

EDUCATION AND TRAINING
SECTOR STRATEGY 2011 - 2016
EXECUTIVE SUMMARY



Preface...

Preface

The significance with which the State of Qatar regards education is self explanatory, as the State of Qatar's Permanent Constitution establishes education as a basic foundation for the progress of society, and the state shall seek to ensure, foster and endeavor to spread it.

This significance is also emphasized by Qatar National Vision 2030, which considers human development as its corner stone, as no development and no progress can be accomplished without advanced high quality educational and training services that are aligned with the labor market needs and the aspirations and abilities of each individual.

To realize the goals of our National Vision, it was imperative to develop the Education and Training Sector Strategy (ETSS) which identifies ways to build advanced educational systems, provides distinctive educational and training opportunities to citizens, offers diverse areas to realize their full potential, and prepares them for success in a changing world that is witnessing a considerable increase in complex technical requirements, in addition to enabling them to participate in international competitiveness.

The ETSS is based on scientific and systematic principles that balance reality with the desired goals. The ETSS outlines outcomes, projects and programs that will facilitate the steady progress toward fulfilling the vision of our wise leadership.

It is imperative that we all commit ourselves to the ambitious goals of this Strategy, and exert the best efforts to make it a reality.



Sheikha Hind Bint Hamad Al Thani

Foreword...

Foreword

The Qatar National Vision 2030 has been derived from its inception by political will under a wise leadership and with strong field provisions. Stemming from the steady progress achieved by the State of Qatar based on the large financial returns from the oil and gas industry, from the great strides made by the State towards building an educational system that benefited from the best international practices and their relevance to national needs, to the Education and Training Sector Strategy 2011 - 2016, the emphasis is on the right of all citizens to access to educational and training opportunities that are consistent with their abilities and interests, and better prepare them for participation in the workforce, and promote their values and their affiliation.

The continuation of these successes will depend increasingly on the ability of the State of Qatar to compete at the international level in the knowledge-based economy, and to diversify its economy in the future. Thus, the education and training of Qataris will be extremely important to continue to progress and prosperity. The State of Qatar will benefit from all the advantages of education in both the economic and social domains.

Hence, we set off in the SEC to work in a harmonious and homogeneous manner with our partners in the development of the pillars of Qatar Vision 2030 within the Education and Training Sector Strategy, which includes 21 outcomes and 31 projects. We seek through the implementation of the ETSS the preparation of citizens of the State of Qatar to become part of the driving economic power in the state, and the provision of education, which makes them personally integrated and active participants in the community building in addition to achieving justice and building a culture that supports innovation in science, medicine and industry. The comprehensiveness of the strategy for the training sector is one of the key advantages of this strategy, which will receive due and desired interest for the comprehensiveness and continuity to prepare human resources in order to provide opportunities for the permanent development of the human resource.

We did not follow traditional ways in the preparation of operational plans. We and our key partners, namely Qatar Foundation for Education, Science and Community Development and the University of Qatar, have the ambition, the will and the skilled national competencies in addition to elements derived from our hard work during the last period in the development of education, which qualified us to work in the implementation of the well thought out plans. These follow the principle of performance and achievement measurement using tools that are characterized by transparency, continuity and parallel to the methodology of the implementation processes to enable the Supreme Education Council and partners to assess and evaluate the programs and projects included in the strategy through the use of high technology and good technological applications in this area.

All those associated with the Supreme Education Council will work with national and professional commitment, integrated partnerships with government and civil society institutions, and all Qatari individuals to achieve high-quality application levels in the implementation of the Education and Training Sector Strategy 2011-2016.

Saad bin Ibrahim Al-Mahmoud
Minister of Education and Higher Education
Secretary-General of the Supreme Education Council





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Summary

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...

