

Seventh Pillar: Education & Training

Overview of Current Situation

The belief that social justice is a central right for citizens renders proper education, which liberates intellectual stagnation and expands horizons, an integral part of the central rights for citizens.

The **Constitution of 2014, Article [19]**, states that education is compulsory until the completion of secondary stage or its equivalent. An allocation of not less than 4% of the GDP for spending on State educational institutions should be increased annually to global levels. Article 21 necessitates that an additional 2% of GDP should be allocated for university education, also to be increased annually to global levels.

As for the institutional framework, there exist more than **47 thousand schools** and more than **450 thousand classrooms**, whose capacity is more than **18 million students**. In addition, there are about **6 thousand private schools**, serving **1.6 million students**, representing about 9% of total enrolled students.

There are 11 sections of specialized industrial and commercial education and each one of them is divided into different divisions. Commercial education includes a General Division, one for Legal Affairs, for Purchases and Warehouses, and for Insurance. Technical education includes secondary schools for hospitality that comprise several divisions such as Internal Supervision and Touristic Services. Moreover, vocational schools for hospitality include Production and Service, Internal Supervision, and Public Service divisions. Technical agricultural secondary schools include animal and poultry production, crop production, food and bakery industries, land reclamation, agricultural mechanization, fish processing, and production technology.

As for higher education, Egypt has seen significant quantitative and qualitative developments regarding the programs introduced at its institutions. One important program is Distance Education, which is available in two forms: partial and complete. The partial form is called hybrid or blended education, offering face-to-face interaction along with distance education. The complete form of Distance Education is fully based on distance learning and has witnessed significant development in the Egyptian Market.

Education saw efforts that aimed to apply decentralization. The competent ministries adopted initiatives aiming to enhance the opportunities for social participation; they performed financial operations at the local level in the fields of school nutrition and simple maintenance. These initiatives were further accompanied by capacity building efforts that are exerted at the various administrative levels. However, these efforts, in spite of being highly significant, still face a variety of obstacles.

The education system in Egypt, at the various levels, faces a number of challenges, which will be described in detail. However, they could be summarized in the challenges that are relating to the availability of educational services. Availability of education is strongly linked with the need to obtain the required finance from the public budget of the State or through social participation. The reduction of the density rate of students in classes, especially in the primary stage, requires more than LE 15 billion.

As well, there is a need to plan for the increase in the number of students that will be the result of the current population growth. Moreover, the improvement of the quality of education requires allocation of additional resources and is linked with the human element that relies on the educational process.

Developed and developing countries strongly focus on "learning," not "education," and use up-to-date technological means to develop various educational instruments. Egypt is still far below the level of such developments. Moreover, technical education and vocational training are not given much interest due to cultural legacies for which the time has come to change in order to be able to provide suitable job opportunities for the graduates of such type of education and promote their social levels. Moreover, university education requires much development in order to cope with the needs of the job market and produce graduates capable of facing competition nationally and internationally.

The education system is heavily burdened in the course of achieving sustainable development targets that are sought by this strategy. Development of any economic or service sector is strongly linked with the human element. The United Nations properly considers that a separate target should be set for education, namely, the fourth target. Please find below a description of the strategic view and targets of education, the performance measurement indicators, the most significant challenges that face such targets, and the most significant programs aiming to implement this strategy.

Strategic Vision for Education to 2030

A high quality education and training system should be available to all, without discrimination, within an efficient, just, sustainable, and flexible institutional framework. It should provide the necessary skills to students and trainees to think creatively, and empower them technically and technologically. It should contribute to the development of a proud, creative, responsible, and competitive citizen who accepts diversity and differences, and is proud of his country's history, and who is eager to build its future and able to compete with regional and international entities

This strategic view is applied to the three types of education: general and technical education (or pre-university education) and higher education. Nevertheless, the strategic targets, performance measurement indicators, and assisting programs for each type of education could vary. Therefore, we shall describe the strategic targets, indicators, and programs for each type of education (general, technical, and university education) separately.

The institutional framework of pre-university education places both general and technical education under the umbrella of the Ministry of Education, but the strategic targets,

performance measurement indicators, and programs that aim to promote technical education are separate from those of general and university education.

