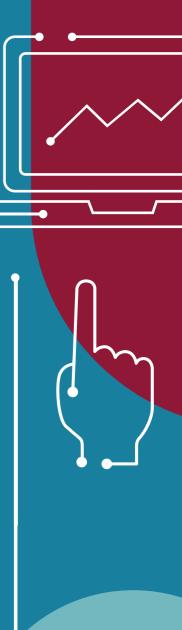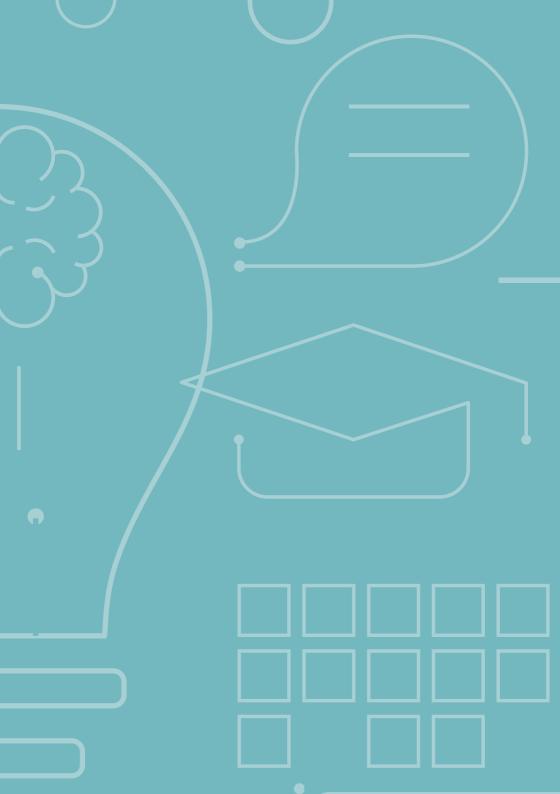# mada
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Education For All

Inclusive Technical and Vocational Education and Training for Qatar

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Education For All

Inclusive Technical and Vocational Education and Training for Qatar

Contents

The purpose of this guide is encourage building inclusive TVET programs for persons with disabilities in Qatar. This guide was developed by experts and consultants in the areas of post-secondary education, vocational education and training for persons with disabilities, access to information and communication in post-secondary settings and planning for service delivery.

Introduction

Qatar has made a major commitment to educating its citizens for futures in a knowledge-based economy that is not dependent on oil revenue. It wants that future inclusive of all, including those with disabilities. To make this a reality, it proposes to expand the Technical and Vocational Education and Training (TVET) resources.

The Ministry of Education and Higher Education has taken into account the initiatives and recommendations of the United Nations Educational, Scientific and Cultural Organizations (UNESCO) on TVET when formulating policy. The reality is that there is little research on evidence-based practices for the schooling of people with disabilities in TVET. Excellent research and best practices abound with regard to secondary school and transitions to post-secondary education. Some of those practices translate to post-secondary education, but the research is lacking.

This paper outlines proven strategies and models for persons with disabilities along the continuum of education from pre-school through university.

It suggests that Qatar is not only capable of using these strategies to construct world-class technical and vocational education, but that it can identify resources and form alliances to play a leadership role in defining best TVET practices for the international community. By building the schools in collaboration with business and industry; by creating centralized supporting assessment, assistive technology and information and communication technology (ICT) services for Qatar; and by researching the outcomes as it does so, it can lead the way.

The world's population stands at 7.2 billion. An estimated 1 billion people, or approximately 15% of the population, live with disabilities. Many of those also are among the 1.2 billion people living in extreme poverty (World Bank, 2011). Disability rates are higher in developing countries, and among the less educated, the poor and women. In a world facing the consequences of growing populations that consume more resources, and rapidly changing technologies affecting economic development and societal change, one key to a better future is greater inclusion of the world's largest minority – people with disabilities – in education and work. World leaders have recognized the crucial role of technical and vocational education and training (TVET) in developing human capital and thereby reducing poverty and its concomitant problems.

In the past decade, the United Nations Educational, Scientific and Cultural Organizations (UNESCO) have promoted the International Project on Technical and Vocation Education (UNEVOC) to further discussion of appropriate goals and initiatives.

UNESCO defines TVET 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; the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupations in various sectors of economic and social life".

It further noted that TVET is to be understood as:

• an integral part of general education;

• a means of preparing for occupational fields and for responsible

• citizenship;

• an instrument for promoting environmentally sound sustainable

• development;

• a method of facilitating poverty alleviation.

Approximately two-thirds of those with disabilities are unemployed, even though studies show that employees with disabilities have better retention rates than their nondisabled peers. A study commissioned by the nation of Australia concluded that raising the employment levels of people with disabilities could have a significant impact on gross domestic product.

