

OER in Qatar

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1. Partners and experts in Qatar

2. Qatar in a nutshell

Qatar (Arabic: قطر) officially the State of Qatar (Arabic: دولة قطر transliterated as Dawlat Qatar), is an Arab emirate in Southwest Asia, occupying the small Qatar Peninsula on the northeasterly coast of the larger Arabian Peninsula. It is bordered by Saudi Arabia to the south; otherwise the Persian Gulf surrounds the state. An oil rich nation, Qatar has the highest GDP per capita in the world.

Sources say the name may derive from "Qatara", believed to refer to the Qatari town of Zubara, an important trading port and town in the region in ancient times.

In English-language broadcast media within Qatar — for example, television commercials for Qatar Airways and advertisements concerning economic development in Qatar — the name is pronounced "KA-tar", with a distinct differentiation between the syllables from the forming of the "t" sound.

In July 2007, the country had a growing population of approximately 900,000 people of whom approximately 350,000 were believed to be citizens. Of the citizen population, Sunni Muslims form a majority (almost all Qataris profess Islam), while the Shi'a Muslims count up to 10-13% of the population. The Wahhabi Muslims form the third group in size, probably no more than 10% of the population, to include the ruling dynasty and a large number of the elite families. The ancient Shia community of Qatar are historically related to the Shia majority in Bahrain and the al-Hasa coastal province of Saudi Arabia.

Besides ethnic Arabs, much of the population migrated from various nations to work in the country's oil industry. Arabic serves as the official language. However, English as well as many other languages like Hindi, Malayalam, Urdu, Tamil, Telugu, Bengali, and Persian are widely spoken in Qatar.

Expatriates form the majority of Qatar's residents. The petrochemical industry has attracted people from all around the world. Most of the expatriates come from South Asia and from non-oil-rich Arab states. Because a large percentage of the expatriates are male, Qatar has a heavily skewed sex ratio, with 1.8528 males per female.

The majority of the estimated 800,000 non-citizens are individuals from South and South East Asian and Arab countries working on temporary employment contracts in most cases without their accompanying family members. They are of the following faiths: Sunni Muslims, Shi'a Muslims, Christians, Hindus, Sikhs, Buddhists, and Bahá'ís.

Qatar has the world's largest per capita production and proven reserves of both oil and natural gas. In 2010, Qatar had the world's highest GDP per capita, while the economy grew by 19.40%, the fastest in the world. The main drivers for this rapid growth are attributed to ongoing increases in

production and exports of liquefied natural gas, oil, petrochemicals and related industries. Qatar has the second-highest human development in the Arab World after the United Arab Emirates. In 2009, Qatar was the United States' fifth-largest export market in the Middle East, trailing behind the U.A.E., Israel, Saudi Arabia and Egypt. With a small citizen population of less than 300,000 people, Qatar relies heavily on foreign citizens, both for its protection and generating labour demand. Qatar has attracted an estimated \$100 billion in investment, with approximately \$60–70 billion coming from the U.S in the energy sector. It is estimated that Qatar will invest over \$120 billion in the energy sector in the next ten years.

3. Education in Qatar

3.1 Policy

Qatar's comprehensive educational policy is based on firm principles of preserving the nation's Islamic heritage and identifying the discrete nature of the individual, while continuing to enhance the development of school curricula and the educational system and benefiting from the achievements of the times and the latest technological innovations.

Since the accession of His Highness Sheikh Hamad Bin Khalifa Al Thani to power in the country in 1995, the educational policies and programs at the Ministry of Education have improved somewhat

The government launched its initiative of developing higher education in Qatar under the slogan "education for a new era", which aims to provide the best educational programs for the sons and daughters of Qatar in order to prepare them to meet the requirements of the economic and social development process of the country.¹

3.2 Overview of all sectors (schools and post-secondary)

Specialized Education

The term of this institute is 6 years, divided equally between a preparatory course and a secondary course, which is subdivided into scientific and literary segments.

Secondary School of Commerce

Students are admitted to this school after completing a preparatory third year. The School's term is three years after the successful completion of which students obtain a Secondary Commercial Diploma.

Scientific Secondary Schools

Within the context of the new educational strategy which seeks to develop secondary education, two scientific secondary schools, one for boys and one for girls, were opened.

¹ <http://www.qsa.gov.qa/QatarCensus/Education.aspx>

Literacy and Adult Education

This has been a project of the Ministry of Education since 1954. It aims to eradicate illiteracy among male and female Qatari aged from 10 to 45.

Special Education

Two institutes have been formed namely the Al-Amal School for Boys and the Al-Amal School for girls. Subsequently, two mental schools and two audiovisual schools, assigned separately for boys and girls, were built. These schools provide the students with Islamic guidance to help them become good citizens and offer them the chance to achieve optimum physical, mental, emotional and social growth compatible with their potential and disabilities.

The Qatari Center for the Gifted and Creative

This center was opened in 2001 to cater for the educational needs of gifted and creative students.

Languages Institute

Established in 1973, this institute receives students from among the employees of the government and semi-official organizations to improve their standards in Arabic, English and French languages.

Department of Training and Vocational Development

This department was established to prepare skilled tradesmen in some technical specialties, predispose Qatari youth to enjoy manual skills, train Qatari government employees in various trades and carry out tests to assess the vocational and clerical abilities of candidates to take government posts.

3.2 Private Education

The Ministry of Education provides private schools with educational inspection, health service and free electricity and water. It encompasses private kindergartens and schools as well as educational services and training centers that provide computer training, secretarial and administrative skills or refresher courses in addition to the university services centers that facilitate the registration of students in foreign universities for distance learning.

3.3 University Education

Qatar University aims to provide education training and research opportunities in various fields of specialization needed to enhance the potential of citizens and advance the welfare of the nation. Today, Qatar University hosts the following faculties: Education, Humanities and Social Studies, Shari'a and Islamic Studies, Law, Engineering, Business and Economics and Technology. The University continues to develop its instructional plans; introduce new scientific sections and units; follow up and

assess the compatibility of programs and curricula at the faculties with the needs and concerns of the community and support Qatari Ph.D. holders and members of teaching staff, many of whom are women.

3.4 Laws

Law 25/2001 ensures free and compulsory education for all children from primary to the end of the secondary stage or until the child reaches the age of 18².

The State of Qatar ratified the Convention on the Rights of the Child on 3 April 1995. The State of Qatar, its Ministries especially the Ministry of Education, and its different institutions are intent on making children become aware of the principles of human rights and freedoms stipulated by the United Nations Universal Declaration of Human Rights through the following laws and legislations³:

1. The Constitution states that: education is an essential pillar, which aids in achieving progress in society. (Article 25) The State implements compulsory education as stipulated in the laws and regulations of the State of Qatar. (Article 49)
2. The emiri decision no. 25 issued in September 2001 by His Highness Sheikh Hamad Bin Khalifa, the emir of the State of Qatar, details compulsory education for all children in Qatar. The 2001 Ministerial decision no. 48 and modified by the 2003 Ministerial decision no. 7 detail the formation of a special committee to execute the emiri decision no. 25
3. The 2003 Ministerial decision no. 27 establishes a department for Pre-School education entitled the Chairmanship of Pre-School education
4. The 2004 Ministerial decision no. 4 details the formation of a Supreme Committee for the dissemination in schools of the principles included in the Convention on the Rights of the Child
5. The 2004 Ministerial decision no. 5 details the formation of a Committee to consolidate the educational values at schools. It also provides that the Supreme Committee shall supervise the project on inclusion of students with special needs into the education system.

