutor management and overall administration. A new set of professionals would necessarily need to be trained and
brought into the open school system — for example, knowledge producers, instructional designers, information technology professionals, media professionals and ICT experts.

If open schooling has failed to harness the full potential of technology, it is because open schools are essentially staffed not by this new set of professionals, but by people from traditional school backgrounds who are perpetuating in many ways the traditional forms of teaching and learning and their management.

8.4 THE IMPORTANCE OF QUALITY ASSURANCE

One key area that was not given enough attention in the research responses but which needs to be highlighted is the importance of quality assurance. As per the 2010 COL publication Quality Assurance Toolkit for Open Schools (pp. 23–24):

Increasingly, quality assurance serves several purposes in an educational setting, primarily because of a wide diversity of stakeholders’ growing interest in education. Some of these purposes include:

• To improve system and process institutional services
• To inform would-be learners and their parents/guardians of what services are provided
• To inform the public of what services are provided
• To teach positive values of excellence to learners who go through the system
• To encourage institutions to continually reflect and transform to keep up to date with changes in society.

One of the main challenges of open schools in the developing context, where they are basically new, is to convince the public that their offerings are comparable to those of conventional schooling. It is important in these contexts for open schools to demonstrate their quality by maintaining robust quality assurance systems that are transparent and that produce quality graduates.
8.5 RECOGNITION OF PRIOR LEARNING

The core uniqueness of open schooling is the flexibility it provides for the individual learner. In this context, individual learning plans in an open school environment depend on technology that can capture, monitor, evaluate and report on the learning of each student, particularly as student numbers increase. In the current study, one critical area that was not addressed by the participants is the recognition of prior learning.

Recognition of prior learning is a process that involves the identification, documentation and assessment of learning acquired through formal, non-formal and informal study. This may include work and life experience, training, independent study, volunteering, travel, hobbies and family experiences. Recognition is the award of academic credits, trade/occupational and/or professional certification, or promotion within the workplace.

- **Formal learning** refers to a learning activity that takes place in an organised way and that, by its very nature, leads to certification by the Ministry of Education, a professional branch or another Ministry.

- **Non-formal learning** refers to organised activities that take place within or outside the workplace and that are not explicitly identified as learning activities. They do not lead to qualifications or certification, but they have a major learning component (e.g., workplace training).

- **Informal learning** consists of learning activities that occur by chance or through everyday activities (e.g., reading, self-directed research, community and volunteer activities).

Recognition of prior learning can be used to demonstrate competencies in all three learning venues — formal, non-formal and informal — but it is like the tip of an iceberg. Most learning lurks below the surface where it is unrecognised and underused.

Why is recognition of prior learning important for open schools? The answer lies in the fact that:

- learners with work experience are the primary beneficiaries of recognition of prior learning;
- accumulated knowledge and skills — “learning outcomes” — make open schooling relevant to individuals when they are measured and valued;
- open school learners need alternative approaches to traditional, classroom-based learning;
- recognition of prior learning offers the possibility of alternative paths to career mobility; and
- recognition of prior learning brings:
  - accessibility — by helping learners to overcome financial and non-financial barriers, and
  - mobility and portability — by recognising knowledge and skills acquired in other settings.
Recognition of prior learning must therefore be deeply embedded in the learning philosophy of open schooling and in a curriculum that integrates vocational education with academic learning because:

- it leads to access and opportunity,
- it is a tool that can be applied to recognise and give value to any relevant learning,
- today’s world places great store by formal learning, and
- workplace and life learning both contribute to the development of individuals.

Recognition of prior learning must enable:

- transferability of academic credits through primarily formal learning and recognition by learning institutions:
  - between institutions, and
  - across professional and trade boundaries; and
- mobility of labour market credentials through recognition by formal learning organisations and certifying bodies:
  - professions and trades and recognition by learning and workplace
  - recognition of workplace/life learning through informal and non-formal learning and recognition by learning and workplace
  - Foreign Credential Recognition (FCR) through formal and non-formal learning and recognition by learning and workplace

Key elements of recognition of prior learning must therefore include:

- Policy:
  - Use of national occupational standards
  - Development of national policy and standards for RPL (i.e., rigorous outcomes-based assessments within a flexible approach)
  - Consensus on national adult learning principles (i.e., a focus on learning outcomes)

- Application:
  - Support and funding
  - Trained and certified RPL practitioners
  - Workplace orientation
  - Institutional and employer support and promotion
Recommendation 195 of the ILO’s 2004 Recommendation concerning Human Resources Development: Education, Training and Lifelong Learning states in part that:

11. (1) Measures should be adopted, in consultation with the social partners and using a national qualification framework, to promote the development, implementation and financing of a transparent mechanism for the assessment, certification and recognition of skills, including prior learning and previous experience, irrespective of the countries where they were acquired and whether acquired formally or informally.

(2) Such an assessment methodology should be objective, non-discriminatory and linked to standards.

(3) The national framework should include a credible system of certification which will ensure that skills are portable and recognized across sectors, industries, enterprises and educational institutions.

12. Special provisions should be designed to ensure recognition and certification of skills and qualifications for migrant workers. (Human Resources Development Recommendation, 2004)

8.6 ARTICULATION AND MOBILITY PATHWAYS

Alongside recognition of prior learning is the need to establish articulation and mobility pathways. Adrian R. Haas defines articulation, in an educational sense, as

the creation of pathways or linkages to facilitate the movement of students between programmes and institutions. The notion of a vocational education pathway implies passage through a series of educational experiences or employment-related competency formations, which aim to progress through to an occupational destination. Further pathways may then lead to another occupation. (Mishra et al., 1990, p. 105)

To relate this to this research study, it is useful to draw upon the work done in the area of career clusters, notably the Oklahoma Career Clusters Model,² which could serve as a tool for connecting academic, technical and employability skills in conjunction with students’ career planning. Career clusters serve as a framework, or model, to help students transition from one educational level to another. For example, they help to connect career exploration at a lower level to in-depth exposure to a cluster at a higher level, moving to more specific skills in secondary and post-secondary education/training.

2 See www.okcareertech.org/educators/career-clusters/about-career-clusters
To put this in operational and curricula terms, students will have the option of acquiring more specialised skills and knowledge as they move through the pathways but no matter which options they choose to focus on, they will always have to master basic — that is, foundational — skills and knowledge that apply to all occupations in a cluster and that must be mastered before a student can progress to the next level.

Clearly, it would be beyond the scope and capacity of any individual open school to work through such details across cluster occupations but at a broader national level it would help to draw on the concept behind the UK’s Sector Skills Councils, now adapted in several countries such as India. Sector Skills Councils are state-sponsored and employer-led organisations that work towards:

- improving access to training,
- reducing shortages of skilled workers and gaps in skill sets,
- improving the skills of their workforces, and
- improving productivity.

Their role includes, but is not limited to:

- identifying skill development needs,
- developing a sector skill development plan and maintaining a skills inventory,
- determining skills/competency standards and qualifications,
- participating in affiliation, accreditation, examination and certification, and
- planning and practising training of trainers.

If this approach were introduced in open schools, the lowest levels would offer a more generic foundation-level curriculum, and the higher levels would require some changes to the curriculum, including:

- sector-specific course content,
- sector-specific training programmes, and
- sector-specific capacity-building.

This leads to the need for effective public-private partnerships (PPP). Collaboration, co-operation and strategic arrangements with private parties are often mistaken for PPP and more often than not end in ambiguity, a sense of frustration and a feeling of being “taken for a ride.” It is therefore important to recognise that key obstacles to successful partnerships include difficulties in negotiating and reaching agreement between non-traditional parties; achieving political will and public support for the participation of the private sector and business community; agreeing on key performance targets; and transparency and accountability within the PPP. Key success factors for successful partnerships include engaging a senior

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3 See www.ukces.org.uk
4 See www.nsdcindia.org/pdf/sector-skill-councils.pdf
champion for the PPP arrangement and agreeing on shared objectives from the beginning of the partnership. The skill sets for working through PPPs are very rarely available in educational institutions and are non-existent in the open schools I have researched. They must therefore be consciously accessed as a prerequisite to successful public-private partnerships.

Although such partnerships should be considered an end in themselves, as an important new strategy for delivering improved services they should also require a substantial commitment from all the stakeholders involved and should offer the prospect of major benefits to all those stakeholders. A potential partnership requires leveraging the strengths of each partner; in this case, defining the roles of the multi-stakeholder partners in terms of how they would contribute to the impact, effectiveness and efficiency of the project. In the context of open schooling these would include:

- For the open school:
  - Enhancement of existing curricula to fit modern needs. Students would be able to leave the open school with workplace-ready skills.
  - “Future-proof” education by providing a mechanism to constantly update curricula in response to actual industry needs and societal requirements.
  - Closer alignment of supply and demand in skills, reducing wastage and increasing employment rates.
  - New approaches to delivering skills without the need for extensive investment in the learning infrastructure and content.

- For students:
  - Enhancement of just-in-time learning and lifelong learning opportunities.
  - Updated curricula to allow for the acquisition of current, value-added skills.
  - Recognised skills qualifications through certifications.
  - Greater employment chances as new workplace skills can be acquired outside of the actual workplace.

- For industry:
  - Workplace-ready potential employees.
  - Closer match between supply and demand reduces the need for costly retraining on the job.
  - Greater visibility and promotion of industry-based skills certifications.
8.7 VOCATIONAL TRAINING FOR THE INFORMAL ECONOMY

Those who are largely unreached in the informal economy could be the largest untapped catchment for potential open schools. A 2009 study by the OECD noted that “vocational education should respond to the needs of the informal economy and be inclusive because in developing countries people work and trade predominantly in the informal economy.” The full article can be found at www.oecd.org/dataoecd/27/5/43280323.pdf. It is highly likely that the figures cited will have increased in the intervening years.