Engaging everyone collectively in contributing to the wellbeing and advancement of a society is achieved through the quality and relevance of education to the economic and business needs. A good education with marketable skills gives people an opportunity to earn a livelihood to support their families, thereby facilitating the proper development of children for future generations.

Qatar Is Committed to World-Class Education

Qatar has committed to education for all and endorsed the United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD).

Qatar is a "young" nation, with over 60% of the population under thirty years old. Qatar has a population of 2.57 million, and the total number of people with disabilities is close to 1.50 % of the population and 15% of the world population according to WHO.

This is due to two factors:

• These figures Include residents working in Qatar.

• Some undisclosed disabilities due to lack of infrastructure.

Qatar embraced "education for all" as a goal in its National Vision 2013. Further, the Ministry of Education and Higher Education adopted a plan to improve higher education and TVET to build a world-class knowledge based economy. Qatar enshrined its commitment to education for all citizens in the Permanent Constitution and in Qatar National Vision 2030, "which considers human development as its cornerstone" (ETSS Strategy 2011-2016). The strategy makes note of the need for equity and inclusiveness for the success of the aggressive improvement plan contemplated for both K-12 general and post-secondary education.

The purpose of this guide is to identify best practices and models to assist Qatar in building inclusive TVET programs for citizens with disabilities. This guide seeks to identify specific strategies, solutions and lessons learned to support the inclusion of persons with disabilities in TVET.

International Initiatives Support Technical and Vocational Education

•   UNESCO-UNEVOC 2013 report, Tackling Youth Unemployment through TVET.

•   Shanghai Consensus, the report of the Third International Congress on Technical and Vocational Education and Training. Shanghai, 14-16 May 2012.

•   Proposed Indicators for Assessing Technical and Vocational Education and Training from the Inter-Agency Working Group (IWG, 2012.)

•   The Zero Project Report 2013, an international study on the implementation of the Convention on the Rights of Persons with Disabilities.

This paper condenses the best advice of experts into a recommended framework. Post-secondary disability services are considered within the framework of access and participation.

INCLUSION BEGINS WITH GENERAL EDUCATION

The advent of technical and vocational education, unfortunately, was based on the belief that only one out of every six individuals in any nation would be suited for a rigorous academic setting. That approach represents a barrier to success for all TVET students.

General education in secondary school (Kindergarten through Grade12) is the key preparation for further learning, whether the chosen path is university, vocational education or technical training. Because many students leave secondary school at the earliest possible time in some countries, they fail to develop the general education skills needed for success. In recent years, the most significant complaint about new employees is not the lack of specific skills, but the absence of elementary literacy. In technical and vocational schools, the first year is often devoted to remedial coursework.

Students should know the alphabet in kindergarten, and acquire basic phonics, phonemic awareness and reading comprehension skills by the end of Grade 3.

Early identification of the reason these students do not master literacy and reading comprehension, and the provision of remedial education, is a key factor in avoiding this outcome.

Early Assessment and Interventions

A child's achievement at the expected grade level hinges on the early identification of any physical, sensory or learning disability that impairs his or her ability. Once identified, intervention to do all that is possible to accommodate and support the child's needs will do much to ensure progress.

The advent of the Apple iPad and other tablets has resulted in many applications to assist speech that are both more affordable and more portable than earlier devices. People with learning disabilities have difficulty taking information in through the senses and processing the information with accuracy to the brain. They possess average or above average intelligence levels.

Some common learning disability characteristics are:

- Problems with language skills, especially reading (dyslexia)

- Problems learning mathematics (dyscalculia)

- Problems with handwriting (dysgraphia)

- Problems with motor coordination, also called sensory integration disorder (dyspraxia)

- Problems with speaking (apraxia of speech or verbal apraxia)

- Central auditory processing disorder

- Difficulty with nonverbal learning

- Visual perceptual/visual motor deficit

- Aphasia or dysphasia

- Executive function (planning, organization and memory)

Through good preparation, training strategies and many advances in modern technology, learning difficulties can be overcome. Computer technologies, e-books access and applications have provided an opportunity to improve the performance of those with learning disabilities.

Successful Practices for Inclusion in General Education

Research has demonstrated that the inclusion of students with disabilities in general education classrooms results in favorable outcomes for the students with disabilities without negative impacts on other students in the classes.