In general, the State wishes to support the next generations by achieving the goals of these educational policies concerning human rights, represented in the following guidelines:

- All citizens should be trained on the rights of citizenship and political participation
- education should make the students learn the value and practice of

² <http://gulfnews.com/news/gulf/qatar/qatar-authorities-enforce-strict-education-rules-1.776451>

³ <http://www.hurights.or.jp/pub/hreas/11/06HRE%20in%20Schools%20-%20Qatar.pdf>

- work, production and perfection
- It should enable students to become proficient in the essentials of education such as reading, writing, and mathematics
- It should provide students with knowledge in advanced sciences, methods of research, and scientific exploration
- It should promote the proper skills and attitude of self-education in order to create a society that seeks knowledge constantly
- It should urge the citizens to be trained on the skills of expressing one's self in different ways
- It should train students on the practical uses of computers
- It should develop their ability to create, invent, think methodically, and their practical applications
- It should develop talented and creative students and prepare a scholastic environment that enhances their skills and hobbies It should rehabilitate those with special needs in a way that help them efficiently join the society
- It should eradicate the source of illiteracy and achieve continuous progress in the promotion of adult education.

Qatari laws and legislations do not differentiate between men and women; however, the particular needs of women are taken into consideration in some cases. There are specific legal provisions concerning childbirth leave (including breastfeeding leave and childcare leave), leave for female Qatari employees whose husbands die, and leave for special circumstances.

Progress in Kindergarten and Pre-School education: Originally, Kindergarten was managed by a special sector and the Ministry of education's role was confined to issuing licenses, providing technical and managerial supervision, and providing financial support each year. However, after adopting the educational Policy, Pre-School education is now considered part of the education system. The State has established public, government-affiliated Kindergartens, paving the way for Pre-School education to become accredited and added to the other three stages of education, namely, Primary, Preparatory, and Secondary.

3.5 Statistics

Achieving equality between the Two Sexes: In the 2001-2002 scholastic year, there were 113,188 students who joined schools in the State of Qatar. In the 2003-2004 scholastic year, 119,254 students were enrolled, achieving an increase of 60,66 students, 5 percent increase from the previous scholastic year (2001-2002). Schools in Qatar have 49 percent girls and 51 percent boys, indicating near equal numbers of girls and boys⁴.

Indications of Increasing number and equality of Students Joining Secondary

⁴ <http://www.hurights.or.jp/pub/hreas/11/06HRE%20in%20Schools%20-%20Qatar.pdf>

School: There were 21,414 students who entered secondary schools in the 2002-2003 scholastic year. In the 2003-2004 scholastic year, there were 24,480 students in secondary schools, a fourteen percent increase in the number of students in secondary school, with 51 percent girls and 49 percent boys.

3.6 Promoting human rights

The State of Qatar promotes human rights through the following qualitative indications:

Providing the opportunity for children to express themselves: in the three levels of education (primary, preparatory, and secondary), there are groups on library, press, and scholastic broadcast through which children can fully express their opinions. There are also magazines, bulletins, researches, and published studies. The Ministry of education organizes cultural and informational debates among students in order to encourage them to express their opinions, and advocates local visits for students to different corporations in order to develop efficient interaction and communication with society.

Helping parents get involved in their children’s education: The Ministry of education has formed the Parent’s Council, which invites mothers and fathers of students to schools in order to discuss all matters relating to their sons and daughters. The Ministry of education seeks to develop an educational awareness through the Parent’s Council in a way that enables parents to assume more responsibilities on their children’s education. Schools invite parents to spend the whole day with their children in classes in order to acquaint themselves with their children’s school life.

Protecting children from any forms of violence, harm, or insults: The Ministry forbids any form of physical or verbal punishment. The Ministry also asserts the need for teachers to use proper, gentle language and treatment inside and outside the classroom.

A selection of statistics with reference to Qatar and Education follows⁵:

Adjusted savings: education expenditure > % of GNI	1.31 % of GNI		[135th of 168]
Children out of school, primary	298		[72nd of 126]

⁵ <http://www.nationmaster.com/red/country/qa-qatar/edu-education&all=1>

Children out of school, primary, female	471		[101st of 117]
Children out of school, primary, male	298		[67th of 117]
Duration of compulsory education	6 years		[144th of 171]
Duration of education > Primary level	6		[39th of 181]
Duration of education > Secondary level	6		[78th of 181]
Education enrolment by level > Primary level	66,473		[143rd of 189]
Education enrolment by level > Secondary level	51,888		[132nd of 171]
Education enrolment by level > Tertiary level	7,826		[115th of 150]
Education enrolment by level, percentage girls > Primary level	48.32%		[94th of 179]
Education enrolment by level, percentage girls > Secondary level	49.45%		[71st of 162]
Education enrolment by level, percentage girls > Tertiary level	72.78%		[2nd of 126]
Education enrolment ratio, net, primary level	100%		[5th of 160]
Education enrolment ratio, net, primary level > Men	99%		[24th of 160]
Education enrolment ratio, net, primary level > Women	100%		[6th of 160]
Illiteracy rates by sex, aged 15+	17.5%		[58th of 138]
Illiteracy rates by sex, aged 15+ > Men	18.6%		[46th of 138]
Illiteracy rates by sex, aged 15+ > Women	15%		[72nd of 138]
Illiterate population by sex, aged 15+	76,500		[107th of 138]

3.7 Ministries and Agencies

3.7.1 The Supreme Education Council⁶

In 2008 the state of Qatar articulated long-term national goals and values in the Qatar National Vision 2030 (QNV 2030). This vision lays out objectives that Qatar will pursue to promote human, social, economic, and environmental development that will define Qatari society over the next two decades. Its overarching aim is to transform Qatar into an advanced country able to sustain its development and provide high standards of living for all of its people.

After launching QNV 2030, the Qatari government undertook extensive studies to define national initiatives that would achieve the goals laid out in its vision. This process culminated with the release in March 2011 of the Qatar National Development Strategy 2011-2016(NDS), a document that reflects Qatar's development priorities and constitutes the nation's blueprint for advancing across a range of areas.

The Strategy details plans, programs, and projects that Qatar should pursue in 14 sectors, including the Education and Training Sector (ETS). It derives from QNV2030 and ultimately defines the plans that ministries and agencies will need to put in place to implement the sectors' priorities.

The NDS identifies 21 key outcomes for Qatar's Education and Training Sector. As it does with Qatar's other sectors, the Strategy approaches Education and Training from the expectation that in the coming decades the nation will need to diversify away from its reliance on natural gas and oil and will become a competitor in the global knowledge economy. To succeed in

⁶ <http://www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf>

that global marketplace, Qatar will need to continue to make substantial investments in education and training, which will produce well rounded and engaged citizens who are prepared to support the nation's industry, science and medicine, but which will develop a more cohesive population that is better equipped to make decisions about health, marriage, parenting and social responsibilities.