Also in 2009, a POVNET (OECD Development Assistance Committee Network on Poverty Reduction) task team on Employment and Labour Markets study stressed the important of recognising “the role and place of the informal economy” and, amongst other recommendations, advised that vocational training programmes be improved. The full report is available at www.oecd.org/dataoecd/27/5/43280323.pdf.

A 1994 study by RAND contained several suggestions for integration reform, some of which could guide us in attempting to integrate vocational and academic education programmes in open schools. In essence, the study noted that integration is a long-term project that should be seen as an all-encompassing change to schools and education. The full report can be found at www.rand.org/pubs/research_briefs/RB8005/index1.html.

8.8 STRUCTURE MUST FOLLOW STRATEGY

The historian Alfred Chandler influenced a generation of consultants with his insistence that structure must follow strategy — changes in strategy can only succeed if managers are willing to completely overhaul their organisations. This is useful for us to consider in the context of education. Too often, academic institutions build structures that are unwieldy, irrelevant and unfit for purpose. Open schools already focus on the needs of students and courses but they should also be looking at adopting flexible structures that follow the open school strategy to integrate vocational education with academic education.

The structure of an organisation influences the efficiency, effectiveness and flexibility of its operations. Too many levels of hierarchy can be just as disastrous as too few levels. Multiple, highly autonomous functional divisions might struggle to bring together multi-discipline project teams and matrix structures, whereas ad hoc teams, assembled for specific projects, might not be best suited for the demands of highly repetitive processes delivering uniform outputs. What is needed, therefore, is an organisational audit or review of the existing structures, staff and work processes. This must be done objectively — and keeping in mind both current priorities and future needs — or change for the sake of change will occur. The organisational restructuring that follows an objective audit must take into account existing organisational synergies and must motivate and facilitate behaviour in aligning with the particular strategy that is drawn up.
The point in highlighting the above is to show that, like so much else in the process of integrating vocational education with academic education in open schools, strategy and structure formation need specialised skill sets.

8.9 MANAGING CHANGE

This study concludes with the obvious — models do not make things happen, a change in mindsets and the management of that change make things happen. Speaking as a human resource specialist with experience in managing large-scale change, I must underscore the need for a change in mindset and must highlight the process of managing change that will address the challenges and opportunities of integrating vocational education with general education in open schools with specific respect to:

- Access and equity
- Quality and excellence
- Relevance and responsiveness
- Efficiency and effectiveness

This requires the management of change in an organisation’s development initiative, which is best defined by Beckhard as “an effort, planned, organization-wide, and managed from the top, to increase organization effectiveness and health through planned interventions in the organization’s processes, using behavioral-science knowledge” (Beckhard, 1969, p. 9). In other words, it is planned change that must be approached strategically, be process- and outcome-oriented and encompass:

- the use of technology;
- the teaching-learning process;
- content creation and delivery;
- programme management;
- process re-engineering; and
- the development of open, innovative and flexible models that need to be built around:
  - learning management systems;
  - student administration systems;
  - content management systems;
  - authoring tools and assembly tools;
  - course material systems and assessment engines;
virtual classrooms; and
collaboration tools.

At the same time, a substantial upgrading of the offerings of open schools through the integration of vocational education with general education needs to focus on availability, standards, certification and inclusion by:

- ensuring dissemination of new skills and technologies and expanding occupational choice (availability);
- controlling the quality of skills through equivalence, validation and accreditation (standards);
- supporting the recognition of skills (certification); and
- improving access for women, and the poor, vulnerable and marginalised populations (inclusion).

Some resistance to change is inevitable. Employees’ resistance to change could be due to the employer not fully explaining its benefits, not accounting for personnel issues (cultural traditions, workplace relationships, for example) or not explaining why the change is necessary at this particular time. Of course, some people are just inherently suspicious of change in any form. That is its own particular challenge.

An effective change management process is much more about people than process, and lasting change has a lot to do with good leadership and people management skills.


### 8.10 THE ROLE OF LEADERSHIP

The success of organisational change depends on strong leadership. The person managing the change needs to be committed to seeing the project through to the end, and to keeping everyone involved on track. He or she needs to make clear the purpose and aim of the change to win the support of both his or her staff and also any external stakeholders. Leaders of open schools — and particularly those embarking on major change initiatives, such as integrating vocational education with academic education — need to assess their ability and readiness to lead change. We now know that employees’ perception of their managers’ abilities are crucial, especially where change is involved.

Michael Fullan sums the issue up well in his 2002 article “The Change Leader”:

Characterizing instructional leadership as the principal’s central role has been a valuable first step in increasing student learning, but it does not go far enough. Literacy and mathematics improvements are only the beginning. To ensure deeper learning — to encourage
problem solving and thinking skills and to develop and nurture highly motivated and engaged learners, for example — requires mobilizing the energy and capacities of teachers. In turn, to mobilize teachers, we must improve teachers’ working conditions and morale. Thus, we need leaders who can create a fundamental transformation in the learning cultures of schools and of the teaching profession itself. The role of the principal as instructional leader is too narrow a concept to carry the weight of the kinds of reforms that will create the schools that we need for the future. (p. 2)

He concludes that principals are at the core of future change in schools, by virtue of their role as leaders.
Lessons learned in reforming vocational education are almost universal and equally relevant to our study on open schools:

- The old model of narrowly specialised vocational education aimed at producing ready-to-work recruits for industry no longer works and it would be neither feasible nor advisable to invest in re-equipping schools for this narrow purpose.
- Parents and students prefer general education over vocational education. The challenge therefore is to add value to general education through vocational education.
- Reform needs to support convergence in content of general and vocational education aimed at generating new skills.
- Several of the measures that would help to promote equity and efficiency are also likely to reduce expenditures by offering a converged curriculum to all in open schooling, which would help increase the upward mobility of the less advantaged and improve outcomes at lower cost.

Based on what has been learned from this research study, a comprehensive framework would help in integrating vocational education (VE) with academic education in open schools. The framework is presented on the following pages.
1 CONTEXT

1.1 VE is a priority for development
- Economic growth
- Demographic changes — growing workforce of youth
- Poverty alleviation
- Growing knowledge economy
- Sustainable development

1.2 Characteristics of the unemployed
- Poor learning outcomes
  - Ability to read and write
  - Speaking and communications skills

1.3 Low employability skills (soft skills)
- English
- Presentation skills
- Etiquette and hygiene
- Work ethic

1.4 Not adaptable or portable
- Low numeracy
- Low computer/IT familiarity
- Lack of multi-skills

1.5 Poor opportunities for entrepreneurship

1.6 Problems and challenges
- Limited access
- Perception as an inferior option
- Unsatisfactory quality
- Inadequate planning and management
- Resource constraints

1.7 Objectives for the role of government in education
- Access/equity concerns — people with varying financial resources and needs have access to education
- Quality concerns — appropriate quality standards are attained
- Stakeholder concerns — ensure that parents act in best interests of their children; ensure employers get what they need
- Social/economic concerns — public resources are used to support realisation of a well-educated community
1.8 Pressure for change

- Relevance
  - Meeting the needs of the knowledge economy
  - New teaching methodology
  - New teaching and learning materials
  - New curriculum and syllabi
  - Mismatch between skill development and labour market requirements (ratio of Humanities to Maths/Science).

- Quality
  - High dropout and repetition rates
  - Time taken to graduate often exceeds mandated period
  - Mismatch between teacher training and education sector subject needs
  - Wide variation in ability of entrants at each education level (elementary, high school, university)

1.9 Four areas of policy focus

- Approach to regulating the private education sector
- Access to resources for private schools
- School funding arrangements
- Co-ordination and partnership

1.10 Enabling policies

- Regulation
  - Weaknesses
    - Inflexible, prescriptive and input-focused regulation (command and control)
    - Inconsistent and ad hoc application of regulations at the local level
    - Over-zealous and uneven treatment of different schools
    - Regulatory mindset towards private provision
  - Possible solutions
    - Adopt light-handed, flexible approach to regulating private schools
    - Reduce extent of current regulations
    - Provide greater certainty about the “rules of the game” (e.g., what is permitted)
    - New school licensing system (e.g., possible tier system)

- Access to resources
  - Weaknesses
    - Lack of access to capital at affordable rates to finance school construction and expansion
    - Lack of access to land in suitable locations
    - Restrictive and uncertain land zoning regulations
    - Lack of access to staff trained in relevant content areas and methodologies
  - Possible solutions
    - Make investment in education more attractive by improving the regulatory environment and relaxing foreign ownership limits on private schools
    - Release government land for use by private education providers
    - Allow private sector to enter teacher training market — pre-service, in-service and school improvement
    - Provide soft loans to private schools through an education finance facility
Co-ordination and partnership

Weaknesses
• Lack of trust between public and private sectors and lack of mechanisms to encourage trust
• Absence of comprehensive private sector co-ordinating body
• Lack of co-ordinating body among government departments with responsibility for private education
• Lack of instruments to assess performance

Possible solutions
• Establish a National Task Force comprising selected personnel from both sectors
• Establish a Private Education Association
• Establish a co-ordinating committee within the Ministries
• Establish an independent National Assessment and/or Examination Board

School funding arrangements

Government policy instruments
• Governments have a range of policy instruments at their disposal to help them meet their objectives
• Generally speaking, there are four broad instruments for intervening in the education sector:
  – funding (e.g., subsidies, vouchers, tax subsidies)
  – provision/ownership (e.g., network of public schools)
  – regulation (e.g., zoning, mandatory schooling age, safety)
  – information provision (e.g., career information)