Technical education and vocational training are given particular significance due to the major role they perform in qualifying a large number of young people and providing them with skills and capabilities allowing them to meet the needs of the job market for highly-educated, well-trained, and greatly-skilled laborers who are able to deal with up-to-date technology. The development of technical education and vocational training allows such young people to seize appropriate job opportunities both in Egypt and abroad, thus raising their income level. Please find below the strategic targets, performance measurement indicators, and most significant programs that cope with the strategic vision of education at the primary, technical, and higher or university levels.

The vision and strategic objectives for Education and Training conforms to the fourth goal of the SDGs proposed by the United Nations aspiring to “Ensure inclusive and equitable quality education and promote life-long learning opportunities for all.”¹ The various objectives of the Fourth Target do conform to the strategic targets and performance measurement indicators of education. These objectives are planned to make education available to all people, to consider the various availability levels, to guarantee education to persons with disabilities, and to focus on technical education and vocational training in a manner qualifying young people for the job market. These objectives also conform to the national and UN targets with respect to qualifying the educators.

Public Elementary Education (Pre-university)

Strategic Objectives for Public Elementary Education to 2030

The strategic vision addresses both the supply and demand sides, and aims at empowering governance and its role in planning and monitoring. Demand for educational services is expected to surge when citizens feel the actual value added by quality education; that complies with global standards, at the level of the teacher, curricula, and other media that enables competitiveness.

The supply side addresses the availability of educational services for all without discrimination, including males and females, those from rural and urban areas, people with special needs, and distinguished and talented students. The Ministry of Education and its different subsidiaries must be able to plan, follow-up, and implement programs and policies without conflict of interests. In this framework three strategic objectives determining the strategic trend of pre-university education until **2030**, have been set.

¹ <https://sustainabledevelopment.un.org/?menu=1300>

Objective	Definition
<p>Improving the Educational System's Quality to Conform with International Systems</p>	<ul style="list-style-type: none"> • Activate quality and accreditation rules that conform to global standards • Empower the learner with the requirements and skills of the 21st Century • Provide comprehensive and sustainable professional development for teachers • Develop curricula to cope with global developments and information updates, taking into consideration the age of the learner and his biological and psychological needs, so that curricula are integrated and contribute to building up personality • Developing the organizational structure of the ministry, educational directorates, departments, and schools to improve educational services • Reach effective technological techniques in presenting and sharing knowledge among students and teachers • Provide and support solid learning infrastructure (laboratories, libraries, Internet access, facilities for practicing activities, and others) • Developing scientific and subject-specific evaluation and assessment techniques while, focusing on comprehensive evaluation (from knowledge, skills, and psychological aspects) instead of evaluating information acquisition only
<p>Availing Education for All without Discrimination</p>	<ul style="list-style-type: none"> • Providing educational needs necessary for each phase, taking into consideration the disparities in needs at the local level (educational directorates and departments) • Eliminating dropouts at different educational phases • Providing a supportive environment to integrate those with minor disabilities into pre-university schools and improving the quality of special education for learners suffering from severe or multiple disability • Improving the quality of schools equipped for those with severe and multiple disabilities • Providing talented and distinguished learners with a high-quality education with regard to advanced knowledge and skills • Providing a distinguished educational service addressing unprivileged and most needy areas
<p>Enhancing Competitiveness of the Educational Systems and its Outputs</p>	<ul style="list-style-type: none"> • Improving educational indicators in global competitiveness reports • Activating the dynamic relationships between educational outputs and labor market requirements • Improving science, mathematics, communication skills, and technology learning, to become globally competitive • Providing solid infrastructure at schools (laboratories, libraries, playgrounds, and other facilities) to provide equal educational opportunities for all

The **First Objective** is entirely responsible for educational system quality, including application of global accreditation and quality standards via local accreditation of schools by the National Authority for Education Quality Assurance and Accreditation, requiring modification of local accreditation rules to comply with global standards.

The **Second Objective** is responsible for providing high-quality educational services for all students, including provision of adequate classrooms in rural and urban areas for males and females and for all classes of society. This objective also aims at integrating people with minor disabilities into schools and providing necessities for them and for talented and distinguished learners who need a supportive environment.

The **Third Objective** is related to competitiveness tied to quality and availability of education in Egypt compared with other countries. This implies continuous enhancement of educational indicators in global reports, such as global competitiveness and human development reports. These reports compare Egypt with other countries to determine progress opportunities and extract lessons learned.