Summary

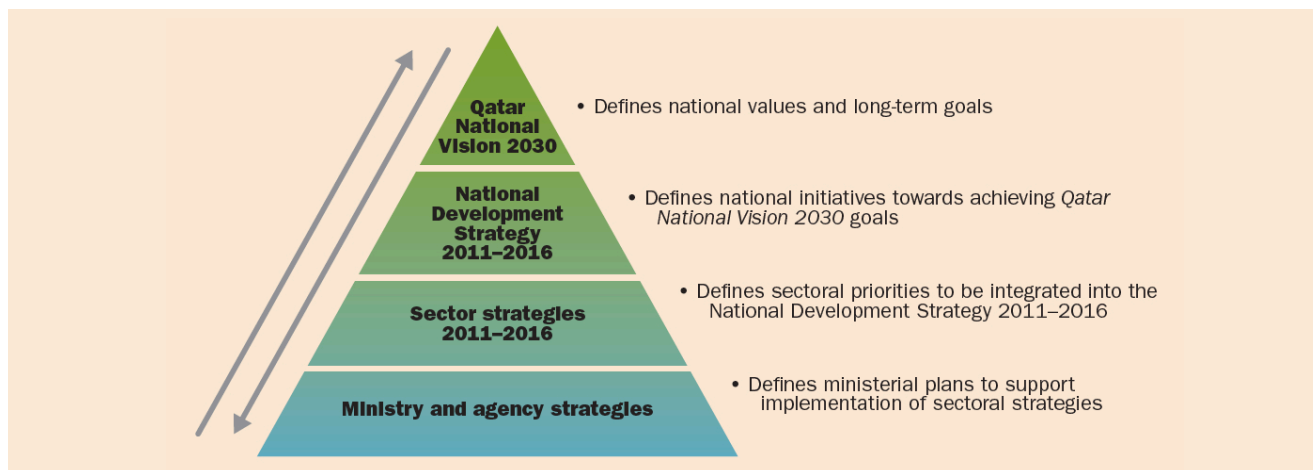
Introduction

In 2008, following several years of comprehensive planning and analysis, 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 and illuminates pathways and choices that will define Qatari society over the next two decades. Its overarching aim is bold and ambitious: 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, analyses and consultations with the nation's public, private, and civil sectors 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 connections between the QNV 2030, the NDS, and the sectors are depicted in Figure 1, which is reproduced from the Strategy document.

Figure 1. Connections between Qatar National Vision 2030 and national, sector and ministry strategies



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 diversify away from its reliance on natural gas and oil and will become a competitor in the global knowledge economy. To succeed in 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.



Current Educational Reforms

Qatar has made significant progress in creating a world-class education system. Just in the past decade, Qatar has implemented a range of sweeping reforms, many made through the Education for a New Era effort, which was begun with the establishment of the Supreme Education Council (SEC) in 2002. The Education for a New Era reform transformed all government schools into autonomous independent schools to encourage innovation and improve student outcomes, while simultaneously holding them accountable. As it developed, the reform also addressed teacher and leadership quality by establishing professional standards and professional licenses for teachers based on these standards. Curriculum standards that address both academic and non-academic dimensions of learning were also established under the reform, to ensure the promotion of well-rounded citizens. Therefore also changed teaching strategies to be more student-centered, using modern information and communication technology, and conducting scientific research.

Qatar's higher education sector has also undergone significant development over the past decade. Qatar University began an ambitious reform in 2003 to solidify its institutional autonomy, pursue accreditation of its programs, and raise academic standards. Qatar Foundation's Education City has continued to expand and progress with the establishment of branch campuses of top international universities. Qatar has also developed institutions to improve access to higher education, including the College of the North Atlantic-Qatar and the new Community College of Qatar. As a result of these initiatives, Qatar is now a hub of innovative and cutting-edge higher education and research in the Gulf Region.

Need for Continued Improvement

Qatar has made major improvements in the Education and Training Sector, yet there is still a need for continued development. An analysis of the current situation of the education system shows that Qatar still faces challenges affecting both supply and demand for education and training and linkage to the labor market. The challenges include: (1) the underachievement of Qatari students in math, science and English language at all levels; (2) weaknesses in educational administration and the preparation and development of teachers;

(3) insufficient alignment between the national curriculum and the needs of the labor market; (4) low standards in some private schools; and (5) inadequate offerings of multiple pathways beyond the secondary level, resulting in limited opportunities for Qataris to continue their education after secondary school and throughout their lives.