Weaknesses
• Funding to private schools not targeted
• Funding to private schools delivered in kind, not in cash — implications for flexibility and quality
• School funding system not neutral between government and private schools
• Funding does not follow students who shift from public to private education sector

Issues related to funding
• The appropriate amount of funding
• Whether public funding is targeted or generally available (targeting)
• Whether public funding is directed at students or institutions (demand side vs supply side)
• Whether public funding is available at public or private institutions (neutrality)

Possible solutions
• Target private school funding on basis of student characteristics (homogeneity, background, etc.)
• Introduce per capita formula-based funding system across public and private schools
• Contract private management of public schools under MoE tender process
• Purchase private school places for public school students where public school is unsuitable or unavailable

1.11 Redefined role of government

1.12 Regulatory environment
  – How providers are established
  – The level and manner in which providers are resourced
  – The taxation treatment of providers
  – How providers are governed and managed
  – Providers’ operational flexibility
  – Information disclosure requirements imposed on providers
  – Regulation of the teacher market
  – The process of review and quality assurance of providers
1.13 Constraints on government
- Political sensibilities
- Government-employed teachers — redirection from government of its resources from institutions to consumers
- Need for an overall strategy — holistic approach — capacity of the government to develop the partnership — ability of the private sector to collaborate with government

1.14 Constraints on funding agencies
- Lack of resources
- Lack of sufficient knowledge base
- Ideological bias
- Fear of globalisation

1.15 New focus
- Linking partnerships with challenges
  - Problem: Current partnerships are not linked with resolving challenges
  - Needed:
    - Clarity about the objectives
    - Sharing of benefits as well as responsibilities
    - Transparency and clarity about who is doing what, with whom and with what outcomes
- Legal and regulatory framework
  - Problem: Lack of a well-defined governance structure allowing for distribution of responsibilities and accountability of all stakeholders
  - Needed:
    - A clear legislative framework specifying roles, responsibilities and accountability of all stakeholders, their relationships and areas of co-operation
    - Definition of roles at each level — central, provincial, district, institutional
    - Definition of role of private, for-profit and community organisations and NGOs
- Issues of trust
  - Problem: Lack of trust and mechanisms on which to build such trust
  - Needed:
    - Structural mechanisms between sides that support ongoing dialogue and debate both within groups and between groups
- Accountability
  - Problem: The public/government sector as the main provider of services is not made rigorously accountable for quality, efficiency, effectiveness and equity of its services. The private providers tend to take responsibility primarily for their organisational goals, be it for profits or otherwise
  - Needed:
    - Means of disseminating information about institutional performance in relation to larger goals
    - Mechanisms for greater involvement of parents and recipient institutions to enable demand-driven services
1.16 Implications of change

Too much time has been spent debating the respective merits of public versus private education. This distinction becomes of less significance if there is agreement that:

- The overall goal is to attain public good for all
- The rules of the endeavour shall be equal for all stakeholders
- The result is contingent upon all stakeholders:
  • building upon their respective strengths, and
  • being measured on their outcomes by their clients, the consumers

1.17 Improved access to quality education

Educational and training facilities have been increasing rapidly. However, access, affordability and quality remain serious concerns. Employability is also an issue. How can we improve the quality and the utility of our education while ensuring equity and affordability?

Key challenges

- Inconsistent data on education
- Insufficient school infrastructure
- Lack of teachers and school administrators
- Inefficiencies in use of current resources
- High ratio of school dropouts
- Inconsistency in the quality of education
- Limited focus on skill development
- Insufficient collaboration between industry and academia

What should be the key focus areas?

- Reworking ICT policy for education to encourage sustainable private sector investments
- Mandating technology through PPP model
- Engaging private sector in training teachers and school administrators
- Accreditation of schools and colleges by independent agency
- Introduction of vocational training in schools
- Implementation of national qualification framework
- Greater participation of industry in college accreditation and curriculum development
- Collaboration between education and vocational institutes, industry and research
1.18 Key lessons learned with regard to

- Participation/collaboration/private sector/NGO participation
- Flexibility
- Capacity-building
- Cultural relevance
- Equity
- Transparency
  - Wide variety of experiences of public-private collaboration
  - Wide variation in the extent to which public policy goals are being met
  - The differences between the public and the private sectors are disappearing
  - To meet public policy goals, public institutions need to become more client-oriented
  - Incentives need to be designed to encourage private institutions to meet public policy goals
  - Public institutions need to strengthen their capacity for policy making, financing, information provision and regulation

- The state and private sector: Changing roles?
  - Dominant model used by governments is one of public funding, public delivery and public regulation
  - Can the current model meet today’s challenges?
  - Alternative approach is to shift the balance of instruments away from provision towards funding, information provision and regulation

- Promoting PPP in education: Policy innovations. Developed and developing countries are making use of a range of public-private partnerships in the education sector. These innovative policies include
  - Vouchers
  - Contract schools
  - Student loans
  - Provision of information
  - Use of the private sector, rather than government, as regulator
  - Private sector regulation — accreditation
  - Accreditation — non-governmental peer evaluation of educational institutions and programmes
  - Educational associations oversee accreditation of programmes
  - Two types of educational accreditation — “institutional” and “specialised” or “programmatic”
1.19 VE initiatives in each country would have both universally accepted and unique characteristics and must therefore be explored at general country level and open school level. They must also be explored in the context of demand-driven vocation education with specific reference to:

- Are new courses introduced regularly to ensure that students are learning skills required for emerging areas of industry?
- Are unpopular courses or courses not relevant to current market needs discontinued?
- How frequently is periodic review and updating of course curricula involving experts from industry at every stage for development of courses including:
  - assessment of training needs
  - development of curricula
  - selection of students
  - testing of trainees
  - assisting in placement
- What is the flexibility with regard to multi-entry/multi-exit, multi-skilling modular courses as per the needs of industry in your open school?
- Is there active industry participation?

2 WHY INTEGRATE VE INTO ACADEMIC EDUCATION?

2.1 Central purpose: to increase student achievement

2.2 The role of standards

2.3 Forms of integration

- Course-level integration
- Cross-curriculum integration
- Programme integration
- School-level integration

2.4 Why is theory so hard to practise?

2.5 What students need for their future

- Competencies
- Foundational skills
3 USE OF ODL IN VE

3.1 Beneficiaries/special target groups
- Rural and urban poor
- Women and girls
- Socially and economically deprived
- Persons with disabilities
- Unemployed youth and adults
- Employed and part-employed
- Formal school dropouts
- Migratory populations
- Persons from less accessible areas
- Lifelong learners
- Hobby/interest learners

3.2 Modular-based VE

3.3 Skill development centres

3.4 Need for new delivery models
  - Use of technology

4 NEED ASSESSMENT AND ANALYSIS FOR VE

4.1 Emerging vocational patterns

4.2 Employment scenario

4.3 Entrepreneurial opportunities
5 CURRICULUM DESIGN AND DEVELOPMENT

5.1 Framework
- Broad-based definition and development of skills and competencies
- Conceptual format of curriculum design cutting across vocational skill areas
- Provision of flexibility in content for RPL
- Co-relation with National Vocational Qualification framework/systems
- Provision of horizontal and vertical mobility

5.2 Focus on competencies and multiple skills

5.3 Modular-based vocational curriculum

5.4 Credit system for curriculum flexibility

5.5 Credit for work experience and training

6 CURRICULUM MATERIAL, METHODOLOGY AND DELIVERY

6.1 Correspondence
6.2 Audio/video CDs
6.3 Radio
6.4 TV
6.5 Mobile learning
6.6 Web-based/online learning
6.7 Interactive audio-video conferencing
6.8 Workplace attachment
6.9 Accredited vocational centres
6.10 Mobile training vans
6.11 Networking vocational centres
7 ASSESSMENT, EVALUATION AND CERTIFICATION

7.1 Formative and summative assessment

7.2 Profile of assessors

7.3 Recognition of prior learning

7.4 Competency assessment and certification

7.5 Testing and certification — initiatives for recognising informal learning
  - Need for introducing system for testing and certifying skills acquired informally
  - Initiative for testing and certifying skills of those who have not undergone any formal institution training
  - Competency-based skill standards for skill areas

7.6 Issue: Recognition — employability perspective
  - Are certificates awarded recognised as qualifications for employment?
  - Does the certification have credibility and acceptance both in the country and abroad?
  - Are awarded certificates at the institute level recognised by sponsoring organisations?

8 ARTICULATION AND MOBILITY PATHWAYS

8.1 Multi-entry and multi-exit systems for flexibility through
  - Career clusters — a grouping of occupations and broad industries based on commonalities
  - Pathway — a narrower grouping of occupations and broad industries within a career cluster
  - Career major — a model sequence of courses or field of study that prepares a student for a career and offers skill credits
  - Courses — an instructional unit of defined competencies, a syllabus or course outline, and a measure of accountability, evaluation or assessment. A course may be occupational, exploratory, academic, foundational or competency development
  - Knowledge, skills and attitudes — specific work tasks performed on the job and that are measurable and observable

8.2 Migration and skills
  - Globalisation of trade and employment has brought in a qualitative change across the world
  - Mass movement of people across national boundaries
  - Manpower has become a potent force as a good source of foreign exchange income and regeneration of economic growth
  - People are also migrating with a view to upgrading their skills
  - Tap reservoir of skilled, semi-skilled and unskilled manpower
  - Young can emigrate to other countries for work if they are given proper training, counselling and reorientation
9 NATIONAL SKILL STANDARDS (NSS) AND THEIR IMPORTANCE

9.1 NSS are set up primarily to specify the minimum skill and knowledge requirements that workers are expected to possess in specific occupational areas

9.2 Used as a tool for unifying all training programmes, training standards, training material

9.3 A national skill testing and certification system can be established

9.4 Acceptable means of assessing the competency of skilled manpower

10 VOCATIONAL EDUCATION IN THE INFORMAL SECTOR

10.1 Large number of workers have acquired skills in an informal manner

10.2 Family tradition/occupation or by virtue of being employed in a particular trade for a long time

10.3 The skills acquired are in various areas of activities

10.4 The size of the informal economy is large (India: about 93% of the total workforce is engaged in the informal economy). What about your country?