Key Performance Indicators for Public Elementary Education to 2030

Key performance indicators (KPIs) include the already available indicators at the level of inputs, outputs, and strategic results. These indicators are expected to be revised periodically by the Ministry of Education to evaluate the educational performance levels from all aspects. Current values have been determined and target values for the years **2020** and **2030** have been set for the chosen KPIs. In addition, suggested new indicators are included for which the necessary assessment framework will be set in cooperation with the concerned parties as follows:

Quantitative Indicators

S. N	Indicator Category	Indicator	Definition	Current Status	2020 Target	2030 Target
1	Strategic Results	Percentage of accredited pre-university educational institutions	A flexible indicator that takes into consideration accreditation renewal of already accredited educational institutions	4.60% (1)	20%	60%
2		Illiteracy rate (15-35 years old)	Percentage of illiterate population (15-35 years old)	28% (1)	7% (absolute zero)	
3		Egypt's rank in primary education quality index	Measures the quality of elementary education in Egypt, compared with other countries according to global competitiveness index.	141/144 Result: 2.1 (2)	≤80	≤30

S. N	Indicator Category	Indicator	Definition	Current Status	2020 Target	2030 Target
4		Egypt's rank in TIMSS test results	A series of international exams in science and mathematics for evaluating and comparing students' knowledge worldwide	Science: 41/48 Mathematics 38/48 (3)	30	20
5		Egypt's rank in PIRLS studies	Measures the level of Arabic literacy (native language) and compares results to other countries.	To be determined later after ratification by Ministry of Education and setting objectives		
6		Percentage of school drop-out under 18 years old	Percentage of dropped out students from total enrolment	6% (4)*	2%	1%
7		Average number of students per classroom (student/classroom)	Measures the quality of educational environment via average number of students per classroom in different governorates at different educational phases**	42 students/classroom (1)	38 students/classroom	35 students/classroom
8	Outputs	Number of equipped schools for talented and outstanding students	Indicates providing necessities for talented and distinguished students; and honoring them during different educational phases	Sports: 65 Academic: 3 (1)	Sports: 70 Academic: 5	Sports: 75 Academic: 12
9		Public spending on pre-university education per student	Measures the public real spending on students in comparison to other countries' achieved and targeted levels****	\$340 (5)	Targets are set in consistency with economic pillar.	
10	Inputs	Percent pre-school enrollment rate	Measures the percentage of children enrolled at nursery schools	31.3%	47%	80%
11		Share of spending on pre-university education in GDP	The ratio of the current expenditures and investments to GDP	3% (1)	5%	8%

(1) Database of the National Authority for Education Quality Assurance and Accreditation, website of the Authority, 2014.

(2) The World Economic Forum, Global Competitiveness Report. 2013

(3) <http://nces.ed.gov/timss/>

(4) <http://data.worldbank.org/>

(5) Website of Ministry of Investment, Annual Report, 2013

*Dropout percentage in elementary stage (0.56%), while in preparatory phase (approx. 4.7%) for 2014/2015.

**Dealing with this Indicator should be performed, cautiously, as the average number of students per classroom differs from one governorate to another, from one educational department to another and from one phase to another. Therefore, it reflect the educational process quality all over the Republic, however, this should be evaluated at the local level and on samples chosen from schools and governorates.

***There are 65 schools (309 classrooms) for those talented in sports and 3 schools (45 classrooms) for the academically talented. The ratio of talented to total population within compulsory education phase is unknown.

****It does not indicate the absolute development of education quality. Therefore, another indicator should be added for measuring the efficiency of expenditures on education.

Suggested New Indicators*

S.N	Indicator Category	Indicator	Definition	Measurement Mechanism
1	Outputs	Percentage of teachers with practicing license	Measures the professional efficiency of teachers with practicing license, which is renewed periodically based on training and previous experience	Number of teachers applying for a license and number of license holders
2		Percentage of students passing national examinations in Science, Mathematics, Arabic Language, and English as a Second Language	Measures teachers' efficiency and outcomes of educational system through a random sample of students representing different governorates in rural and urban areas	Passing national annual exams by assessment and examinations committee as an independent entity and based on universal standards in Science, Mathematics, Arabic Language, and English as a Second Language and establishing a mechanism for evaluating examination results and analyzing them to determine the required developments in teaching and learning systems
3		Percentage of schools with proper educational technology	Measures efficiency of technological infrastructure at schools; including computers, technological devices, digital media, learning tools, and connectivity to world wide web**	This indicator is measured by calculating all educational institutions applying for accreditation, to identify the capability of institutions and to set a timetable for developing institutions that are not yet accredited
4		Percentage of schools	Measures the sincere care to	Analyzing the number of