Qatar can use its reform successes as a springboard for making further improvements in education and training. The development of this strategy provides an opportunity to review sector-wide progress systematically in each area, to ensure that the plans take advantage of international best practice and meet the needs of Qatari society and the aspirations of Qatar National Vision 2030.

Desired Qualities for Qatar's Education and Training System

The education and training initiatives of the National Development Strategy 2011-2012 build on current education reforms and are based on an extensive stakeholder consultation and current analysis of achievements and challenges facing the Education and Training Sector.

To prepare its population for the new knowledge-based economy, the NDS emphasizes the need for Qatar to integrate its entire education and training system –spanning early childhood education to higher education and other post-secondary training– much more thoroughly. Key to this integration will be the notion of life-long learning. The system will need to encourage and accommodate individuals to engage in education and to take courses and training throughout their lifetimes so that they can keep their skills current and competitive. Lifetime learning will need to involve the country's three major education elements: The strategies and plans laid out in the NDS encourage general education (kindergarten through grade 12), higher education, and technical and vocational education and training. Even though each stage of education has its own identity, organization, and mission, all three stages will need to orchestrate and coordinate their operations to a far greater degree than in the past and will need work much more closely with employers to anticipate and respond to emerging and evolving demands for labor.

For the same reasons, the NDS notes that Qatar's education and training system will need to make further improvements in quality,





in equity and inclusiveness, and in portability and mobility. High-quality teachers, trainers, and lecturers, and high-quality curricula are critical to the success of all of the other outcomes. So too are high-quality information and communication technology systems and management arrangements that govern institutions. The challenge is to achieve and sustain quality measures consistently across all of the general education, higher education, and technical and vocational stages. Pursued correctly, quality measures can improve student performance, particularly in critical knowledge areas for Qatar such as science, mathematics, and foreign languages.

Equity and inclusiveness also play a critical part in an education system designed to prepare students for the knowledge economy. Equity and inclusiveness are features that all education and training elements need to exhibit to encourage life-long learning, and any Qatari should have the ability to obtain and improve his or her skills, regardless of socioeconomic status, gender, age, or career stage.

Qatar's education and training must also be portable. Students and trainees should expect to have their coursework and credentials recognized by other educational institutions, employers, public and private certification boards, and other bodies. Students and life-long learners should be able to enter or re-enter the education system with minimal friction, and to move between school and workplace with few hindrances. This adaptability will allow for flexible careers and educational pathways, unconstrained by life stage or other factors.

Development of the Education and Training Sector Strategic Plan (ETSSP)

The lead responsibility for realizing the education and training components of the NDS has been assigned to the Supreme Education Council (SEC). The SEC, through its Strategy Management Team, developed the ETSSP through a consultation process involving its institutes and other major participants in the sector such as Qatar University and the Qatar Foundation for Education, Science, and Community Development, so as to maximize synergy and minimize artificial institutional boundaries. The results of this consultation process have been codified into 21 strategic plans and corresponding action plans to achieve the 21 key education- and training-related outcomes identified in the NDS. Figure 2 offers a broad overview of the achievements that the strategy must accomplish.

Figure 2. Overview of Strategy Achievements



The ETS strategic plans cover five programs that together provide a comprehensive, integrated strategy for the sector, emphasizing the alignment of K-12 education to vocational and higher education and labor force needs. The five programs are: 1) Core and Cross-Cutting Education and Training; 2) Improving K-12 General Education; 3) Improving Higher Education; 4) Strengthening Technical and Vocational Education and Training; and 5) Enhancing Scientific Research. In the following sections we describe each program, corresponding outcomes, key performance indicators and projects, followed by project timelines.

A key to the success of the implementation of the strategy will be the continuing participation and commitment of partners and stakeholders across the sector, as well as the involvement of stakeholders from other sectors and the broader society.