10.5 Lack of testing and certification of skill attainment levels results in stagnation without any scope for vertical mobility

10.6 Mobility and opportunities in terms of employment and promotion within the country and abroad

11 NEW STRATEGIES FOR SKILL DEVELOPMENT FOR THE INFORMAL SECTOR

11.1 To provide skill training to economically weaker and less educated persons — a new framework for skill development needs to be evolved

11.2 Competency-oriented employable skill training on offer on a modular basis

11.3 Acquired qualifications expressed in terms of learning outcomes

11.4 For skill progression of this target group, national qualification framework to be evolved
12 **SKILL MOBILITY**

12.1 Globalisation of trade and employment has brought in a qualitative change throughout the world

12.2 Mass movement of people across national boundaries

12.3 Manpower has become a potent force as a good source of foreign exchange income and regeneration of economic growth

12.4 People are also migrating with a view to upgrading their skills

12.5 Tap reservoir of skilled, semi-skilled and unskilled manpower

12.6 Young can emigrate to other countries for work if they are given proper training, counselling and reorientation

13 **SKILL MOBILITY APPROACH**

13.1 **Development of National Qualification framework**
   - A nationally agreed framework that would guide and reflect the agreement of stakeholders needs to be developed
   - Such a framework will act as a bridge between different national systems of acquiring skills and will facilitate transparency, mobility and progression of different levels of skilled people working in and outside the country

13.2 **Mutual recognition of qualification and harmonisation of skill standards**
   - Projection of employable areas and development of acceptable skills standards
   - Co-operation agreement with partner countries for a coherent qualification framework
   - Mechanism to acquire skills needed and have them certified by the appropriate authority

13.3 **Obstacle-/barrier-free mobility of workers**
   - Mutual recognition of qualifications
   - Avoid discrimination when evaluating qualifications from other countries (in practice, national qualifications are considered superior)
   - Build up mutual trust and confidence through regular contacts
   - Easy/fast-track visa processes for workers with recognised qualifications

13.4 **Raising skill levels of workers**
   - Measures to upgrade skill standards of workers with active participation of stakeholders
   - Measures could include having skills competition among partner countries
14 TECHNOLOGY

14.1 Approaching the education dilemma with tele-education

- Quality education at primary, secondary and college levels in developing countries is constrained by non-availability of skilled teachers
- Space communication, which is broadcast in nature, can be used to spread education to any part of a country quickly and cost-effectively
- Broadcasting or interactive network
- The interaction could be audio/video. The schemes used are one-way video and two-way audio or two-way video and audio
- Broadcast network is used for primary education since the size of the network is large
- Interactive network for teacher training and higher levels of education

14.2 Benefits of tele-education

- High-quality education can be imparted uniformly from a central teaching-end/studio where good quality teachers can be brought together
- Teachers can be trained periodically in distance education
- Education through a space-based network can make “learning from the place you want and at the speed you want” a reality
- Can be used for informal education and adult literacy to improve the literacy levels of the community

14.3 Issues in tele-education

- Identify and prioritise specific sectors to be addressed by tele-education
- Prepare and provide appropriate educational material
- Select the location of the uplink facility and the teaching end
- Select the locations of the various student-end nodes
- Plan for optimal use of network by using it full-time
- Regulatory clearances of the recipient country should be obtained for acceptance of courses

14.4 Other technology interventions

- Mobile learning
- Audio/video CDs
- Radio
- Interactive audio-video conferencing
- Networking vocational centres
15 PROGRAMME PLANNING AND MANAGEMENT

15.1 Curriculum design and development
15.2 Assignment of credits, assessment and certification
15.3 Public-private partnerships
15.4 Programme implementation, evaluation and review

16 CONCLUSION

16.1 Perception of VE — need for change
16.2 Schools as a foundation for world of work
16.3 Use of technology
16.4 Wider scope of delivery systems
16.5 Establish vocational MIS
16.6 Introduce incentives
16.7 Create a reliable system of training of trainers
16.8 Address the needs of the informal economy
16.9 Build a regulatory and accreditation framework
16.10 Set up mechanisms for certification
16.11 Enhance resource allocation for VE
16.12 Proceed on “mission mode”
Evaluating the initiative against the COL Quality Assurance Toolkit for Open Schools

Because of its comprehensive applicability and universal appeal in open schooling, in the context of this study of integrating vocational education with general education in open schools, we reproduce the quality criteria as outlined in the above-mentioned publication because it could serve as a useful and effective framework for evaluating the entire initiative of integrating vocational education with general education in open schools.¹

¹ Commonwealth of Learning, Quality Assurance Toolkit, pp. 33–51
1. POLICY AND PLANNING
The educational provider has a clear sense of purpose and direction, based on both national priorities and the quality demands of cost-effective educational provision. There are both rationale and relevant systems for the use of distance education methods to achieve the purpose of the programme for the target learners.

Although you may be following a national curriculum determined by the relevant ministry in your open schooling system, you still need to be able to make independent adaptations to suit your open schooling context.

**Elements of the criterion**

- **i.** Institutional policies are aligned with national policy, including appropriate registration, accreditation and articulation.
- **ii.** Institutions establish guidelines related to all the quality criteria.
- **iii.** Prior to offering programmes of study through open learning, the provider has explicitly designed systems for administering all the processes to the best advantage of learners.
- **iv.** Prior to offering programmes of study through open learning, learner support mechanisms are in place and contingencies are planned in order to meet the provider's stated aims in terms of academic quality and standards.
- **v.** Given the nature of change in education, at least annual planning and 3–5 year review cycles take place.
- **vi.** Institutions involve all stakeholders in the planning process.
- **vii.** There are policies to ensure that the physically challenged members of a society have the same access to educational facilities as everybody else.

2. LEARNERS
There is up-to-date, detailed information about past, present and potential learners. This is used to inform policy and planning of programme development, course design and materials development, learner support, and other relevant aspects of educational provision.

In an open schooling system we need to take into account school-age learners as well as out-of-school and adult learners.

**Elements of the criterion**

- **i.** Educational Management Information Systems (EMIS) of the institution must be updated and maintained and available to planners and decision-makers, including course coordinators.
- **ii.** The EMIS of the institution must articulate with the EMIS of the national government.
- **iii.** Learner profiles include at a minimum: demographic information, technology profile, records of learners from formal schooling, records of learners with special needs, access to regional learning infrastructures, prior learning experiences and achievements, language profile (including language ability in the main language of teaching and learning, mother tongue and multilingual language ability). For older learners, work experience would also be included. This information is regularly updated.
### 3. PROGRAMME DEVELOPMENT

Subject to national prescriptions, programmes are flexible and designed with both national needs and the needs of prospective learners and employers in mind; their form and structure encourage access and are responsive to changing environments; learning and assessment methods are appropriate to the purpose and outcomes of the programmes.

Programme development forms the core of open schooling provision. In programme development, all other aspects of open schooling need to be taken into account.

#### Elements of the criterion

1. Programme development always starts with the learner profile and in open schooling we envisage three main categories: school-age children, out-of-school youth and adults.

2. Apart from meeting the needs of the learners, the programme development also meets the requirements of the national curriculum and ensures equivalence in standard, even if the programme is not ‘the same’.

3. Programme development is the integration of curriculum design, materials development, decentralised learner support and assessment.

4. Programme development takes account of resources available (e.g., technology, human resources, infrastructural resources).

5. Programme development makes sure that resources are used appropriately and cost-effectively to suit the desired learning purposes and outcomes.

6. Programme development is a team exercise to integrate content/subject expertise, pedagogic expertise and technical expertise.

7. Institutions can design programmes to suit the wide range of differences (e.g., age, entry level) of learners in the school.

8. Appropriate stakeholders are involved in the programme conceptualization (e.g., learners, parents, employers).

9. The provider ensures that the programme provides a learning pathway that leads to the relevant national qualification.

10. Programmes and qualifications offered by an institution are aligned with the national qualifications framework of the country.

11. To facilitate access, entry requirements for the programme are as open as possible, and include recognition of prior learning and work experience.

12. Due to the openness of entry, care is taken to provide sufficient academic support to academically challenged learners as identified upon enrolment. This may be through the provision of bridging courses, or more face-to-face support, or additional units (or learner guides) within existing courses, or more time to complete the programme.

13. Programmes are evaluated regularly.

14. The institution has a reliable system of costing programme and course development.
### 4. COURSE DESIGN

The course curriculum is well researched, with aims and learning outcomes appropriate to the level of study; content, teaching and learning and assessment methods encourage the achievement of the aims and learning outcomes; there is an identified process of development and evaluation of courses.

Course design is a process that defines the learning pathways learners have to follow to meet their needs as well as the needs/aims of the course.

**Elements of the criterion**

i. The course is structured to support independent learning and meets the requirements of the programme.

ii. The course design has a balance of content, pedagogy and technology.

iii. Where e-learning is used, it is ensured that systems, technologies and support arrangements provide an effective platform for quality delivery.

iv. The institution has a standing policy on reviewing the effectiveness of systems and procedures for the designing, approval and accreditation of courses.

v. Notional hours for courses are clearly defined in line with national policy.