S.N	Indicator Category	Indicator	Definition	Measurement Mechanism
		with integration requirements	people with disabilities by evaluating the extent of equipping school building, teachers and specialists, and developing curricula	students with disabilities, then defining the standards of integration and calculating the number of schools abiding to such standards
5	Inputs	Percentage of curricula that conforms with global standards	Measures the compliance of curricula (that are not culturally loaded) with global standards by measuring the percentage of curricula prepared in accordance with such standards	Supervision and curricula development authorities follow-up on the number of developed curricula to the total number of curricula, to set a mechanism for identifying the parts that require further development

*Other indicators can be introduced, including unemployment rates among the educated and the level of society's satisfaction from educational outputs, to benchmark competitiveness. In addition, providing education for all without discrimination can be measured through the percentage of children outside the educational system and number of under privileged areas.

**The standard limit for using technology at schools (e.g. 10 computers, 5 data show projectors, Internet access, etc.) will be set in accordance to the strategic plan of the Ministry of Education.

Challenges of Public Elementary Education²

The challenges of pre-university education are divided into **three sets**, as follows:

The first set is known for its great impact and relative flexibility to control. Therefore, it becomes first priority; and includes:

- **Decrease in the number of teachers relative to the number of students** and absence of distribution standards, as the educational system suffers from deficiencies in distributing teachers among different governorates according to specialization, which affects the quality of education.
- **Unspecified period or deadline for accreditation**, which discourages schools from applying for accreditation.
- **Lack of trust between society and the educational system** due to the deficiency of quality in educational services and the mismatch between education, on the one hand, and requirements of life and the labor market on the other.
- **The digital illiteracy of most teachers** is one of the most important bottlenecks hindering the efficient integration of technology to facilitate the educational process and increasing its competitiveness.

² The Ministry of Education is aware of such challenges and exerts its efforts to face them, gradually, through educational development strategies along with short- and long-term plans.

- **Lack of detailed databases and the impact on supporting decision making.** This disintegrated system for data collection from within the educational sector obstructs reaching some categories of society.

The second set of challenges is characterized by a relatively limited impact and ease to control them, including:

- **Deficiency of training program for teachers.** There is no annual plan for training different specializations and different levels.
- **Diminishing role of civil society and the private sector in the educational process,** including establishing schools and providing necessary resources, thus increasing the burden on the Ministry of Education for planning, and follow-up processes.
- **Deficiency of evaluation, monitoring and incentives systems** and lack of an integrated results-based monitoring and assessment framework despite, the presence of several departments for follow-up and assessment. Those departments suffer from a lack of coordination and integration due to a deficient organizational structure to determine the obligations and responsibilities at different administrative levels. In addition, the disconnect between the current assessment and incentives systems discourages coping with development.
- **Limited number of classrooms and deficiency in student distribution.** The reasons for the high student density are insufficient classrooms and **more than 42 students** per classroom. In addition, the distributive inefficiency is demonstrated in the elevated student density in some governorates (more than **55** students per classroom) and the lower density in others (**15** students per classroom).
- **Absence of supervision over curricula and development regulations** due to the absence of an entity competent for supervising curricula and ensuring continuous updates and development to cope with global standards. This in turn has resulted in the disintegration of curricula.
- **Poor curricula and delay in updating and integrating them.** Some curricula suffer stagnation and lags behind modern educational trends that links it with knowledge and the economy. These curricula do not give opportunities for creativity, innovation, and critical thinking, and do not cope with life's requirements. Hence, radical development is needed for ensuring integration.
- **Readiness of schools to be accredited (financial and human requirements).** The lack of financial resources and trained and qualified personnel hinders the ability to applying quality standards confirming the importance of supporting schools in both aspects.
- **Limited ability of the Quality Assurance Authority to perform its role in accreditation,** due to the scarcity of financial resources and efficient personnel responsible for: accrediting schools and ensuring abiding to modern accreditation and

quality standards, as well as continuously updating such standards to ensure conformity with global standards.