Training

“In order to develop an education system that equips citizens to achieve their aspirations and to meet the needs of Qatar’s society and global market.”



Core and Cross-Cutting Education and Training

In order to develop an education system that equips citizens to achieve their aspirations and to meet the needs of Qatar's society and global market, it is essential to ensure cohesion across all education phases. Tackling the shortcomings of each education phase separately is not likely to optimally improve the performance of the Education and Training Sector. The Core and Cross-Cutting Education and Training program is aligned with the National Development Strategy 2011-2016. The program addresses structures and mechanisms that are common to all phases of the education system and that need to be put in place to allow for integration and continuity among the education phases. Such structures and mechanisms include the formulation of an integrated 10-year strategic plan across all phases that promote quality, efficiency and equity, the development of an education and training professional system for all professionals across all education phases to improve their effectiveness, the establishment of comprehensive database that takes into account sectoral links and promotes transparency, and the development of a National Qualifications Frameworks to align all phases of education and labor market needs (see Table 1 below).

Table 1. Core and Cross-Cutting Education Training Program

Program: Core and Cross-Cutting Education Training		
Outcome	Key Performance Indicators and (NDS Targets)	Project
1. Developed 10-year comprehensive strategic plan for Education and Training Sector that promotes quality, efficiency and inclusiveness	<ul style="list-style-type: none"> 10-year strategic plan (2011-2022) is developed and implemented for all education phases developed through engaging all key stakeholders from public and private sectors as well as the local community 2011-16 strategy is regularly evaluated and monitored 	1.1. Develop an integrated, nationally aligned strategy for 2011-2016 for implementation and monitoring which promotes optimal quality, efficiency and inclusiveness of the Education and Training Sector
		1.2. Develop an integrated strategic plan for the years 2017-2022 to enhance quality, efficiency and inclusiveness in the Education and Training Sector in line with the provisions of Qatar Vision 2030
2. Reliable, up-to-date and valid evidence to inform decision making in the Education and Training Sector made available	<ul style="list-style-type: none"> Comprehensive education and training information and planning database are available online Framework for monitoring and evaluation is developed using the database that takes into account cross-sectoral links Indicator guidelines are available for decision making Strategic plan is developed for 2017-2021 	2.1. Develop a comprehensive information database that fully supports the decision making and information needs of ETS stakeholders

Program: Core and Cross-Cutting Education Training

Outcome	Key Performance Indicators and (NDS Targets)	Project
<p>3. Strengthened and integrated Qatari national values, Arab, and Islamic Culture throughout all aspects of work within the Education and Training Sector</p>	<ul style="list-style-type: none"> • Diverse education and training programs that instill national, Arab, and Islamic values in Qatari students are designed and launched • Awareness is increased among Qatari students of national, Arab, and Islamic values • Awareness is increased among Qatari students of heritage and identity • Student behavior in places of learning and community is consistent with Qatari, Arabic, and Islamic values • Student participation in civil society and organization is increased • Student involvement in cultural and heritage events is increased 	<p>3.1. Activate and diversify programs that enrich and strengthen Qatari national values and Arab and Islamic Culture throughout Education and Training in partnership with civil society</p>
<p>4. Development, approval, and adoption of a Professional Development/Performance Management Plan for all Professionals and Institutions in the Education and Training Sector</p>	<ul style="list-style-type: none"> • Workforce and institutional development plan and performance management strategy is formulated and implemented for education and training professionals and institutions • Professional capacity of instructional, leadership, and other staff in K-12 education is enhanced • Institutional capacity to cater to the diverse needs of students is strengthened • Specialized workforce development plan for TVET, Higher Education, and AESN staff is formulated and implemented 	<p>4.1. Develop, approve, and adopt a Professional Development/Performance Management Plan for all Professionals and Institutions in the Education and Training Sector</p>
<p>5. Achievement of best-in-class use of ICT throughout education and training</p>	<ul style="list-style-type: none"> • A strategy of integrated use of ICT across the ETS is developed and implemented 	<p>5.1. Establish a sector-wide approach to the effective use of ICT in student education, teacher and trainer education, and education administration, including 3 sub-projects:</p> <p>5.1a The development and introduction of a Learning Management System (LMS)</p> <p>5.1b E-content development</p> <p>5.1c. Design and provision of electronic packages for students</p>