### 5. COURSE MATERIALS

The content, assessment, and teaching and learning approaches in the course materials support the aims and learning outcomes; the materials are accessibly presented; they teach in a coherent way that engages the learners; there is an identified process of development and evaluation of course materials.

Course materials mediate the teaching and learning process in distance education, and they need to be developed by experts, supplied on time to learners and revised regularly to keep them up to date with changes in knowledge and learner needs.

**Elements of the criterion**

Print-based course materials

i. Clear procedures are in place for the development, dispatch and timely provision of high-quality learning materials to give learners enough time to use the materials before examinations.

ii. Course materials have a balance of knowledge, skills and values that are presented appropriately using relevant media.

iii. Course materials are designed in an accessible way. Access devices such as contents pages, headings, graphic presentation of information and layout all help learners.

iv. When designing course materials, the open schooling provider takes into account the special needs of learners with disabilities.

v. Course materials are periodically reviewed to keep them up to date with changes in knowledge and learners' needs.
5. COURSE MATERIALS continued

vi. Materials are developed by people with expertise in ODL and are subjected to rigorous quality reviews before use by learners.

vii. The content of the materials is accurate, up to date, relevant to course aims and outcomes and sensitive to the multicultural realities of the context.

viii. The materials are based on sound learning theories and lead learners to develop their knowledge rather than simply memorise facts.

ix. While the provider holds copyright for course materials developed by employed or contracted staff, the individual author’s intellectual property rights are also respected.

x. Materials actively engage learners during the learning process.

xi. There is a clear house style for materials development.

Multimedia course materials

i. If web-based courses are used, the site should be navigable, the sitemap should have clearly marked links and the different elements should integrate seamlessly with each other.

ii. Where possible, materials should be multimedia resources for ease of adaptation and user friendliness.

6. ASSESSMENT

Assessment is part of the course design; formative assessment is an essential part of the teaching and learning process. Assessment is well managed with sufficient external moderation to meet the requirements of accreditation bodies.

Assessment is an integral aspect of the teaching and learning process and should be authentic enough to guide both learners and tutors.

Elements of the criterion

i. Due recognition is paid to assessment as the key motivator to learning and as an integral part of the teaching and learning process.

ii. A credible assessment system that regulates both internal and external moderation, and criteria for the appointment of moderators and use of moderator reports is in place.

iii. There are processes for the recognition of prior learning as well as diagnostic testing for appropriate placement.

iv. When designing assessment arrangements, and communication systems with tutors and other institutional stakeholders, the open schooling provider takes into account the special needs of learners with disabilities.
6. ASSESSMENT
continued

v. There is carefully scaffolded continuous formative assessment with timely constructive feedback that contributes to a supportive environment for learners throughout their course of study.

vi. Formative assessment prepares learners to meet the demands of the final summative assessment.

vii. The assessment strategy includes integrated assessment tasks in which a number of outcomes/or the content of a number of modules (in a single subject/learning area) are tested in an authentic context.

viii. The range of outcomes for the final summative assessment is validly and reliably assessed.

ix. Weighting of examinations and continuous assessment (course work) is well regulated by clear policy that takes into account the rigour of each of these assessment processes.

x. Sound rules and regulations are in place to guarantee security procedures, disciplinary and appeals procedures, marking procedures, accommodating students who are ill and supplementary examinations.

xi. Effectiveness of the assessment policies, strategies and practices are reviewed regularly.

xii. Moderation strategies and processes are clearly defined.

xiii. Policies and systems that take into account the unique needs of learners with disabilities are in place.
The success of open schooling depends heavily on the quality of support given to learners; a healthy learner support system creates a healthy learning environment for open school learners.

**Elements of the criterion**

i. Learner support is conceptualised as part of the course design with methods selected to suit the activities and outcomes, including appropriate learning through social interaction.

ii. Learners with special needs are adequately catered for in the learner support services of the provider.

iii. Particularly for younger learners, the learning environment helps learners develop the necessary discipline for increasingly independent learning and good work habits; for older learners, peer support and collaborative learning are available.

iv. The level of support is dependent on the age and entry level competence of the learners, and may vary for different types of learners in the programme and/or at different stages of the programme.

v. To provide an adequately supportive learning environment the existing structures and resources of the education system and the community are used as much as possible.

vi. Each learner is linked to an appropriate tutor for mentoring, assignment tutoring and help in understanding the materials.

vii. Subject-specific tutors are trained in techniques to mediate the course material, rather than re-teach the content of the curriculum. This is particularly important if teachers from conventional schools are employed as open school tutors.

viii. A contract (covering, for example, role, deliverables and payment) is entered into with tutors, and attendance and performance are monitored with appropriate sanctions and rewards.

ix. Feedback from tutors informs ongoing improvement of the programme, materials, assessment and learner support.

x. Different kinds of tutorials are provided for different students, for both remedial and enrichment purposes. Tutorials are for fast learners who need enrichment in various areas of learning as well as learners who need their learning reinforced.

xi. Available technology is used to enhance the quality of learning and learners are sufficiently supported to make maximum use of the available technology.
8. HUMAN RESOURCE STRATEGY

The staff structure and the roles and key performance areas, experience and qualifications are all appropriate for the education and training services provided; staff development programmes equip staff to perform their roles and tasks effectively.

Open schooling relies on the services of core full-time staff and support from qualified, motivated and directed part-time staff. Striking the right balance between the two categories of staff is critical in open schooling.

Elements of the criterion

i. A clear recruitment strategy that ensures suitably qualified and experienced staff are appointed is in place.

ii. An effective performance management system is in place and benefits every member of staff in the open school.

iii. The staff structure includes all the key personnel to ensure that the institution carries out its services efficiently enough.

iv. There are sufficient tutors/mentors, usually employed on a part-time basis to meet the individual needs of learners.

v. Staff are trained, monitored and supported for the specialised roles and tasks they perform in the organisation.

vi. There is a clear induction policy for new staff who join the organisation to acquaint them with the school’s work processes and procedures.
9. MANAGEMENT AND ADMINISTRATION

There is effective, transparent and democratic management of communication and information as well as human and material resources; efficient administrative systems support the activities of the educational provider; the educational provider is functionally sound and can make reliable educational provision.

The virtual nature of the open school creates a need for decentralising management and administration roles, and for coordinating these distributed roles efficiently enough to harmonise all institutional activities that take place in the dispersed sites.

Elements of the criterion

Accountability and governance

i. There are clear lines of accountability within the open school and its governing structures, and between the governing structures and the community.

ii. Proper accountability mechanisms and guidelines are in place to ensure proper governance systems.

iii. Staff, learners and external stakeholders are represented on governance structures.

iv. Mechanisms are in place to prevent staff from using their position of power within the institution to generate extra revenue for personal benefit or double payment for the same work.

Management of communication

v. There are effective systems for communication with stakeholders.

vi. Enquiries, complaints and general correspondence are dealt with quickly and clearly within a structured administration system.

vii. The enrolment procedures/guidelines include provision of accurate, helpful information to prospective learners.

Management of the curriculum

viii. The enrolment guidelines include provision of accurate, helpful information to prospective learners and registration information.

ix. Production and delivery of course materials are in accordance with a course production schedule. Where existing systems prove inefficient, creative alternatives are considered.

x. There are systems to organise decentralised support for remote groupings of learners, allocation of tutors and the location of suitable sites of learning.
9. MANAGEMENT AND ADMINISTRATION continued

Management of the curriculum (cont.)

xi. There are clear procedures to receive, record, process and turn around assignments. The turnaround time is kept to a minimum.

xii. There are systems of managing examination papers, processes and results in a manner that maintains the credibility of the entire examination systems of the school.

Management of information

xiii. Learners’ records (e.g., contact details and assessment results) are detailed, up to date and accessible to tutors, academic staff and administrative staff.

xiv. Tutor records (e.g., qualifications and experience) are detailed for each tutor and are available to tutor-monitors.

xv. Records of course results and other management information are analysed to:

• give completion rates for each group of learners;
• identify learners at risk;
• identify incentives for learners.

xvi. Important indicators like pass, throughput and retention rates are monitored.

Management of facilities and equipment

xvii. Facilities and equipment accommodate all learner profiles (they are inclusive).

xviii. Equipment and facilities are well managed and maintained and secure against theft or damage.

xix. There are emergency methods of communication for use in the event of a failure of the primary channel of communication.

xx. Staff and learners are trained in the use of the equipment, facilities and communication and information systems.

Management of finances

xxi. Proper budgetary processes are in place to ensure that the allocation of resources reflects the goals, values and principles of the educational provider.

xxii. Financial procedures (like handling fees, orders, accounts, receipt of external funds and part-time and full-time salaries) are known and adhered to.
### 9. MANAGEMENT AND ADMINISTRATION continued

**xxiii.** Budgetary procedures are in place to deal with the allocation of resources and monitoring of expenditure. Budgeting procedures are flexible enough to promote and enable constructive experimentation in design and delivery methods.

**xxiv.** Proper evaluation systems are in place to compare estimated goals and budgets with actual achievements.

**xxv.** There are clear and concise internal and external auditing procedures.

**xxvi.** Fees are pegged at levels that allow learners from disadvantaged socio-economic backgrounds to access the educational services of the open school.

**xxvii.** Financial aid and information about criteria for its allocation are provided for learners, external funding and donations permitting. Information about financial aid is openly available to all learners.