Research over the past two decades has demonstrated that the following strategies result in favorable outcomes:

1. The application of universal design for learning for all students;

2. The inclusion of students with disabilities in general education classrooms ("mainstreaming" with appropriate supports when necessary);

3. Collaborative teaching (team teaching in which one instructor is the content specialist and the other is trained in instructional methodologies for students with disabilities);

4. The use of peer-mediated instruction (often peer tutoring); and

5. Instructional and curriculum adaptations.

Universal Design for Learning
Universal design for learning (UDL) assumes that teachers plan for instructional support for all students in the classroom at the outset, taking into account the needs of students with disabilities. This counters the traditional approach of planning for general classrooms and modifying the curriculum afterwards.

Inclusion of Students with Disabilities in General Education Classes
A recent study investigated the effects of inclusive programs for students with high-incidence disabilities and their typical peers. The two-year study found that 41.7% of students with learning disabilities made progress in math in general education classes compared to 34% in traditional (segregated) special education settings, without the presence of nondisabled peers.

Collaborative Teaching
Collaborative teaching is a form of team teaching in which one individual is the subject matter expert and the other has special training in teaching students with disabilities. It often is employed to teach mainstream classes that include a significant number of students with disabilities. The two work together with all students, but the students with disabilities show greater gains in this environment.

Peer Mediated Instruction
The use of peer tutoring is one of the most effective strategies for inclusive classrooms. Studies reported an improvement in academic outcomes for students with disabilities.

This makes students more positive and integrated into active learning. Students who teach a topic usually realize gains in learning the subject matter themselves.

Instructional and Curriculum Adaptations

These adaptations may range from the choice of instructional materials to additional supports to facilitate learning. Some of these supports benefit all students: use of graphic or advanced organizers, self-regulation strategies, semantic maps, chunking, questioning, and visualizing strategies.

Non-Academic Outcomes of Inclusion

Inclusion and content mastery are not sufficient to prepare students for post-secondary education, whether technical, vocational or professional.

THE NEED FOR A CAREER EDUCATION THREAD IN SECONDARY EDUCATION

- **Rationale for Career Education**
  To generate awareness of what work is like, of what careers are, of the economic world, and of the eventual need to choose an occupation.

- **Best Practices in Career Education**
  Students should know enough about the economy of the country to understand the career opportunities available to them. Ideally, they would have opportunities to experience work environments through limited "work" or "internships" to allow them to determine a level of interest in one or more of those possibilities.

Successful Models of Career Education

- unior Achievement has global working models. Injaz Qatar is an excellent model to extend to all middle and high schools, and to consider for creating programming for elementary students.

- Fifth Street Bakers, an after-school business enterprise, was operated by middle school students in Home Economics Classes. Their product was fresh-baked cookies. The students chose company officers and assigned work responsibilities.

Career Guidance

The government can assist with this thread of career education by incorporating it into the general education curriculum, by enhancing it with career guidance for late general education years, and by tracking the employment opportunities in the most significant economic clusters of the economy (e.g., healthcare, computer technology, the hospitality industry, heavy construction of roads and bridges, etc.) to inform student choices.

Combining High School with Post-Secondary Opportunities

Many schools provide access to dual enrollment in high school with TVET or university. These students split their time between high school classes and the post-secondary classes. Those students who choose dual enrollment in TVET often graduate with credentials that make them ready to enter the job market.

TRANSITION TO POST-SECONDARY EDUCATION

Best Practices for Transition
Career and Technical Education Programs (CTE)
Research evidences that high school students engaged in CTE programs are more likely to become employed.

Some core skills needed for people with disabilities to experience academic success are:

- Self-advocacy.

- Awareness of one's strengths and challenges and how to compensate for them.

- Basic reading, writing, math, computer skills for some areas.

- Perseverance.

- Academic survival skills – knowing when to seek assistance, how to ask for assistance, where to look for it, and following through getting past obstacles; referred to as readiness for post-secondary education and career readiness.

Successful Models for Transition Programs

There are five key factors for a successful framework:

1. School-based preparatory experience, such as participation in community-based work experiences or academic programs, exposes students to post-secondary coursework with or without credit.

2. Career Preparation include a range of activities that expose students to careers.

3. Youth development and leadership activities help young people become self- sufficient and develop social skills.

4. Connecting activities help students to access services, supports and activities necessary for their successful transition to post-secondary education or employment.