Program: Core and Cross-Cutting Education Training

Outcome	Key Performance Indicators and (NDS Targets)	Project
6. Development and implementation of a comprehensive approach to enhancing learners' motivation	<ul style="list-style-type: none"> • A comprehensive communication plan to increase student motivation has been prepared and implemented • Attendance rates have increased • Dropout rates have decreased • Graduation rates have increased • Higher education enrollment rates have increased (direct academic progress) • TVET higher education rates have increased • Labor market satisfaction has increased • Parents satisfaction has increased 	6.1. Develop and implement a comprehensive sector-wide plan to promote student motivation, including the development of a communications plan, targeting parents and children across the different dimensions of education and training
7. Comprehensive and accessible career guidance at all levels of education and training offered	<ul style="list-style-type: none"> • Performance of academic and vocational guidance in school is enhanced • TVET options are incorporated into career counseling and dropout rates are reduced • Improved career and counseling programs result in better perceptions of TVET (Cross reference Outcome 20) 	7.1. Establish accessible career and academic counseling serving all educational sectors in Qatar and promote participation in counseling services
8. A National Qualifications Framework (NQF) and occupational standards to align (tertiary) education and training with labor market needs and enable alternative pathways to tertiary education developed and implemented	<ul style="list-style-type: none"> • Standards for a National Qualifications Framework are defined and implemented with all its stakeholders • System of occupational standards for relevant professions is developed and implemented • National Qualifications Authority is established • Students are provided diverse post-secondary education pathways to meet labor market needs • Increase the gross tertiary 	8.1. Develop and initiate the implementation of a National Qualifications Framework so as to determine and build alternative pathways through the education system and between the educational and work phases of lives.
		8.2. Establish an occupational standards oversight body, and through this body to develop and implement occupational standards for relevant professions in the State of Qatar
		8.3. Based on the NQF, identify deficiencies in pathways to tertiary education so to allow creation of new pathways



Improving K-12

“Improving and increasing access to K-12 education is essential in Qatar.”

Improving K-12 General Education

Improving and increasing access to K-12 education is essential in Qatar. Education helps prepare citizens to meet their goals in life. Education develops Qatari's knowledge, as well as their social and work skills so they become active members in society and in the increasingly diversified economy. The program for improving K-12 education system is aligned with the National Development Strategy 2011-2016. The program is designed to achieve six outcomes pertaining to K-12 general education (see Table 2 below). Specifically, the program is designed to provide universal access to high quality public and private schools to all Qatari children, including children with special needs. Qatar's K-12 system will adopt a national curriculum and network of programs that 1) emphasize the teaching of language, math and science skills; 2) are aligned with curriculum and programs at higher education institutions and vocational schools; and 3) develop skills that students can use throughout their careers. The K-12 system also will encourage parents and community members to participate in their children's schools and educational development and provide opportunities for adults to continue their basic education.

Table 2. Improving K-12 General Education Program

Program: Improving K-12 General Education		
Outcome	Key Performance Indicators and (NDS Targets)	Project
9. Universal access to high-quality public and private K-12 education provided	<ul style="list-style-type: none"> • Enrollment exceeds 95% • School capacity expands in line with enrollment growth • Higher quality school facilities • Plans for improving education quality in private schools are completed • Retention and dropouts rates are close to zero • Performance levels meet international standards • Number of outstanding schools increases 	9.1. Establish education policies that include mandatory kindergarten and mandatory secondary schooling, so as to achieve an adjusted net enrollment ratio (NER) of over 95% throughout K-12 schooling
		9.2. Develop an infrastructure plan to ensure there is sufficient capacity for all children in order to start provision
		9.3. Enhance the institutional capacity to improve the quality of education in private schools
		9.4. Provide incentives to, and attract, outstanding schools to establish branch campuses in Qatar through the Outstanding Schools Program