Institutes and functions within the Supreme Education Council include⁷

- Education Institute
- Evaluation Institute
- Higher Education Institute
- Shared Services Department
- Human Resources
- Office of Information Technology
- Office of Communications
- Legal Affairs Department
- Research and Policy Analysis

3.7.2 The Qatar Foundation for Education, Science and Community Development⁸

Qatar Foundation for Education, Science and Community Development (QF) aims to support Qatar on its journey from a carbon economy to a knowledge economy by unlocking human potential.

It was established in 1995 by His Highness the Amir Sheikh Hamad bin Khalifa Al-Thani. His wife, Her Highness Sheikha Moza bint Nasser, is the organization's chairperson and driving force.

Its Vision is to support centers of excellence which develop people's abilities through investments in human capital, innovative technology, state of the art facilities and partnerships with elite organizations, thus raising the competency of people and the quality of life.

Qatar Foundation's mission is to prepare the people of Qatar and the region to meet the challenges of an ever-changing world, and to make Qatar a leader in innovative education and research. To achieve that mission, QF supports a network of centers and partnerships with elite institutions, all committed to the principle that a nation's greatest natural resource is its people. Education City, Qatar Foundation's flagship project is envisioned as a Center of Excellence in education and research that will help transform Qatar into a knowledge-based society.

⁷ <http://www.sec.gov.qa/En/about/Pages/default.aspx>

⁸ <http://www.qf.com.qa/discover-qf/about-qf>

3.7.3 ICTQatar⁹

ictQATAR connects people to the technologies that enrich their lives, drive economic development & inspire confidence in the future.

Established in 2004 as the nation's ICT policy and regulatory body, the Supreme Council of Information and Communication Technology (ictQATAR) supports Qatar's ambitious vision to achieve social and political change while advancing global competitiveness.

3.7.4 The Qatar Assistive Technology Center (Mada)

Mada is a non-profit organization that strives to empower and enable people with disabilities through Information and Communication Technology (ICT). Based on a vision of a world with Information and Communication Technology for All, Mada provides Assistive Technology Solutions for people with disabilities. In addition to providing expert advice, Mada plays a leadership role in Assistive Technology Solutions, providing up-to-date information on the latest technology and thinking, as well as offering training for professionals, parents and people with disabilities

3.7.5 Quality Assurance¹⁰

The responsibility for collecting, analysing and disseminating data is lodged with the Evaluation Institute. Consequently, the Institute has two primary roles:

- to inform schools, teachers and students about their performance, thus helping them reflect and improve upon it
- to supply information to parents, to other parts of the SEC, and to other decision-makers on the extent to which schools are fulfilling their roles. This information assists parents in selecting the best schools for their children and allows the SEC to assess the effectiveness of each individual school by implementing an institutionalized system of school evaluation.

3.7.6 The Evaluation Institute

The Evaluation Institute houses five offices:

Student Assessment Office¹¹

The Student Assessment Office is responsible for designing and implementing the Qatar Comprehensive Educational Assessment (QCEA), a program that measures student learning. This program administers standardized tests to students in the independent schools in Qatar. Testing is done annually, with

⁹ <http://www.ictqatar.qa/en/about>

¹⁰ <http://www.sec.gov.qa/En/SECInstitutes/EvaluationInstitute/Pages/About.aspx>

¹¹ <http://www.sec.gov.qa/En/SECInstitutes/EvaluationInstitute/Offices/Pages/StudentAssessmentOffice.aspx>

the first tests occurring in April and May 2004 to establish a baseline from which to compare all future test results. A pilot of this baseline test was conducted in October 2003 in a representative sample of Qatari schools.

School Evaluation Office¹²

The School Evaluation Office is responsible for designing, implementing and overseeing the evaluation of all schools in Qatar. This system of evaluation is designed to ensure that schools are accountable for providing quality education and to assist schools in their development and improvement.

Data Collection and Management Office¹³

The Data Collection and Management Office (DCM) is responsible for the planning, design and deployment of all resources needed for the successful collection of data related to the education reform effort. A crucial component of reform, data collection and dissemination provides access to the raw data and analysis needed to make informed decisions to improve the quality of education.

Qatar Senior Schooling Certificate Office¹⁴

The QSSC is based on healthy, reliable and authentic school based assessments as well as standardized external tests set under the Education for a New Era initiative.

Qatar Office of Registration¹⁵

Maintains and safeguards accurate student records, and interacts with students, faculty, administration, staff, and the community at large.

Licensing and Accreditation Office¹⁶

Established by the SEC's Evaluation Institute, the Qatar Office for Registration, Licensing and Accreditation (QORLA) states that all teachers and leaders of independent schools will have to seek professional licenses from September 2009. The teachers who have obtained their provisional license will have to a secure permanent license in the long run.

¹²<http://www.sec.gov.qa/En/SECInstitutes/EvaluationInstitute/Offices/Pages/SchoolEvaluationOffice.aspx>

¹³<http://www.sec.gov.qa/En/SECInstitutes/EvaluationInstitute/Offices/Pages/DataManagementOffice.aspx>

¹⁴ <http://www.sec.gov.qa/En/Media/Events/Pages/EventDetail.aspx?EventId=48>

¹⁵ <http://qatar-weill.cornell.edu/education/officeRegistrar/index.html>

¹⁶ <http://www.onlineqatar.com/614-Professional-license-system-introduced-for-teachers-in-Doha.html>

4. Schools in Qatar¹⁷

- Acorn Nursery School
- Alforqanschool
- Al Jazeera Academy
- Al Khor International School
- Al Maha English School
- American Academy School
- American School of Doha
- Bangladesh M.H.M High School and College
- Birla Public School
- Cambridge International School for Girls
- Compass International School, Doha
- Compass International School, Al Khor
- Doha Academy
- Doha College
- Doha English Speaking School
- Doha Modern Indian School
- DPS Modern Indian School
- Doha Montessori and British School
- Dukhan English School
- Elite International School
- English Modern School
- Global Academy International
- Gulf English School
- Ideal Indian School
- International School of Choueifat
- International School of London in Qatar
- Iranian School
- Japanese School
- Jordanian School
- Little Angle Nursery School
- Little Village Nursery
- Lycée Bonaparte
- M.E.S Indian School
- Michael E. DeBakey High School for Health Professions at Qatar
- Middle East International School
- Newton British School
- Newton International School
- Noor Al Khaleej International School
- Pak Shama School
- Pakistan Education Centre
- Park House English School
- Philippine International School
- Philippine School Doha
- Qatar Academy

¹⁷ http://en.wikipedia.org/wiki/List_of_schools_in_Qatar

- Qatar Canadian School
- Qatar International School
- Qatar Leadership Academy
- Qatar Norwegian School
- Shantiniketan Indian School
- Sherbone School
- Summit Academy
- The Cambridge School Doha
- The Gulf English School
- The Lebanese School

5. Further and Higher education in Qatar

5.1 Universities in Qatar¹⁸

Education City has many campuses from various universities around the world. The University has a wide range of diploma and degree courses offered over a one to four year period. All the mainstream courses are available at the Universities.