### 10. COLLABORATIVE RELATIONSHIPS

In the interests of cost-effective provision of education and training, collaborative relationships are formed and collaborative projects are undertaken wherever possible.

Open schools should be proactive and innovative in forging collaborative relationships through networking with significant stakeholders.

**Elements of the criterion**

**i.** Open schooling requires collaborative relationships with key stakeholders like parents and other community carers, governmental and non-governmental education providers within and outside the country, and the corporate world for:

- Sharing existing facilities such as libraries, ICT facilities, learning centres, human resources, health facilities and counselling services, examination centres.
- Sharing existing courses, jointly developing new courses and learning materials, peer reviewing each other’s performance, jointly delivering programmes, collaborating in research.
- Facilitating workplace learning.
- Resource mobilisation and support.

**ii.** Affiliate membership of relevant associations and forums is encouraged.

**iii.** There are collaborative relationships with other ODL institutions with similar mandates.
11. QUALITY ASSURANCE
There is a quality assurance framework that integrates policy and practice, and that informs a clear cycle of planning, implementing, monitoring, reflecting and acting to ensure that learners’ and staff’s needs as well as the needs of other stakeholders are met.

Cultivating a culture of quality allows the diverse community of an open school, located in geographically different parts of a country, to share a common quality ethos.

Elements of the criterion

i. There is a clear quality assurance framework supported by clear quality assurance action plans.

ii. The institution ensures that daily activities are aligned with its mission, goals, principles and policies in relation to national and regional priorities.

iii. Internal quality assurance processes are articulated with external processes as laid down by the relevant national quality assurance bodies.

iv. There are clear routines, procedures and systems for quality assurance, and staff and learners are familiar with those.

v. There is a clear cycle of planning, development, documentation, reporting, action and review of policies and procedures within the institution.

vi. A quality culture is nurtured within the institution.

vii. Staff development is seen as fundamental to quality service provision.

viii. Staff, learners and other stakeholders are involved in the process of quality assurance and quality review.

ix. The institution engages in benchmarking against other similar institutions and uses appropriate monitoring and evaluation techniques to gather and analyse data to use as a basis for setting priorities and planning for quality improvement.

x. Mechanisms for monitoring learner participation and performance are designed into the technical platforms used in electronically delivered programmes. For example, systems may be designed to track:

- the time spent by different learners on components of the materials,
- the sequence of choices made by learners in accessing web-based files or
- learner participation in online discussions.
12. ADVOCACY AND INFORMATION DISSEMINATION

Education services provided by the institution are effectively and accurately promoted in a variety of ways.

Providers of open schooling should strive to be professional enough to fulfil the promises they make to potential clients.

**Elements of the criterion**

i. There is an advocacy strategy in place to positively influence ODL perception by the public.

ii. There is accurate and sufficient publicity about programmes to enable potential applicants to make informed choices. Institutional advertisements are truthful and professional.

iii. In the case of programmes using electronic methods, sufficient information is provided to the learner about access to technologies used in the programme, technical competence required and the nature and potential challenges of learning in the programme's technology-based environment.

iv. Employers and others who enter into collective agreements regarding education or training have received sufficient and correct information about the aims, content and outcomes, entry requirements and implementation of the programme.

v. Information dissemination strategies form part of the institution's management of information systems and are subjected to institutional cyclical reviews.
13. RESULTS
The educational provider fulfils its mission and individual programmes achieve valid teaching and learning goals in cost-effective ways that have a positive impact on society and meet the needs of clients and national priorities.

Providers of open schooling need to constantly monitor their performance by collecting and analysing relevant data on programme relevance, delivery strategies and learner success.

Elements of the criterion

i. The educational provider is fulfilling its mission and is meeting the expectations of clients and the nation.

ii. Institutions of further studies (e.g., colleges and universities) as well as employers are satisfied with the quality of the graduates from the providing open school.

iii. Learners are achieving the intended outcomes specified by the provider in the design of the programme.

iv. Enough learners complete the programmes they enrolled for within reasonable time periods to justify the cost in time and person power for the design of the programmes, courses and learner support systems. Pass, throughput and retention rates are monitored and mechanisms are put in place for continuous improvement of these rates.

v. Feedback and results of the programme review/evaluation are used to improve the programme’s design and delivery and to develop further educational expertise of academic staff.

vi. The administrative systems are informed by and meet the needs of learners and of staff involved in programme/course/support design and delivery.

vii. As much as possible, there is integration of learners with disabilities in the mainstream student body to avoid psychological isolation.
I would like to take the liberty of concluding with a few personal comments.

This study was a most enriching and stimulating experience on several levels, not least because it gave an amazing perspective on the intellectual wealth of the countries that were represented — truly a commonwealth of ideas and experiences and an unparalleled opportunity to collaborate for the common good.

The study underscores the need for standards and for standardisation of approaches and curricula, complete with the relevant localisation. It also points to the need for sustainable models of replicability and scalability to avoid the danger of good work going no further than being a successful pilot project. This is particularly significant as all the open schools have successfully piloted initiatives in the use of technology, curriculum change, the teaching-learning process and learner support which, if followed through, could have great and lasting impacts.

Technology has yet to become the critical enabler in open schools — print media continue to dominate. There is therefore a need to evolve low-cost high-impact content development, appropriate technologies, language-independent content and technology-based assessment, all of which could perhaps be incubated by COL and prioritised for implementation in open schools.

With so many open schools in the developing world still in their relative infancy with regard to vocational offerings, a Commonwealth Repository of Digital Technical and Vocational Content could enable open schools to leap-frog into the area of integrating vocational education and establish a long-term benefit for all.

Vocational education is meaningful and useful if it provides employable and relevant skills and knowledge to its students. This demands not only a more holistic approach but also the involvement of all stakeholders.

While the problem of shortages of skilled manpower was clearly accepted by all countries there is a strong case for COL to initiate a dialogue that could possibly lead to a protocol on skill migration within the Commonwealth to avoid the danger of a skills drain, which could have disastrous effects on several developing countries, particularly in the context of changing demographics.

There is a need to institutionalise a regional approach whereby regional resources and experts would be used for closer monitoring and evaluation of open school projects, thus enabling greater focus and accountability.

An overarching framework to focus the initiatives of integrating vocational educational in open schools should include:
• Standardisation (to ensure consistency in activities, courses and outcomes)
• Scalability (to move from successful pilot projects to models that would enable large-scale interventions)
• Sustainability (to maintain long-term continuity after initial seed funding during pilot and experimental phases)

In order to achieve the above, the following enabling factors are critical:

• Curriculum (to ensure standardisation in the quality and content of courses that could become benchmarked practices across the Commonwealth)
• Context (to provide for localisation within a standardised curriculum so that programmes are both locally relevant and acceptable). This would include re-purposing/recreating content for local needs, and digitising the same so that greater outreach can be achieved as well as appropriate delivery mechanisms.

In recognition of the common predicament of students in Commonwealth countries who are paper-chasing certificates (as opposed to focusing on less tangible learning outcomes), shorter-term modular employable skills that are delivered with a basic education and in a technical mode could allow for COL accreditation to enable lateral and upward mobility and greater access to the otherwise unreachable and to earn some credibility. In fact, this could lead to a Trans-Commonwealth Open School Educational, Technical and Vocational Qualifications Framework.

An integrated vocational and academic offering could provide open schools with an opportunity to dispel the myth that vocational education is the place of last resort for students who cannot make it in the mainstream school system. In tandem with an internal transformation of the open school, this could also be the impetus to rebrand the open school through public campaigns designed to create public awareness and increase credibility; timely and newsworthy human-interest success stories in the vernacular and local media; and direct engagement with key stakeholders, with activities tailored for specific groups of prospective students, educators and parents as well as the general public.

Vocational education and training have traditionally formed separate parallel systems within the education system with their own policies, institutions, programmes and teachers. This tends to reinforce the perception of the vocational track's being inferior. While it is therefore important to create articulation pathways between vocational education and general education, open schools are inherently flexible and could use their integration of vocational and general education to set them apart from mainstream schools.

Finally, it is my firm conviction that the need to integrate vocational education with academic education in open schools is not an option but an absolute necessity. The typical student in an open school is already disadvantaged and facing many barriers in breaking into the job market. Such a student will be at a higher risk of unemployment if the open school does not equip its students with the skills and knowledge required by the job market.

In short, this research report's simple project title — Integrating Vocational Education with Academic Education in Open Schools — is in fact a hugely complex collection of multidimensional issues. This is perhaps why, despite the obvious need and benefits, it continues to remain a work in progress for many countries.
Appendix 1
Questionnaire 1

Base Data/Information to Explore Integrating Vocational Education with Academic Education in Open Schools

1. ABOUT YOU AND YOUR ORGANISATION

Name: _________________________
Position: _______________________
Organisation: ___________________
Joining date: ___________________
Address: _______________________
Skype ID: _______________________
Phone No: _______________________
Email ID: _______________________

• How long have you been involved with Open Schooling?
• Please describe your present role and responsibilities.
• Please indicate your prior roles and responsibilities.
2. EXPLORING THE POTENTIAL OF OPEN SCHOOLING

Section A: Background

Q 1. Name of country __________________

Q 2. Total population __________________
   a. by gender __________________
   b. % urban population ________________
   c. % rural population ________________

Q 3. Total number of primary schools ________________

Q 4. Total number of secondary schools ________________

Q 5. Total number of years in primary school ________________

Q 6. Total number of years in secondary school ________________

Q 7. School-age population ________________

Q 8. Out-of-school children (if known) ________________

Q 9. Approximate number of adults with only primary school education or less ________________

Q 10. Approximate number of adults who have finished primary school, but have not completed their secondary level education? ________________

Q 11. Of the adult population in questions 9 and 10 above, in your opinion would some of the adults have an interest in acquiring secondary school level education if they did not have to attend full-time classes and could enrol on a part-time basis?