5. Family involvement and support activities focus on the involvement of parents and family members to facilitate the social, emotional and physical growth of youth with disabilities,

INCLUSION STRATEGIES FOR POST-SECONDARY EDUCATION (INCLUDING TVET)

Teacher Qualifications at TVET

TVET instructors need skills that add to, not substitute for, academic skills. Those include:

1. Routine expertise: Being skillful

2. Resourcefulness: Stopping to think to deal with the non-routine)

3. Functional literacies: Communication, and the functional skills of literacy, numeracy, and information and communication technology (ICT)

4. Craftsmanship: Vocational sensibility; aspiration to do a good job; pride in a job well done

5. Business-like attitudes: Commercial or entrepreneurial, financial or social sense, and

6. Wider skills for employability and lifelong learning.

Flexible Pathways

TVET should not be the end of the road, it should integrate paths leading to higher education in universities or create higher levels in the technical schools.v

Lesson Learned: Academic courses in TVET that are equivalent to university courses should have transferrable credit. TVET graduates sometimes move on to university. If they take general educational courses, they should be allowed to use the credit in other settings. This requires the creation of a system of course equivalencies among all post-secondary institutions.

Best Practices to Support TVET Students with Disabilities

Services for individuals with disabilities should be both accessible and inclusive.

Transition Planning

There should be a smooth shift between the responsibilities vested in the school system at the secondary level, and the one of complete individual responsibility at the post-secondary level.

Successful Models for Services

A successful model is AMAC Accessibility Solutions and Research Center (AMAC Accessibility) at the Georgia Institute of Technology. Many of the services provided by exist now in Qatar, either at the University or Mada Center.

Partnerships for Employment of TVET Graduates

Partnerships with business and industry serve TVET students in several ways.

1. They provide the on-the-job training that is critical to specific occupational skills.

2. They afford an opportunity to practice the social interaction skills needed for the workplace, and to demonstrate commitment to attendance, punctuality and organization.

3. They represent potential references for students who have no other job experience.

4. If successful, the job training may lead to employment.

Possible Models for TVET Employment

Walgreen's Diversity Program hires workers with disabilities (42%). PWDs are hired to help Walgreen's develop its diversity program.

Angela Mackey, Career Outreach Manager at Walgreen's Distribution Center in Anderson struggled for years to land a job, even with a master's degree and top grades. Employers focused on her cerebral palsy, and finally she was hired by Walgreen.

Lessons Learned from TVET from Around the World

Canada offers extensive support for technical and vocational education. It also sets aside funds to intervention for people with disabilities.

Egypt is addressing the need to create employment opportunities, in particular for persons with disabilities, women and other vulnerable groups.

Ethiopia: There is one study that identified seven recommendations to improve TVET.

1. Develop TVET qualifications to motivate learners.

2. Develop occupational or competency standards.

3. Conduct occupational assessment and certification processes

4. Have TVET institutions accredited for credibility and accountability.

5. Conduct research on the efficacy and outcomes of TVET.

6. Build partnerships and engage stakeholders

7. Include other support services such as apprenticeships and vocational guidance.

Finland offers TVET and continuing education programs to improve the work force and industry needs, and to offer continuing education. Programs offer training in technology, business administration, health and social services.

Spain: The Once Foundation of Spain has developed career training including in physiotherapy. Once has found that persons who are blind and visually impaired do well as physiotherapists.

Singapore: Four plans were developed to phase in the transformation of Singapore's TVET over a five-year period:

During the Phase I, ten state-of-the-art campuses and headquarters were built and commissioned research to explore perceptions of its image by stakeholders.

Phase II, it improved its course offerings by moving adding web-based student services and an e-Tutor learning system.

Phase III, ITE upgraded its staffing and developed partnerships with industry giants like Microsoft, IBM, Sun Microsystems and others to create learning centers matched to industry's needs.

Phase IV, a comprehensive marketing and outreach campaign was introduced to communicate the relevance and value to industry and society.

Recommendations:

1   Create a World-Class Accessibility Center to Serve Qatar and the Region.

2   Conduct research on evidence-based practices while building the exemplary TVET system. This opens a door of opportunity for Qatar to research and document its efforts toward its law of "education for all" in support of the Qatar Nation Vision 2030.

3   Build an Exemplary System of International Best Practices for Inclusive Technical and Vocational Education and Training. Develop a plan and secure Commitment of Relevant Qatari Ministries and Leaders for development of a Plan for TVET Inclusion of Persons with Disabilities.

Conclusion

Qatar has worked to implement some strategies and models that have proven effective in the education of persons with disabilities at all stages, from pre-school to university, with a view to establish a distinguished technical and professional education.

Qatar has worked to define best TVET practices for the international community. It encouraged building schools in collaboration with business and industry, creating centralized supporting assessment and providing assistive technology and information and communication technology (ICT) services.

Qatar has adopted "Education for All" as its goal in 2030 Vision and has launched a plan to improve higher education and technical and vocational training to build an economy based on the best international standards and to provide education for all citizens.

The purpose of this guide is to identify the best models to help develop technical and vocational education and training programs for persons with disabilities, and to identify strategies and to provide solutions for access to education.

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