The National University of Qatar is gender segregated.

Entrance requirements do vary. Males require a Visa that can be obtained through the University. Females can use their father or husband's sponsorship.

Carnegie Mellon University

Website: www.qatar.cmu.edu

Stenden University

Website: www.stenden.edu.qa

College of the North Atlantic Qatar (CNA-Q) Website: www.cna-qatar.com

Georgetown University School of Foreign Services in Qatar Website:
www3.georgetown.edu/sfs/qatar

NorthWestern University Website: www.qatar.northwestern.edu

Qatar University

Website: www.qu.edu.qa

Shaqab Institute for Girls (College of Design Arts) E mail
: info@chn.edu.qa
www.stenden.com/en/stenden/Locations/qatar/Pages/Contact.aspx

Texas A&M University at Qatar (TAMUQ): www.qatar.tamu.edu

¹⁸ <http://www.qatarliving.com/the-qatar-guide/education/universities#ixzz2IzNh50TV>

University of Calgary Qatar Website: www.ucalgary-qatar.ca

Virginia Commonwealth University Website: www.qatar.vcu.edu

Weill Cornell Medical College Website: www.qatar-med.cornell.edu

Post-secondary

- Academic Bridge Programme
- Carnegie Mellon University in Qatar
- College of North Atlantic Qatar
- Georgetown University School of Foreign Service in Qatar
- Northwestern University in Qatar
- Stenden University Qatar
- Texas A&M University at Qatar
- Virginia Commonwealth University in Qatar
- Weill Cornell Medical College in Qatar
- University of Calgary Qatar
- University of Qatar

5.2 Polytechnics in Qatar

No information.

5.3 Colleges in Qatar

Aspire

College of Business and Economics
College of Education, University of Qatar
College of Engineering, University of Qatar
College of Law
College of North Atlantic
College of Sharia
Doha International Center for Interreligious Dialog Qatar
Hamad Medical Corporation, Ministry of Education
Michael E. DeBakey High School for Health Professions at Qatar
Qatar Aeronautical College
Shafallah Medical Genetics Center
Sidra Medical and Research Center

6. Education reform¹⁹

Qatar has reformed its entire education system, from elementary school to higher education, with the aid of the RAND Corporation. With a population of only 1.65 million (of which at most 20% are Qatari nationals), there appears to be plenty of wealth to go around. Like its oil-producing Persian Gulf

¹⁹ <http://www.mei.edu/content/higher-education-reform-arab-world-model-qatar>

neighbours, most Qatari citizens work in secure public sector jobs with generous benefits while expatriates dominate the private sector.

The country's strategy has been to adapt the best of the US and UK higher educational system to local needs and the national vision while simultaneously preserving the country's Muslim and Arab heritage. The ultimate goal is to "Qatarize" the workforce so that citizens, women as well as men, will obtain the necessary skills to shape the nation's destiny and lessen the national dependence on an expatriate work force.

Doha's monumental Education City, a 14 million square meter multiversity complex on the city's outskirts, is the flagship of the reform scheme. It hosts branch campuses of leading US universities in targeted fields including: journalism (Northwestern University), medicine (Cornell), engineering (Texas A&M), business and computer science (Carnegie Mellon), design (Virginia Commonwealth), and foreign affairs (Georgetown). The Qatar Faculty of Islamic Studies stands alongside these US counterparts and offers innovative graduate degrees emphasizing the coexistence of Islam and modernity. The US branch campuses award home university degrees and demand the same quality standards. They provide an opportunity for Qatar and the region's most talented students (including many women) to enjoy the best of US higher education without having to travel too far from home.

Education City's mission is not just to educate undergraduates, but also to build indigenous research capacity in several priority areas including: medicine, biotechnology, information and communication technologies (ICT), environmental sciences, and nanotechnology. The strategy involves simultaneous investment in fundamental research in basic science, applied research, and the development of commercial products at a technological incubator, Qatar Science and Technology Park. Qatar has committed an impressive 2.8% of its GDP to its goal of becoming a regional research powerhouse. But can a country, even with such substantial investment, quickly build world-class research capability from scratch? The experience of countries such as the US and Singapore demonstrates that this process takes significant time and that success is far from guaranteed.

The **Weill Cornell Medical College** in Qatar (WCMC-Q), the only US medical school with a branch campus overseas, features prominently in Qatar's ambition to become a world leader in the healthcare and biomedical fields. Inaugurated in 2002 with a tripartite mission of education, research, and clinical care, WCMC-Q has already educated 112 new physicians in its first five graduating classes, the majority of whom have obtained medical residencies in the US with plans to return to Qatar. They will have ample opportunity to secure key positions at the state-of-the art \$7.8 billion Sidra Medical and Research Center opened in 2012 and employing a staff of more than 2,000.

How realistic are plans for conducting cutting edge biomedical research in Qatar? At first glance, it would seem that there are insurmountable obstacles to overcome. To begin with, the country lacks both a scientific culture and a

previous track record—it must build completely from the ground up. Moreover, most prominent researchers lack familiarity with the region in general and Qatar specifically.

7. Administration and finance²⁰

Introduction

Traditionally, education in Qatar was under the responsibility of the Ministry of Education (or more recently the Ministry of Education and Higher Education). Since the beginning of formal education in Qatar (1956), school administration posts were assigned to highly-qualified Arab persons regardless of their nationalities. However, in 1971/72 a decision was issued for gradual Qatarization of the administrative posts in order to maintain stability in this field. Accordingly, all vacant or new posts have been filled by Qataris only. In 1991/92, the percentage of Qataris holding top school administration posts reached 96%. The schools of Qatar were distributed into four geographical zones, namely Doha (the capital city), Al-Shamal (north Qatar), Al-Khor (north-eastern parts), and Dukhan (west of the country). Each Educational Zone had a director and administrative staff. The director was responsible for all the technical, cultural, administrative and financial affairs of the zone. Girls' education was autonomous. Girls' schools had their own administrators and educational guidance supervisors. However, girls' education was linked with the central educational administration through the Girls' Education Department.

In recent years several substantial changes were introduced in the administration and functioning of the education system, especially within the framework of the education reform initiative *Education for a New Era*, started in 2002.

The **Supreme Education Council** (SEC) was established in November 2002. It directs the nation's education policy and plays an integral role in the development and implementation of the education reform effort, including the work of three Institutes operating under the Council. The SEC also approves the contracts for the independent schools. In April 2009 a decree reaffirmed the authority of the SEC and consolidated the Ministry of Education personnel and schools into the Supreme Education Council.

The **Education Institute** directly oversees and supports independent and semi-independent schools. The Institute is responsible for establishing rigorous curriculum standards and ensuring schools are equipped to meet them. The Institute also issues licenses for and monitors the private schools including nurseries and kindergartens. It also supports teachers and school administrators at every stage of their career with an array of professional development programmes.

²⁰ UNESCO-IBE (<http://www.ibe.unesco.org/>) World Data on Education. 7th edition, 2006/07

The **Evaluation Institute** develops and conducts comprehensive national assessments of student learning, evaluates the performance of independent K–12 (kindergarten to grade 12) schools, and oversees licensing of teachers and data collection. The Institute also spearheads Qatar’s participation in the most important international education assessments.