Q 12. If yes, please give your best estimate as to how many of these would be potential learners in your open school.

Q 13. What is the highest priority educational need in your country?
Section B: Access to education

Q 1. What factors prevent students from continuing their education from primary to secondary school?

Q 2. Are there enough places in secondary school to cater to the number of potential learners? (If not, please explain why.)

Q 3. Why do students drop out of secondary school?

Q 4. Are there any institutions with the mandate to offer secondary level education through open and distance learning (such as correspondence colleges or open schools)?
   • If yes, which are they?
   • If yes, how many learners do they currently have at the secondary level?
   • If yes, do these institutions cater to adult learners as well as children and youth?

Q 5. Are there any alternative programmes of secondary level equivalence to provide education to primary school leavers? If yes, please explain. For example, by NGOs or faith based organisations.

Q 6. Do you think there is potential for open and distance learning at the school level in your country? Why?

Q 7. In your opinion, would your government support the concept of open schooling?

Q 8. Please add any additional comments or suggestions that you feel are relevant and would be useful to us in this research study.

Section C: Education statistics

Please provide education statistics for the past five years by class and gender in primary, secondary, vocational education and open schooling.

If you can provide other statistical data on adult literacy, please include it.
3. EXPLORING TVET

Section A: Policy, planning and management of TVET systems

In this section we are interested in learning of ways in which policy, planning and management of TVET systems have been improved in your country. You are asked to think only about initiatives that have been introduced and steps that may have been taken, in the past five years, to:

- Develop a national approach to TVET
- Establish a national body responsible for co-ordinating planning in TVET.

Q 1. Has your country developed a national strategy, or national plan of action, for TVET?

Q 2. If so, could you please attach a copy of the strategy/plan, or attach a summary of the strategy/plan?

Q 3. Was the skills development strategy/plan developed within the context of an overall national development plan? Or maybe as part of your country’s Education for All (EFA) plan?

Q 4. Has your country established a national body to co-ordinate TVET?

Q 5. If so, please provide details.

Q 6. If not, please explain how responsibility is shared amongst the various authorities.

Q 7. Is there anything else you would like to tell us about policy, planning and management of TVET in your country?

Section B: Access to TVET

In this section we are interested in learning of ways in which access to TVET may have been broadened in your country. Again, it would be useful to think about initiatives and steps that may have been taken in the past five years to:

- Increase opportunities, overall, for more people to have access to TVET.
- Increase opportunities for people from disadvantaged backgrounds to have access to TVET.
- Increase opportunities for people to return to/continue vocational education.

Q 1. Over the past five years, has there been any substantial expansion in funding of TVET to increase opportunities for training?

Q 2. If so, could you please attach a summary of the impact of the expansion — for example, whether the growth is in new facilities in cities or towns, or perhaps in mobile training units or technology-enabled interventions.
Q 3. Have any new programmes been developed to increase the participation of women and girls?

Q 4. To increase the participation of poor people from rural areas?

Q 5. To increase the participation of people with disabilities?

Q 6. To increase the participation of war-affected individuals?

Q 7. To increase the participation of ethnic minorities?

Q 8. Does your country have an equity policy for education and training?

Q 9. What policies/programmes does your country have to allow adults to move in and out of training over time? In particular, programmes which allow for the acceptance of skills acquired previously or through life experience.

Q 10. Is there anything else you would like to tell us about access to TVET in your country?

**Section C: Relevance and quality of TVET systems**

*In this section we are interested in learning of recent steps that may have been taken in your country so that TVET is seen as excellent preparation for an occupational field. Think of initiatives and steps that have been introduced over the past five years to:*

- Encourage TVET providers to forge stronger links with the world of work.
- Structure programmes to better suit the needs of industry and workers.
- Match TVET programmes to skills needed for wage employment and self-employment.

Q 1. Have new initiatives been introduced to encourage structured dialogue between training providers and industry?

Q 2. To what extent can learners choose between day release, sandwich or block release programmes?

Q 3. Are some programmes available through radio, television, Internet or other distance learning modes?

Q 4. For people combining work and learning, are evening or part-time programmes commonly available?

Q 5. What steps have been taken to take account of the importance of “new” competencies — for example, communication skills, teamwork skills and technology skills?

Q 6. To what extent do programmes preparing people for micro-business, farming and artisan trades include entrepreneurship and technology training?

Q 7. Is there anything else you would like to tell us about the capacity of TVET in your country to prepare people for an occupational field?
4. **EQUAL ACCESS AND OPPORTUNITY FOR GIRLS AND WOMEN**

**Section A: National Policy and Enrolment Information**

Q 1. Does your country have legislation or formal policy related to equal educational access and opportunity for women? ___Yes ___No

For boys and men? ___Yes ___No

If yes, please attach a copy in the original language and/or English-language summary.

Q 2. Does your country have legislation or formal policy related to technical and vocational education for girls and women? ___Yes ___No

For boys and men? ___Yes ___No

If yes, please attach a copy in the original language and/or English-language summary.

Q 3. Does your country have legislation or formal policy related to vocational guidance for girls and women? ___Yes ___No

For boys and men? ___Yes ___No

If yes, please attach a copy in the original language and/or English-language summary.

Q 4. How is vocational guidance funded in your country? Check all that apply.

___ National funding

___ Provincial or state funding

___ Local funding

___ Business and industry funding

___ Private education (paid by student or family)

___ Other ________________________________________________

Q 5. Please check any of the following that is required in your country's legislation or formal policies for girls and women (questions 1-3):
___ Access and opportunity for girls and women in all technical and vocational programmes offered to men

___ Cooperation between employers and technical and vocational education

___ Increased social status of technical and vocational education

___ Articulation between technical and vocational education and higher education

___ Public awareness (for parents, employers and others) of technical and vocational educational opportunities for women

___ Vocational guidance to encourage the participation of girls and women in technical and vocational education programmes.

___ Legal recourse if rights are not granted

___ Active recruitment of girls and women into technical and vocational education

___ Penalties for violation of legislation or policy

___ Funding to implement law or policy

___ Other (please list) ____________________________

Q 6. Please list all of the vocational and technical education programmes in which girls and women are enrolled (for example, homemaking, building trades, business education, business management, nursing).

Q 7. Do you have national statistics for the number of girls and women enrolled in technical and vocational education?  ___Yes ___No

(If yes, please include a copy of the enrolment statistics if convenient.)

Q 8. Please check any of the following that have direct responsibility for administering vocational guidance for girls and women in your country.

___ Department (or ministry) of education or vocational training

___ Department (or ministry) of labour and employment

___ Joint efforts of education and labour

___ Special agencies dealing with the rights of women

___ Other ________________________________
Vocational Guidance Programme Development and Improvement

Q 9. Have the vocational needs of girls and women been identified for use in the development of vocational guidance programmes? If yes, can you include a description in the original language and/or an English-language summary?

___ Yes, at the national level
___ Yes, at the local or regional level
___ Planning to conduct in future
___ No

Q 10. Please check all of the following groups that were included in the needs assessment.

___ Students
___ Teachers
___ Counsellors
___ Parents
___ Employers
___ Counsellor/Teacher Educators
___ Women's groups or association
___ Others______________________________________________________________

Q 11. Please check those barriers (that have not yet been reduced) to the participation of girls and women in technical and vocational education that the vocational guidance programme is designed to reduce.

___ Students’ attitudes
___ Parents’ attitudes
___ School staff attitudes
___ Employers’ attitudes
___ Social role assigned to girls and women
___ Shorter school attendance for girls
___ Limited funding to attend programmes
___ Limited family/child care support
___ Limited programme offerings for girls and women
___ Others _________________________________________________________________________
_______________________________________________________________________________
Q 12. Please check the settings in which vocational guidance programmes to help girls and/or women are available.
___ Primary schools
___ Secondary schools
___ Higher education
___ Employment or career centres
___ Private women's advocacy organisations
___ Employer-based programmes
___ Others (Please list) _________________________________________________________________________
Q 13. Please check any of the following who provide vocational guidance programmes for girls and/or women.
___ Guidance counsellors
___ Primary teachers
___ Secondary teachers
___ Department of labour staff
___ Other _________________________________________________________________________
Q 14. Please describe how vocational guidance counsellors are trained at the pre-service level in your country.
Q 15. Please describe how vocational guidance counsellors are provided continuing education in your country.
Q 16. Please describe how other staff (for example, teachers) are trained in vocational guidance at the pre-service level in your country.

Q 17. Please describe how other staff (for example, teachers) are provided with continuing education in vocational guidance in your country.

Q 18. Please indicate which of the following types of technical assistance is provided by the national or provincial levels to local sites.

___ Curriculum materials
___ Careers and educational information resources
___ Counsellor training
___ Teacher training
___ On-site assistance
___ Fund university faculty to assist local sites
___ Fund regional or state staff to assist local sites
___ Other (please list) ______________________________________________________________

Q 19. Please list specific benefits that vocational guidance programmes have produced.

___ Benefits to girls and women
___ Benefits to local communities
___ Benefits to broader society
___ Benefits to vocational guidance
___ Benefits to technical and vocational education

Q 20. Please indicate which of the following is responsible for evaluating the vocational guidance programme.

___ National staff
___ Local staff
___ Other (please describe) ____________________________________________________________
Q 21. Are evaluation results used to improve the programme?