Program: Improving K-12 General Education

Outcome	Key Performance Indicators and (NDS Targets)	Project
<p>10. K-12 National curriculum aligned with higher education, TVET, work skills and individual student needs developed</p>	<ul style="list-style-type: none"> • More students approach or meet national standards in math, science and English • High school graduation rates increase • Fewer students directed to foundation/non-credit bearing programs/courses • Increase Qatari enrollment in higher education • Reduced rate of dropouts from higher education institutions • Higher enrollment ratio in higher education for male Qataris • Greater student skills in knowledge-based economy • Greater student employability 	<p>10.1. Align and coordinate K-12, Higher education, and TVET programs and services and establish feedback mechanisms)</p> <hr/> <p>10.2. Improve the breadth and quality of the national curriculum, learning resources and programs to address the diverse learning needs of all students including the educational and working skills needed to enable them to fulfill their potential</p>
<p>11. Developed physical education curriculum, including guidelines for students with disabilities, and certification for physical education teachers</p>	<p>Curriculum support materials, including physical education guidelines for students with disabilities, are developed</p> <p>All physical education teachers are certified</p>	<p>11.1. This outcome is achieved through projects 4.1 and 10.2</p>
<p>12. Appropriate education options for children with special needs provided</p>	<ul style="list-style-type: none"> • 80% of schools are equipped with infrastructure for students with disabilities • Greater capacity–better facilities and more specialists–to service students with special learning needs • Students are able to (1) fulfill their potential as life-long learners; (2) be active members of the community; and (3) be eligible for employment 	<p>12.1. Improve the specialized education system ensuring high-quality education for students with additional education support needs (AESN)</p>

Program: Improving K-12 General Education		
Outcome	Key Performance Indicators and (NDS Targets)	Project
13. Options provided during schooling to expose students to future work environments and increasing awareness of required skills	<ul style="list-style-type: none"> Put in place initiatives to foster student exposure to work environments 	13.1. Design and implement initiatives to enhance the students' overview of the work environment and to strengthen the link between schools and the labor market
14. Participation of community and parents in K-12 education improved	<ul style="list-style-type: none"> Increased communication between schools and stakeholders Increased parental satisfaction with and involvement in schools Information on schools and students is provided to parents Greater stakeholder participation in setting and implementing education and training sector strategies 	14.1. Enhance community and parent involvement in schools
		14.2. Enhance parents' ability to be involved in decisions about their children's education
		14.3. Increase stakeholder awareness of, and participation in, the development of education and training sector policies and strategies
15. A broad range of basic education programs for adults established	<ul style="list-style-type: none"> Increased capacity and variety of adult education institutions More adults receiving basic education Lower adult illiteracy and innumeracy 	15.1. Improve and expand the basic education programs for adults, including basic numeracy and literacy, and provide equivalency pathways



Improving

“Core missions of higher education are to optimize student talents and capabilities.”

Improving Higher Education

Core missions of higher education are to optimize student talents and capabilities, develop student knowledge and skills that are compatible with labor market needs, and support the needs and aspirations of the society. This program is designed to improve the capability of higher education institutions in preparing students to participate in knowledge economy. Specifically, this program is designed to align current higher education programs and course offerings to workforce needs, and increase Qatari enrollment in knowledge economy courses. The program also emphasizes the public service mission of higher education institutions.

Table 3. Improving Higher Education Program

Program: Improving Higher Education		
Outcome	Key Performance Indicators and (NDS Targets)	Project
16. Students prepared for the knowledge-based economy through quality higher education program	<ul style="list-style-type: none"> • Increase the proportion of students graduating with qualifications needed in the knowledge economy to 70% • Based on baseline studies, establish targets for: • Fewer Higher Education dropouts • Increased Knowledge-Economy qualified students • Increasing Qataris enrollment in Higher Education • Increased Gross Enrollment ratio for Male Qatari students attending Higher Education • Increased labor market and families' satisfaction • Increased knowledge-based economy employability 	16.1. Increase the proportion of students graduating from quality assured higher education programs linked to the needs of the knowledge-based economy
17. Needs and aspirations of Qatar supported through increased interaction with Higher Education Institutions	<ul style="list-style-type: none"> • Community interaction with Higher Education Institutions is increased 	17.1. Enhance interaction between society and Higher Education Institutions

A young man with dark, curly hair is shown in profile, looking down at an open book. He is wearing a white long-sleeved shirt. The book has Arabic text on its pages. The background is dark, and the lighting is focused on the man and the book. A teal-colored rectangular box is overlaid on the left side of the image, containing the text 'TVET'.