In 2008, the **Qatar Office for Registration, Licensing and Accreditation** has been established at the Evaluation Institute to issue provisional and full licenses to teachers and school leaders according to the National Professional Standards for Teachers and School Leaders.

The **Higher Education Institute** administers Qatar’s scholarship programme and guides students through the college application process, including preparation for international admissions tests. The Institute also handles certificate equivalency, ensuring that students who received credit for courses taken abroad are given appropriate credit by the Institute’s standards.

An **independent school** is a government-funded school that is granted autonomy to carry out its educational mission and objectives while being held accountable to terms agreed to in an operating contract. All independent schools must meet established curriculum standards in Arabic, English, mathematics and science, as well as comply with periodic financial audits. Tuition is free for Qataris and others eligible for public education. The organizational structure of the school includes: the school principal, his/her deputies, assistants, assistant directors, the board of trustees, and parents councils. The **Board of Trustees** is considered to be an element of legal organization required for every independent school. Its role is to direct, give advice, represent parents, society, and help the school in quality control. The first group of independent schools began operation at the beginning of the 2004/05 academic year. Twelve schools opened September 2004 and more schools opened in September 2005. By 2007/08, the total number was 88 schools. During 2008-2009 several new independent schools were established, bringing their total to 103 in 2009. In the same year, 77 former Ministry of Education schools were operating as ‘semi-independent’ while their staff and facilities were preparing to act as true independent schools. (SEC, 2009).

The Supreme Council of Family Affairs in cooperation with several sectors defines the National Strategy on Childhood aimed at setting up a foundation for caring of children. The Council and several other state sectors jointly implement national strategies for the family, women, youth, and those with special needs.

The mission of the **Qatar Foundation for Education, Science and Community Development** is to prepare the people of Qatar and the region to meet the challenges of an ever-changing world, and to make Qatar a leader in innovative education and research. To achieve that mission, the Foundation supports a network of centers and partnerships with elite institutions, all committed to the principle that a nation’s greatest natural

resource is its people. Education City, Qatar Foundation's flagship project is envisioned as a Center of Excellence in education and research that will help transform Qatar into a knowledge-based society.

As part of Qatar Foundation's efforts in education, it sponsors the [World Innovation Summit for Education \(WISE\)](#), a global forum that brings together education stakeholders, opinion leaders and decision makers from all over the world to discuss educational issues. The summit has been held in [Doha](#) since 2009²¹:

- The first edition from November 16th to 18th 2009
- The second from December 7th to 9th 2010.
- The third edition from November 1st to 3rd 2011, during which the [first \\$500,000 WISE Prize for Education\[3\]](#) was awarded to Sir [Fazle Hasan Abed](#), Founder and Chairman of [BRAC](#).
- The fourth edition from November 13th to 15th 2012
- The fifth edition from October 29th to 31th 2013

7.1 Schools

As an example²²:

Tuition Fees, set by the Qatar Canadian School Board and approved by the Supreme Education Council for academic school year 2012-2013.

For returning students to secure a seat at QCS, for the next academic year, a non-refundable deposit of 1,000QR will be required and the deposit will be deducted from the next year's tuition. Tuition payments are divided into two terms.

The tuition fees vary per term (two terms) from 10,000QR (Junior Kindergarten) to 26,500QR per term in Grade 12

Registration Fees for all students:

There is an annual student registration fee of 3,500QR that is non-transferable and non-refundable for the registration of each child at QCS. This is in addition to tuition fees which are paid on a term/yearly basis. The registration fee of 3,500QR is included in the total fees listed above

7.2 Post-secondary

Carnegie Mellon is taken as an example of the tuition fees and financial support:

Merit Scholarships

Approximately five to ten merit scholarships are awarded annually by

²¹ http://en.wikipedia.org/wiki/Qatar_Foundation

²² <http://www.qcs.edu.qa/Tuition%20Fees.pdf>

Carnegie Mellon to the most academically promising applicants. These awards usually cover 50% of tuition and can be combined with need-based aid from Qatar Foundation. No extra application is required to apply for the merit scholarships, and students are notified of the awards at the same time they receive the offer of admission.

Qatari citizens

For Qatari citizens and citizens of other GCC countries, government scholarships and/or sponsorships from companies usually cover the full cost of attendance.

Non-Qatari Students

Need-based financial assistance is available to students of all nationalities through the Hamad bin Khalifa Financial Aid Program administered by Qatar Foundation. Loans of up to 100% of tuition and fees are made to families based on their unique financial circumstances. The loans can be repaid either by normal financial installments or by time served working in Qatar immediately following graduation. The second option, known as the "Paid Service Option" is unique to Qatar and it enables even students with heavy debt loads to have their loans forgiven if they work in Qatar for an approved Qatari entity.

This program requires a separate application, which is done entirely online²³.

Contact Financial Aid

Students can contact the Qatar Foundation Financial Aid Office.

Tuition and fees in Qatar are the same as Carnegie Mellon University in Pittsburgh, Pennsylvania.

Tuition:	QR 163,812 (US \$44,880)
Activity, Tech. & Orientation Fee:	QR 2,774 (US \$760)
Application Fee:	QR 250 (US \$70)
Books & Supplies (est.):	QR 3,650 (US \$1000)
Totals:	QR 170,486 (US \$46,710)

9. Information society

9.1 ICT Infrastructure²⁴

Market structure and Regulatory Framework

Qatar continues to enhance its legal and regulatory framework to meet the growing needs and challenges of the ICT marketplace. With the issuing of the second fixed license in Qatar to Vodafone Qatar in April 2010, ictQATAR has

²³http://myeducationcity.com/en/dynamic_pages/index/26/financial_assistance/financial-aid

²⁴ <http://isper.escwa.un.org/Portals/0/National%20Profiles/2011/English/Qatar-11-E.pdf>

completed the second major phase of liberalization of its telecommunications sector.

Qtel was the first major telecommunications provider to offer both mobile and fixed services, but now Vodafone Qatar offers both as well, enabling consumers, businesses, and government customers to choose between providers for a full range of services. Furthermore, Vodafone Qatar will also be able to provide converged services involving both mobile and fixed networks such as fixed/mobile data packages.

Penetration of ICT Services

Growth in Qatar's telecommunications market continues at a steady pace. From 2008 to 2010, fixed telephone line subscriptions increased 12 percent, mobile subscriptions increased 63 percent, fixed Internet subscriptions grew 45 percent, and fixed broadband subscriptions rose 55 percent.

Competition created by market liberalization, reducing prices of hardware and services, and free Internet access at public parks also contribute to the significant increase in ICT adoption and usage throughout Qatar.

PC penetration rates across the mainstream population (excluding the transient labor population) reached 85 percent in Qatar in 2010, an increase of 31 percentage points from 2008. However, when considering the overall population (including the transient labor force), computer penetration in 2010 stood at 72 percent, a substantial increase from 32 percent in 2008. The gap between penetration rates of the overall and mainstream populations is due to the significantly lower rates of PC access among the transient labor force. Household-level PC penetration continued to increase in Qatar, from 71 percent in 2008 to 89 percent in 2010.