- **Limited ability of the Professional Academy for Teachers in licensing**, due to the limited human and financial resources available to the Academy to perform its functions regarding granting licenses after comprehensive assessment and continuously developing the prerequisites for the professional license through the provision of pre-licensing training.
- **Infeasibility of accreditation (economic and educational)**, which requires an incentive system to encourage schools to apply for accreditation. Economic incentives are largely financial, while educational incentives include programs and certificates of recognition.
- **Limited numbers of trained psychologists and social specialists**. In addition to its mandate in the educational process, the school also plays a major role in upbringing young people, which cannot be ignored. Children spend most of their time at school and face many factors that affect them socially and psychologically. Therefore, the absence of trained psychologists and social specialists is an important challenge, especially in cases when there are students with disabilities and special needs.
- **Limited educational means for the disabled** due to inefficiency in equipping schools to receive people with minor disabilities, including necessary educational means and resources, and specialized teachers.
- **Fragility of binding regulations for integrating students with minor disabilities** results in the difficulty in providing education for all.
- **Need for adequate authorities to equip and develop schools for quality**. The State exerts efforts to provide adequate authorities to apply developed quality standards and provide necessary training.
- **Absence of binding regulations for obtaining practicing license**. Educational legislation does not oblige teachers to obtain a professional license as a prerequisite for employment.
- **Absence of binding regulations to integrate nursery schooling into the elementary education phase**, as the compulsory stage for attending school starts from the age of **6 years**, which explains the decline in the admission rates for children in nursery schools.

The **third set of challenges** is of lower priority, but this does not indicate ignorance. These include:

- **Lack of financing and its resources**, as pre-university education relies largely on resources allocated from the State's General Budget. These resources are not adequate to fulfill all development needs. Though the constitution allocates **4%** from GDP, the actual percentage reached only **3% in 2014**. In addition, the financing structure is

unbalanced and needs amendments, as **wages constitute 89%** from the total educational budget, while the percentage allocated for investments and other commodities, services and expenses does not exceed **11%**.

- **Dependence of current quality systems on operations, ignoring output quality**, such as student density in classrooms or number of teachers relative to students, and ignoring output quality at the student's level, such as success rates.
- **Professional inefficiency of some teachers.** The educational system lacks highly qualified teachers, resulting in the phenomenon of private lessons.
- **Ignoring subsidizing unprivileged and poor areas** with regards to the provision of school expenses, school uniforms, and the need for incentives to compensate for income generated by child labor.
- **Inability of schools to engage students** and increased absence and dropout rates due to the unattractive educational environment, lack of student activities, density in classrooms, lack of efficient teachers, and lack of focus on student activities and sports.
- **Deterioration of school infrastructure**, which hinders creation of a supportive environment for students and frequently means technology is not integrated into the educational process.
- **High cost of modern education technology**, as the provision of technological learning tools necessary for educational processes such as computers and other electronics requires huge financial resources.
- **Limited number of centers competent for discovering and supporting talented and distinguished students**, due to insufficient financial and human resources and the fragile structure of the systems for discovering the talented student.
- **Cultural values and division of labor within rural families**, as poverty in some areas is a major reason for illiteracy and dropout, as children turn to labor to provide for their families. In religiously conservative areas there is also the prevalence of cultural values discouraging girls' education.
- **Unavailability of schools for all educational phases in poor and unprivileged areas.** Some areas do not have enough schools, and may lack schools for all educational phases, which increases dropout.
- **Need for radical change in the process of teachers' preparation and graduation.** Development of the college of education, and teachers preparation centers is the first step in the teacher preparation process, which requires a radical change in curricula, evaluation systems, and integration of psychology into curricula for preparing specialized teachers capable of increasing the value-added from education for students.

- **Lack of language practice activities.** Despite the fact that learning languages expands students' horizons, and the presence of Arabic as a mother language or a foreign language as a second language in the educational curricula, there is a lack of opportunities for practicing language, inducing language deficiency, especially in the elementary education phase.
- **Lack of participation in global tests.** Irregular participation in global tests such as PIRLS (Progress in International Reading Literacy Study) and TIMSS (Trends in International Mathematics and Science Study), hinders comparing Egypt to other countries.