TVET

“TVET institutions and programs prepare students directly for professional activities.”

Strengthening Technical and Vocational Education and Training (TVET)

TVET institutions and programs prepare students directly for professional activities. Because of their role it is critical that these institutions provide high quality programs and course offerings as well as different pathways to employment in order to meet labor market needs. The program for improving TVET is aligned with the National Development Strategy 2011-2016. This program is designed to achieve three outcomes pertaining vocational education (see Table 4 below). The program will elevate the reputation of vocational institutions so that these institutions are seen by the public as a center piece for professional careers and consequently increase Qatari enrollment. The program will also develop a regulatory framework to align technical education and vocational training with the education sector and labor market needs and establish quality assurance mechanisms. Further, the program will develop differentiated pathways to extend education opportunities to students who cannot directly enter universities, while simultaneously meet labor market needs.

Table 4. Strengthening Technical and Vocational Education and Training (TVET) Program

Program: Strengthening Technical and Vocational Education and Training (TVET)		
Outcome	Key Performance Indicators and (NDS Targets)	Project
18. A framework and plan for the development of high-quality, appropriate and well-managed Technical and Vocational Education and Training (TVET) offerings, including an organizational model that is able to support development of the capabilities of the TVET System, defined and agreed on	<ul style="list-style-type: none"> An organizational model for TVET is developed and implemented A quality assurance system for TVET institutions and programs is defined and implemented A national TVET framework and plan is defined and agreed 	18.1 Establish either an overall supervisory body for TVET or separate supervisory bodies for (i) core functions & labor market coordination; and (ii) quality assurance
		18.2 Define and implement quality assurance systems relating to TVET offerings, including the accreditation of programs and the licensing and accreditation of institutions
19. Technical and Vocational Education and Training (TVET) programs and outputs aligned with the needs of Qatari society and the labor market developed	<ul style="list-style-type: none"> A plan to align TVET programs with the needs of the labor market is developed and implemented An industry partnership model accepted by all stakeholders is developed First industry partnership is established according to model Second industry partnership is established 	19.1 Develop differentiated TVET programs catering to labor market needs
		19.2 Establish a model for developing partnerships between the public and private sector to develop further TVET offerings and to set up some first partnerships according to this model
20. Improve the perception of Technical and Vocational Education and Training (TVET) programs in order to increase their enrollment and better prepare the entire Qatari population for the labor force	Information and perceptions about TVET programs is improved [Cross reference: Outcome 7, career guidance; and Outcome 13, future work environment]	20.1. Increase the awareness of, and participation in, TVET programs



Enhancing Scientific Research

“Higher education institutions have a mission to conduct scientific research for producing knowledge.”

Enhancing Scientific Research

Higher education institutions have a mission to conduct scientific research for producing knowledge. Qatar has recently invested considerable resources in research and development. An outstanding infrastructure is in place for scientific research to draw potential researchers and build partnerships with universities and businesses. This program is designed to help use these resources effectively by developing a national strategy to identify key priority areas for scientific research.

Table 5. Enhancing Scientific Research Program

Program: Enhancing Scientific Research		
Outcome	Key Performance Indicators and (NDS Targets)	Project
21. Enhanced productivity and effectiveness of the scientific research system	<ul style="list-style-type: none"> A national strategy defining priority areas for scientific research and development is developed The number of scientific research publications and patents is increased 	21.1. Develop a national strategy and plan to define key priority areas for scientific research and development in Qatar