Projects for ICT Infrastructure and Services

Qatar continues to move forward with investment in its state-of-the-art high-speed broadband network, its first communications satellite, and submarine cables. These projects will be supported by a modernized regulatory framework to ensure competition and stimulate demand for services and bandwidth.

Qatar established a joint investment with Eutelsat to build, launch, and operate Es'Hail a high-capacity communications satellite that will serve the entire MENA region with enhanced access to and quality of communications services. Qatar Satellite Company has been established to lead initiatives related to satellite infrastructure and communications.

ICT Connectivity

ictQATAR is currently implementing a number of initiatives to ensure that national broadband connectivity will support programs such as e-Health, e-Education and e-Inclusion, among others. It is rolling out a single ICT backbone, the National Government Network, which will connect all government entities to each other by 2015. The network will enhance the

efficiency of government operations and services and facilitate dissemination of information and exchange of documents. The aim is to connect all education institutions, libraries, government institutions and information points, museums, and community centers. A physical national network will gradually grow to encompass other areas, such as universities, vocational centers, and small and medium enterprises (SMEs).

In addition to the strong ICT backbone, ictQATAR is committed to developing a population whose members have the necessary ICT skills to succeed in a knowledge economy on an equal basis.

Internet Infrastructure

In line with Qatar National Vision 2030, Qatar is currently facilitating the creation of a fiber-to-the-home (FTTH) network, with public and private investment, in order to provide high-speed connections to households and businesses.

The Qatar National Broadband Network (Q.NBN) Company has been established with a mandate to rollout and rapidly deploy a nationwide high-speed and open FTTH network by 2015. As the licensed passive network provider in Qatar, Q.NBN is aiming to achieve 95 percent national coverage in the next five years by partnering with the existing telecommunications operators, Qtel and Vodafone Qatar.

Qatar Telecom (Qtel) is partnering with Tata Communications for the construction of the Tata Global Network (TGN) Gulf Project by 2011 and Qtel will enable Qatar's role as a designated landing party in the regional network. The TGN Gulf project is a state-of-the-art Gulf-wide undersea cable network connecting the Gulf Region directly to the world's major business hubs and city centers, improving connectivity and providing foundational support for next-generation communication technology.

Gulf Bridge International (GBI) will deploy and manage a subsea cable system that will connect the Gulf countries with one another and provide connectivity to the rest of the world. The network will have two fiber pairs throughout the Gulf and will use the latest DWDM of 128 x 10 Gbps. wavelengths per fiber pair to achieve a total system design capacity of 2.56 terabits per second. The planned network will offer double landings at the major terminals of Qatar and Fujairah (UAE). GBI finalized agreements with Vodafone Qatar in February 2010 and Qtel in May 2010 to provide landing stations for GBI's cable in Qatar.¹⁶

Within Qatar, much work has been done to ensure that Internet infrastructure is available to end users. In collaboration with the Ministry of Municipality and Urban Planning, ictQATAR has rolled out free wireless Internet in major public parks under the iParks program.

The Supreme Council of Information and Communication Technology (ictQATAR) took a major step towards ensuring all of Qatar experiences the full benefits of technology with the introduction of the Qatar's first

eAccessibility Policy²⁵.

The policy aims to ensure people with disabilities in Qatar have equal access to the technologies that can enrich their lives, and covers a range of e-accessibility issues, including websites, telecommunications services, handsets, ATMs, government services, access to assistive technologies and digital content. The policy is effective immediately and ictQATAR will oversee the implementation of the policy across sectors and monitor progress.

The primary provisions of the eAccessibility Policy include:

- Requiring telecommunications service providers to provide accessible handsets, user interfaces, relay services, special rate plans, emergency services and accessible public payphones where appropriate.
- Requiring public sector organizations to develop websites and mobile content that can be accessed by persons with disabilities.
- Requiring all public sector organizations, including government owned banks, to implement service improvements that will ensure that public access terminals/kiosks and ATMs are available at strategic locations and usable by people with low vision blindness, deaf or hearing impairments, physical disabilities and reading problems.
- Requiring Qatar's Assistive Technology Center (Mada) to establish a fund to improve access to assistive technologies (AT) and services, encouraging the wide spread procurement of ATs, spreading awareness of the available services and benefits of ATs and providing demonstrations, special training and evaluations.
- Calling to action all producers and distributors of digital media in Qatar to improve the accessibility of their content through accessible eBooks, online information and special captioning for video programming.

Qatar's eAccessibility Policy supports numerous national initiatives in Qatar, including the Qatar National Development Strategy 2011-2016 and Qatar's General Family Strategy. The policy also supports Qatar's obligations under the United Nations Convention on the Rights of Persons with Disabilities, of which Qatar is a signatory.

e-education

In the 21st century, education's long-proven ability to empower people of all ages has grown exponentially, thanks to the advances of information and communication technology (ICT). Powered by the tools of ICT, education also becomes intensely personal and customized, breaking down barriers and leveraging opportunities. The individuality of every learner can be addressed—whatever his or her special physical needs, talents, or ambitions.

On January 18, 2010, ictQATAR announced on its website the launch of its revamped Qatar National e-Learning Portal. The portal offers more than

²⁵ <http://ifap-is-observatory.itk.hu/taxonomy/term/662>

2,500 free online courses to government employees in a variety of topics, including: business, IT, computer skills, human resources, marketing, personal development and management.

The new e-Learning Portal has an individually designed page for each government ministry and entity, allowing for customized learning to meet the needs of their specific employees. Human Resource specialists within each government entity can work with their employees to identify the appropriate courses to meet their development needs, set an achievable timeline to complete the courses and monitor progress against goals.

Internet in Qatar

Internet usage and penetration statistics are available at internet world stats²⁶ e.g.

Internet Usage Statistics:

1,682,271 Internet users as of June/12, 86.2% of the population, according to IWS.

Facebook Subscribers:

727,980 Facebook subscribers on Sept 30/12, 37.3% of the population, according to FB.

9.2 Educational internets in Qatar

No information.

9.3 Copyright law in Qatar²⁷

General

Qatar is not a member of the World Intellectual Property Organization (WIPO) nor does it belong to the Paris Convention for Protection of Intellectual Property. Within Qatar, therefore, owners of trade marks and copyrights and holders of patents are dependent on Qatar's own national laws and regulations for protection.

Patents and Designs

There is no patent or design law in effect in Qatar, however, caveats and cautionary notices may be published in both the Arabic and English language press and appropriate periodicals. While the publication of a cautionary notice does not affect a registration of the invention or design, it is intended to put the public on notice of the interests of its owner and to prevent potential infringement.

Trademarks

Law No. 3 of 1978, Administrative Decision No. 47 of 1986, and Ministerial

²⁶ <http://www.internetworldstats.com/me/qa.htm>

²⁷ <http://www.infoprod.co.il/country/qatar2d.htm>

Decree No. 17 of 1987 govern the Qatari trademark regime. Names of distinctive features, signatures, words, letters, numbers, designs, pictures, symbols, stamps, seals, vignettes and any other sign or combination of signs having a disjunctive character may be registered as a mark. Marks without distinctive features, expressions, designs and signs of immoral character or contrary to public policy, portraits or emblems of individuals without their permission and marks likely to deceive the public are among the things that cannot be registered as a mark.