Public Elementary Education Programs until 2030

Within the vision and strategic objectives of Education and Training, in addition to KPIs that have been set for measuring the extent of achievement and the preset educational development programs in the government program for the period 2016-2018, the most important chosen programs expected to contribute significantly in achieving such vision, objectives, and indicators are as follows:

Programs Related to Mechanisms of Execution

Adopt an investment strategy in education and develop new financing schemes at Ministry and school level

- **Program Description:** This program aims at providing financial resources necessary for the development the current school infrastructure, establishment of new high quality schools, and providing schools with the necessary resources to fill the financing gap of the public sector. The cost of this program is low and is expected to be completed by the beginning of 2020.

- **Key Elements:**

At the level of Ministry of Education:

- Amend the regulations of budget allocated for education in Egypt, ensuring an increase to at least **8% of GDP**. Restructure budget allocations, increasing the proportion allocated for investing in educational establishments and decreasing proportion allocated for wages. Set policies that facilitate and activate expansion in civil society and non-governmental institutions.
- Designing a comprehensive program to unify the efforts of the private sector in view of corporate social responsibility to finance and provide schools with modern educational technologies and to support accreditation.
- Set policies that encourage the private sector to finance the education sector and provide schools with suitable technologies and facilities necessary for enhancing educational performance.

- Set policies to that impose fees to be allocated for the education budget in the municipalities in order to support building schools within the municipalities in order to mainstream the concept of self-reliance in the municipalities.

At the school level:

- Set policies and mechanisms to activate the role of the board of trustees at schools or directorates, allowing it to manage financial resources, identify priorities of disbursement, and facilitate the community's contribution to financing renewal and maintenance of schools.
- Set guarantees for allocating proportions of long-term low-interest international loans and grants for school maintenance in order to decrease the burden incurred by the public sector.
- Remove obstacles faced by civil society in establishing schools and providing for its educational needs.

Develop Teachers' Professional and Technical Skills:

- **Program Description:** This program is responsible for development of professional and educational skills through setting evaluation and development systems responsible for qualifying and raising efficiency. The cost of this program is high and is expected to be completed by the beginning of 2025.
- **Key Elements:**
 - Develop programs to prepare teachers and qualify them to obtain professional licenses and ensure efficiency in the new cadre, while focusing on their technological qualifications to cope with the requirements of this era.
 - Set a monitoring mechanism and develop requirements for obtaining professional licenses while updating the license renewal mechanisms for current and new teachers through periodic examinations to ensure conformity with changes in the methods and contents.
 - Raise the efficiency of the Professional Academy for Teachers and develop it to include modifying regulations of wages and salaries and restructuring of the Academy and training of cadres.
 - Set a mechanism for connecting training centers in governorates with the Academy to ensure continuity of training and qualification.
 - Modify the role of technical guidance and application of the mechanisms necessary to ensure the efficiency of raising quality.

Develop a System for Equipping Schools for Accreditation:

- **Program Description:** This program aims at increasing the ratio of accredited schools through motivating them within the outer scope of the school as a whole or the internal

scope of teachers, managers, and students. The cost of this program is high and is expected to be completed by the beginning of 2025.

- **Key Elements:**

- Accelerate the issuance of a law that obliges schools to apply for accreditation during a specific period to ensure completion of all schools before starting the application of the developed curricula.
- Set a mechanism for updating quality standards that ensures a balance between the quality of operations and the quality of outputs, so that they include passing rates, dropouts, and classroom density.
- Establish branches for Quality Assurance and Accreditation Authorities and set policies to motivate the private sectors' contribution, to ensure coverage and accelerate implementation.
- Set a program encouraging schools to gain accreditation, including a program for recognition of accredited schools (e.g. granting the best school in the governorate a certificate of recognition).
- Set mechanisms and policies to link teachers' promotions to accreditation, thus motivating teachers and helping to achieve a school's quality standards.
- Set policies to improve the quality of outputs and operations through developing standards.
- Provide quality standards training programs for trainers and qualifying schools for accreditation, mandating the task of training on quality standards to local training centers, in additions to establishing assessment and quality centers in the universities.

Programs Related to Specific Topics

Application of Comprehensive Curricula Reform System:

- **Program Description:** This program intends to develop and ensure the integration of educational curricula over different educational stages in addition to providing required supervision for curricula quality development to conform to international standards. The cost of this program is low and is expected to be completed by the beginning of 2020.
- **Key Elements:**
 - Amend the Law of establishing the Curriculum Control Center and its implementing regulations, separating it from the Ministry of Education to become subordinate to the Supreme Education Council.
 - Design a national context for curricula that is integrated over all educational stages and conformed to international standards and requirements for professional life and the requirements of 21st Century. Create a mechanism to integrate technology with emphasis on scientific subjects such as mathematics and the sciences.