___ Yes, at local level
___ Yes, at national level
___ Not now but plan to in future
___ No
___ Don't know

**Section B: Description of Vocational Guidance Programme Model**

Q 1. Do you have national guidelines for vocational guidance? ___ Yes ___ No

If yes, please enclose a copy of the guidelines.

Q 2. Please indicate which of the following programme structures are addressed in your national vocational guidance guidelines.

___ Relationship of vocational guidance to total education programme
___ Guidelines for qualified leadership
___ Guidelines for staff qualification and staff/student ratios
___ Guidelines for resources (money, equipment, facilities, materials)
___ Guidelines for linkage with other groups (for example, employers, parents, government agencies, higher education)
___ Other programme structure areas___________________________________________________

Q 3. Please indicate which of the following vocational guidance programme components are recommended in your guidelines.

___ Information about careers and education/training
___ Vocational assessment
___ Advising
___ Counselling
___ Enabling activities (for example career days)
___ Women mentors
Section C: Best Vocational Guidance Activities

Q 1. Please describe the best vocational guidance activities for assisting girls and/or women, disadvantaged or marginalised groups to enrol in, complete and secure employment in vocational and technical education areas.

5. PROFILE OF VOCATIONAL EDUCATION LEARNERS OF YOUR OPEN SCHOOL

1. Target learners:
   a. Who are the target learners?

2. General characteristics
   a. What is the gender and age range of the learner group?
   b. What is the cultural/socio-economic/marginalised background?
   c. Will the learner have any disabilities?

3. Previous learning
   a. What formal qualification(s) will the learner have?
   b. What informal learning will the learner have?
   c. What is the likely level of literacy and numeracy?
   d. What is the likely level of IT skills?

4. Skills and knowledge
   a. Will the learner be working in a workplace relevant to the programme?
   b. What skills and knowledge will the learner have of the content of the programme?
   c. Will the learner have any knowledge or practical skills that are out-of-date or inappropriate? Provide examples.
   d. What generic skills (for example, communication skills, teamwork skills and problem-solving skills) are considered important for this learner group?

5. Motivation
   a. Why will the learner undertake the training and assessment programme?
   b. What expectations is the learner likely to have of the programme?
6. Support  
   a. Where is the learning and assessment likely to take place?  
   b. What support will the learner have from their workplace for their learning and assessment programme?  
   c. What technology (for example, Internet, email and telephone) will the learner have access to?  

7. Learning styles  
   a. What study skills and abilities is the learner likely to have?  
   b. What is the learner’s preferred method of learning (for example, practical or technology based)?  

8. Other  
   a. What other relevant information will help to ensure the learning and assessment programme is appropriate for the needs and characteristics of the target group?  

6. BEST PRACTICES

Within the national context and at your Open School level, please identify and describe your best practices with regard to:

- Access  
- Equity (Including inclusivity, Gender & Marginalized)  
- Quality  
- Cost/Financing  
- Credibility  
- Curriculum Development  
- Materials Development  
- Learner Support  
- Management  

The above issues should be considered with regard to the enabling environment, policy, courses; existing and required skill sets; capacity building; availability and utilization of infrastructure; networking and partnership with industry and employers and the efficiency and effectiveness of delivery, assessment and certification.
PART 1: SPECIFIC DETAILED CHALLENGES OF YOUR OPEN SCHOOL RELATED TO:

• Access
  i. Identification of special groups
  ii. Appropriate approaches to their learning

• Curriculum
  i. Structure of courses
  ii. Flexibility through recognition of prior learning

• Quality Assurance

• Delivery
  i. Partnership with industry
  ii. Use of technology
  iii. Accreditation, assessment, certification & recognition
  iv. Integration with national qualification framework
  v. Horizontal and vertical mobility

• Organisation/Management
  i. Learner centric
  ii. Use of technology
PART 2: SPECIFIC DETAILED STRATEGIES FOR SUCCESS IN YOUR OPEN SCHOOL

- How to enable positive perception of “Open” VE?
- How to provide foundation for work in your existing/new courses?
- How to enhance use of technology enabled learning?
- How to broaden scope of delivery?
- How to establish a Vocational MIS — to link demand with supply from your open school?
- What incentives do you need to provide in your Open School to increase access and guarantee success?
- How can you increase reliability of trainers through TOT?
- What provisions can you make to train for the informal economy?
- What do you need to do to create a credible regulatory, accreditation and certification framework?
- What innovative financing/collaborations through PPP/other means can be explored?
- What steps are needed to bring students into the VE stream?
- How does the Open School ensure that continuously changing market demands for skills are captured?
- What collaboration exists with industry — demand estimation, curriculum development, training, assessing, placement?
- Any examples of effective and successful public-private partnerships?
- What steps have been taken to integrate VE with general education?
- What steps have been taken to encourage and attract students towards VE?
- What mechanisms for vertical and horizontal mobility of VE for skill enhancement are needed?
- What adaptations to existing models are needed?
- Should there be differences between rural and urban schools in respect of integrated curriculum in general/vocational education?
- What are the strategies and programmes offered for the unorganised workforce keeping in view size, heterogeneity, age range, geographical coverage, educational and income status, gender and social disparity?
- Most unorganised sector artisans have traditional skills, but there are few mechanisms to ensure the certification of such traditional skills. What needs to be done?
• Challenges in Training of Trainers (ToT) keeping in view languages/dialects, social characteristics, issues of pedagogy.

• Modalities of imparting emerging skills keeping in view: limitations of the workers, their theoretical knowledge, traditional skill-set.

• What mechanisms and institutions are needed to ensure certification and accreditation of courses in the informal sector?

• Any innovations like cost-sharing between training providers and trainee, and rationalising the cost-to-beneficiary; cross-subsidisation; income generation by selling goods and services as a “by-product” of the training process?


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National Institute of Open Schooling (NIOS), India

Dr Mamta Srivastava, Deputy Director, and Ms Koushalya Barik, Assistant Director, are currently deeply involved in the curriculum design of vocational education courses. They write ODL modules and train tutors and co-ordinators in ODL methods. Their involvement extends to the examination system: they not only create examination papers, they also moderate examinations and mark the papers. In addition, they are actively involved in the preparation and drafting of policy documents. They share a background in curriculum design, identification of needs-based courses and preparation of SLM.

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Md. Anwaral Islam, Assistant Professor (Mathematics), has a background in curriculum design and quality assurance of open school programmes. He is currently very involved in ODL: he designs ODL curricula, writes modules for ODL and participates at every stage of the examination process. He also trains tutors and co-ordinators in ODL and writes and presents audio-video scripts to open school learners.

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Dr Wilberforce E. Meena, Head of Research, Planning, Publication and Consultancy, was a secondary school teacher for one year, a teacher-educator for 16 years and an academic dean in a teachers’ college for 11 years. He now lectures student teachers and researchers, trains teachers and administrators in ODL and is involved in curriculum design and development. He also writes, and guides the writing of, ODL material.

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Henry Paul, ODL Projects Co-ordinator, co-ordinates projects involving the use of ICT in teaching and learning. Before this, he was a teacher-educator, lecturing student teachers about Information Technology and supervising their teaching practice.
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Masego Bagopi, HoD – Open Schooling, is currently Head of Department for Open Schooling, which not only requires strong academic leadership in the field of open schooling but also the monitoring, implementation and revision of new programmes. Bagopi’s previous experience includes secondary school teaching, and co-ordinating distance learning programmes. This included writing course materials, developing audio materials, editing materials written by other staff members and training part-time staff in writing for distance learning.
About the lead author

Mr Guilherme Vaz has been deeply involved in the promotion of education and social development in India and 20 other countries since his teenage years.

He taught for four years at St Xavier’s Collegiate School, Kolkata, then, in the early 1980s, was both instrumental in conceptualising and actively involved in establishing India’s first University Department of Education Management, at SNDT Women’s University (Asia’s first women’s university). He maintained his ties for several years as Visiting Faculty & External Examiner for their post-graduate research projects in Education Management.

Over the years he has been involved in formal and non-formal education, public-private partnerships and large-scale, technology-enabled change initiatives in school, technical, vocational and higher education both at institution and national levels. He has played an important role in Catholic education in India and was a leading member of the group that formulated the first All India Catholic Education Policy. In April 2008 Pope Benedict XVI appointed him to a key Vatican Governance Council.

Mr Vaz has a particular interest in ICT in education and social sectors; IT systems and processes in education administration and social sectors; education and examination reform; governance standards, processes and management; education leadership: strategy, planning and policy; benchmarking and quality standards, planning, processes and evaluation; public–private partnership education models, evaluation and monitoring; and long-term financing models for sustainable education and development and national skills development: planning strategy and deployment.

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Our world is changing, and so are attitudes to education. A growing shortage of skilled workers, combined with renewed interest in how to make education relevant to students who do not plan to continue on to university, has put the spotlight on technical and vocational education and training (TVET). Increasing access to TVET would serve the dual purpose of helping to keep more students in the education system while training them to fill the current gaps in the skilled worker sector. The big challenge is how to integrate TVET with academic/general education without compromising current academic/general education options.

This study looks at the need to increase access to TVET and also at options for integrating TVET with the more traditional academic curriculum. Five organisations — National Institute of Open Schooling (India), Bangladesh Open University, Institute for Adult Education (Tanzania), National Open School of Trinidad & Tobago and Botswana College of Open and Distance Learning — participated in a survey to assess the availability of TVET, and the potential for and challenges of integrating it with academic/general education. The study included questions about access, equity (including inclusivity, gender and marginalised populations), quality, cost and curriculum development, amongst other factors.

The responses to the survey have been published here as submitted to give an authentic picture of the current approach and attitudes to integrating TVET with academic/general education in the countries that participated in the survey.