With the exception of the alcoholic goods of Class 33, Qatar adopted all 42 classes of the international classification system. Application and registered marks are published in the Trademark Gazette. Opposition may be filed within four months from the date of publication. Upon registration, the mark is protected for ten years, and the protection is renewable for similar periods. The rights confer exclusive ownership of the mark. Lack of use of a mark in Qatar for five consecutive years is grounds for challenge. Violations of the law may give rise to criminal penalties.

Copyright

The Law for the Protection of Copyright No. 25 of 1995 became effective on 23 January 1996. Under this law, authors of literary, artistic, and scientific works may benefit from protection regardless of the work's value, kind, purpose or media. Protection covers works expressed in writing, sound, drawing, image or motion, creative titles and computer software. Also protected by the law are those who obtain the permission of the original author to translate the work or those who summarize, modify, explain or comment on the work to produce a new form of the work without infringing on the rights of the original authors. The protection extends to the rights of the author and the right of those who translate a work into a foreign language for three years from the date of publication.

Protection is granted to Qatari authors whose works are published inside and outside the country, the works of non-Qatari authors published in Qatar for the first time and the works of authors of any other foreign country that treats Qatari authors on a reciprocal basis. A literary work may be licensed for publication, display or circulation upon meeting the following legal stipulations: (1) The work must be accompanied with a certificate of origin showing the author's name or the name of the person who surrenders the right of usage; (2) The work must be accompanied with a permit from the supplier or owner for display or circulation, showing the geographic areas where the display or circulation, showing the geographic areas where the display and circulation is licensed; (3) The work must be accompanied with a supplier's certificate showing that the publishing rights are covered whether through paying the charges of putting the work to use by the public or by making copies of the work for distribution.

Once granted copyright protection, the author is entitled to attribute the work to himself and to apply his name to all the copies produced from it whenever the work is put to public use, except when the work is mentioned

accidentally in a radio or in a television presentation of current events. This right is inalienable and is not abolished with the lapse of time. The author also has the right to decide on publishing the work, recording or displaying it and to determine the relevant terms. The author has the right to use his work, on condition that the right was not surrendered to another person. Yet, it is forbidden to use any work through transferring it to the public in Qatar except by a written, authenticated permission from the author or the author's representative or successor in the event of death.

The author has a vested right to modify or to translate a work into another language; heirs, too, can exercise this right. Only the author has the right to publish his letters and to transfer the financial rights which the work entails, according to the provisions of the law, to another. The author has the right to defend against any violation of his rights and has the right to prevent any elimination, addition, change or deformation of the work.

Even following the death of the author, the rights provided for in the law are all or partly alienable, whether through inheritance or by law. The law stipulates that in cases of joint production of works where it becomes impossible to determine the exact share of each one in the joint work, all participants will be considered equal partners in its ownership, unless otherwise agreed.

10. ICT in education initiatives²⁸

The Qatar National e-Learning Portal provides online courses, covering a range of topics in information technology and business. It offers more than 2,500 different courses and allows for flexible learning. Already, 24 organizations and 37 small and medium businesses in Qatar are taking advantage of the e-Learning Portal, with more than 4,000 courses successfully completed to date. The proposed benefits are as follows²⁹:

- Maximize business performance by connecting corporate strategy and individuals
- Reduce the overall cost of training significantly
- Manage learners through a customized learner management system
- Give employees flexibility to learn anywhere, anytime without disrupting business continuity
- Offer in-depth content with a catalogue of 2,500 courses covering fundamental business and advanced IT competencies
- Reduce stress and increase employee satisfaction via a self-pacing system
- Build a scalable solution for organizational learning

The World Innovation Summit for Education (WISE) was established by Qatar Foundation in 2009 under the patronage of its Chairperson, Her Highness

²⁸<http://www.itu.int/wsis/stocktaking/plugin/documents.asp?project=1299413725&lang=en>

²⁹ <http://www.ictqatar.qa/sites/default/files/documents/QNEP.pdf>

Sheikha Moza bint Nasser. WISE is an international, multi-sectoral platform for creative thinking, debate and purposeful action in order to build the future of education through innovation. WISE is now an ongoing initiative and a global reference in new approaches to education. Through both the annual Summit and a range of continuing programs WISE is promoting collaboration and building the future of education.

10.1 Virtual initiatives in schools

Twenty new Qatari schools have started incorporating electronic learning (e-Learning) into their curriculum this year, bringing the number of schools using the system to 50. By school year 2014-2015, all Qatari schools will be expected to implement the e-Learning experience in their classrooms, according to the Supreme Education Council of Qatar³⁰.

The use of new technology aims to keep pace with modern learning methods used in developed countries. It allows students to communicate with their teachers, do their homework, and review what they have studied in the classroom electronically.

It also allows parents to reach out to the school and follow up on their children's progress. Teachers can upload lessons and educational material online, send homework electronically and record the behaviour and attendance of their students.

Educational authorities are currently seeking to close the gaps in some schools before they all go digital in 2014.

There is also an initiative that aims to provide a personal computer for each student and teacher, enabling them to access all systems and electronic content.

One of the earliest e-learning initiatives of ictQatar was **eSchoolbag** launched at Al Wakrah Independent School for Girls in 2006. Seventh grade students all received Tablet PCs containing programs for digital note-taking and searching, as well as e-content in maths and science mapped to current Qatari curriculum standards (Elearning Project 2006). Qatar University has also embraced e-learning, and the Blackboard learning management system is now available at QU. In 2005, a group in QU's Department of Engineering and Computer Science, developed an e-learning system for teaching basic computer and programming courses. This same group experimented with Semantic Web applications in e-learning to make web data more intelligent, and more machine readable and interoperable.

Specifically, in the primary and secondary education system, ictQatar and the Supreme Education Council are pursuing the development of Knowledge Net (K-Net).

Knowledge Net is a learning management system portal based on Microsoft

³⁰ http://al-shorfa.com/en_GB/articles/meii/features/2012/09/12/feature-02

Learning Gateway that allows for three-way communication between parents, students, and teachers. Knowledge Net was launched in twelve Qatari schools in 2006–07 and the final Phase III of the project was slated to be introduced in 2010–11 to approximately 300 Qatari schools administered by the Supreme Education Council.

10.2 Virtual initiatives in post-secondary education³¹

Georgetown University maintains state-of-the-art Polycom RPX (Real Presence Experience) “telepresence” facilities at its Qatar campus and on the main campus in Washington, D.C. These include 16 foot video screens that create a “true-to- life” interaction between classrooms. Georgetown jointly runs one or two “bi-local” classes per semester with an instructor from one of the campuses and students from both. This allows the Qatar campus to expand its curriculum with electives not offered by faculty in Qatar. It also increases the visibility of the Georgetown University School of Foreign Service in Qatar with students and faculty on the main campus. Moreover, students on both campuses meet regularly through the RPX room (outside of the formal classroom) for dialogue about relations between the US and the Middle East.

Weill Cornell Medical College in Qatar (WCMC–Q) has also made considerable use of teleclasses because of a shortage of faculty to teach some of the very specialized material required in medical education. Cornell originally agreed with Qatar Foundation that it would provide the exact same curriculum as in New York City. The New York City main campus dean Antonio Gotto reported that “the [Qatar Foundation] said ‘we’ll pay for it. You do it exactly as you would in New York’” (Bollag 2006, 6). Live teleconferencing has helped to achieve this goal of curriculum parity. Before the introduction of teleclasses, students were instructed by a mixture of Qatar campus faculty and taped lectures from New York City faculty.

Each lecture hall at WCMC–Q is “equipped with an integrated system of electronic teaching tools controlled from the lectern, and audio response system and laptop connectivity for students. Three rear projectors allow for simultaneous use of a variety of resources. Facilities include advanced communications and A/V solutions, Internet access, and provision for CD, VCR and DVD presentations” (WCMC–Q, 2009). One course in the Premedical program, Introductory Psychology (Psych 101), is taught in a blended learning approach by Dr. James Maas from Ithaca, New York, via teleconference, while a Teaching Assistant in Qatar assists with student questions and concerns, and proctors exams.

Teleclasses have proved to be more cost efficient than constantly flying over

³¹ Web-Based Learning in Qatar and the GCC States Alan S. Weber
<http://www12.georgetown.edu/sfs/qatar/cirs/AlanWeberCIRSOccasionalPaper2010.pdf>

medical experts from the main campus in New York to teach small specialized tutorials to small groups of students (Weber 2010).

Carnegie Mellon University in Qatar (CMU-Q) in Education City makes similar use of teleclasses. At CMU-Q, Dr. Benjamin Reilly developed a history course titled "Inward Odyssey" which integrates e-learning into the course theme of Christian and Muslim travel literature. American students at the Pittsburgh main campus and Gulf students at the Qatar campus of Carnegie Mellon University confront each other much in the same way as travelers to other cultures encountered new peoples.

CMU-Q, established in 2004, offers the Bachelor of Arts degree in computer science and therefore has been actively involved in all aspects of e-learning, including teleclasses, development of educational computer software, and electronic outreach to developing nations. For example, undergraduate Noura Mohammed El-Moughny and Professor M. Bernadine Dias have been developing an electronic adaptive Braille writing tutor for blind Arabic speakers (2008). CMU-Q's Tech Bridge World organization founded by Professor Dias is involved in a number of international technology transfer projects involving e-learning, specifically the Education e-village. E-village will make on-line course materials, syllabi, and reading lists for CMU-Q's courses such as "Technology for Developing Communities," "Technology and Global Development," and "Understanding and Challenging the Images of Computing" available on the Internet to partners in Ghana, Zambia, the Cook Islands, China, and Micronesia.

CMU-Q's recently introduced program called innovative Student Technology Experience (iSTEP) allows students to apply existing computer technologies to solve unique small-scale community problems. The 2009 projects in Tanzania include "developing a mobile phone application for use by social workers to track information on services provided to AIDS orphans and vulnerable children, creating and evaluating culturally-relevant educational technology and games for children's literacy and enhancing and evaluating a low-cost Braille writing tutor for visually-impaired students" (Tech Bridge World 2009).

Texas A&M University at Qatar (TAMU-Q) students have 24/7 access to the Office of Academic Supplemental Instruction Services (OASIS) comprised of an Advanced Writing Center which hosts a variety of e-learning resources for English language learning, including grammar podcasts, handouts, and a dedicated language lab for computer-assisted English language practice. E-learning is also one of the delivery methods which will be used for advanced petrochemical training and management at TAMU-Q under a recent agreement with Schlumberger, Inc., through the Network of Excellence in Training (NExT). The NExT network, now numbering over 250 virtual faculty, offers "subject-specific modules, e-learning (computer-based training), and blended learning (tutorial-led and computer-based training)...and multilingual Web-based learning in exploration and production fundamentals" (Texas A&M Engineering News 2008).

In April 2009, Tech Bridge World organized the 3rd International Conference on Information and Communication Technologies for Development (ICTD 2009) in conjunction with ictQatar. Bill Gates (chairman of Microsoft Corporation, and co-chairman of the Bill and Melinda Gates Foundation) and Carlos A. Primo Braga (director of Economic Policy and Debt in the Poverty Reduction and Economic Management (PREM) Network at The World Bank) spoke at this meeting.

Qatar's technical college, **College of the North Atlantic-Qatar** (CNA-Q), has been heavily involved with e-learning training, promotion, and research by sponsoring the annual ICT in Education Conference in 2008 and 2009, co-sponsored by ictQatar.

In the next few years, several of Qatar's major medical institutions will begin operations, including the Sidra Medical and Research Center (Qatar Robotic Surgery Center). These facilities include extensive plans for innovative use of e-learning and related technologies. The Sidra Medical and Research Center will be one of the largest, most complicated, and capital-intensive health projects ever undertaken in the Gulf.

When Sidra hospital opened in 2012, all employees will be experienced users of web-based applications. The hospital will boast an advanced Electronic Medical Record (EMR) system.

Qatar also benefits indirectly from the Carnegie Mellon OLI programme in that it has a strategic partnership with Carnegie Mellon via The Qatar Foundation.

11. Lessons learnt³²

Several education scholars and international reports have argued that there is a mismatch between technical and vocational education in Qatar, and both national economic demands and the aspirations of Qatari youth. From 1977 to 2001, over 70% of secondary and 73% of university graduates in Qatar studied literature and related fields, which could lead to lucrative public sector employment. Addressing this situation obviously involves educational policy, but e-learning may play a small role in making learning in general more attractive, and more useful and targeted for Qatari youth, particularly since any activity involving technology will have a perceived higher status among younger learners.

Two very real barriers to e-learning adoption that ictQatar has identified, that e-learning itself can probably not solve (although education about ICT and e-learning may make an impact), include lack of inter-ministerial cooperation and collaboration, and technophobia.

³² Web-Based Learning in Qatar and the GCC States Alan S. Weber
<http://www12.georgetown.edu/sfs/qatar/cirs/AlanWeberCIRSOccasionalPaper2010.pdf>

In Qatari society, the issue of inappropriate content on the Internet is a huge barrier to wholesale adoption of the technology. Some parents resist children's Internet use, and a wide technological divide exists between children and their parents.

11.1 General lessons

E-learning can address some of the education, training, and labor market challenges that crop up consistently in international and national reports and discussions of the Qatari education system, large expatriate work forces, lack of coordination between education and private business needs, over reliance of nationals on public sector employment, and large youth unemployment, particularly in Qatar. But obviously, education policy, structuring, organization, and pedagogical philosophies must all be re-examined in an attempt to address fully these concerns³³.

11.2 Notable practices

The National Committee for Internet Safety (NCIS) goal is to help create a safer online environment in Qatar by raising awareness about Internet safety issues and improving online safety education. The NCIS was formed with the support of the Supreme Council of Information and Communication Technology (ictQATAR) and includes representatives from the government, key industries, law enforcement, academia, non-governmental organizations, parents and local youth³⁴.

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