- Enact required legislation for applying a curriculum development program.
- Develop curriculum supervision mechanisms and development programs to ensure efficiency and quality.
- Develop a mechanism for promoting publishing houses to contribute to curricula and educational media enhancement.
- Develop a mechanism for expanding gender equality, such as including the roles of women in curricula, to orient students to ongoing developments, and activating the role of citizens in society.

Develop a Subsidy System for Poor Families:

- **Program Description:** This program intends to provide basic education for all social classes and raise awareness of the importance of education, which may increase enrollment and reduce the dropout rate that eventually results in illiteracy. The cost of this program is high and is expected to be completed by the beginning of 2020.
- **Key Elements:**
 - Develop a clear system that links the availability of education to the current and expected population growth rates to achieve efficiency in class organization and wider coverage.
 - Develop a system that encourages civil society to establish ‘second chance’ schools and illiteracy programs, as well as raising awareness about the importance of educating girls to activate the elements of attraction from outside the Ministry of Education, reducing the burdens accrued by the Ministry.
 - Develop a subsidy system for disadvantaged families, such as providing financial subsidization, meals at school, school uniforms, books, and stationary, and compensating families for the income lost as children leave work to attend school. Such subsidies would cease if the child drops out.
 - Create and activate databases to identify school ages of different social classes and access methodology.
 - Develop a communications system with different social classes, and raise awareness about the importance of education in general and female education in particular.
 - Impose harsher penalties for violating laws banning child labor before the age of basic education completion.

Develop the Pre-school System and Increase Enrollment at Nursery Stage

- **Program Description:** This program is concerned with nursery schooling as the first step to education enrolment through designing an integrated system including financing, policies, awareness, and retraining nursery teachers. The cost of this program is average and is expected to be completed by the beginning of 2020.

- **Key Elements:**

- Enact legislation to modify the compulsory years of basic education to include nursery schooling.
- Merge supervisory authorities competent for nursery schooling integration in one entity overseen by the Ministry of Education.
- Update policies to allocate a portion of the education subsidy to nursery schooling.
- Develop family awareness programs about the importance of nursery schooling, providing subsidies to disadvantaged families, providing meals for needy children, school uniforms, and health care.
- Develop a system for recreational activities (sporting, entertaining, and educational).
- Develop a mechanism to enhance the selection of teachers and training them about the kindergarten stage to ensure the quality of the educational process.
- Develop the nursery school curriculum, emphasizing the integration of psychology as a part of the requirements for teacher certification.
- Conduct periodic tests to evaluate the efficacy of teachers' psychological retraining.

Integrating Students with Minor Disabilities in Schools

- **Program Description:** This program aims at equality in education for mildly handicapped students, in addition to providing special techniques for dealing with them. The cost of this program is average and is expected to be completed by the beginning of 2020.

- **Key Elements:**

- Modernize information and communications technology for various disabilities to keep pace with the latest international developments.
- Set policies to allocate required funding for integration separate from the education budget, to ensure sustainability of integration and quality.
- Modify accreditation standards from the Quality Assurance Authority to include integration mechanisms as one of the prerequisites to ensure integration.
- Provide incentives for teachers and psychologists.
- Establish local, regional, and international partnerships to support integration and special education systems.

Distinguished and Talented Student Support Program

- **Program Description:** This program intends to draw attention to distinguished and talented students and provide them with a supportive environment. The cost of this program is average and implementation is expected to commence in 2020 and to be completed by 2025.

- **Key Elements:**

- Develop tools to discover talented and academically distinguished students to ensure they are provided with a supportive environment.
- Assign the sponsorship of distinguished students to a competent department at the Ministry of Education, while enhancing efficiency via training and rehabilitation.
- Provide training and a special cadre of teachers and special classes for distinguished students through a program that includes discovery, sponsorship, and financial subsidy.
- Enact legislations to accelerate the transition from one stage to another.
- Activate systems supporting talented and excellent students, such as a credit hours system.
- Develop exchange programs and scholarships for talented students at international schools inside and outside Egypt.
- Ensure ongoing coordination with the Ministry of Youth to develop an athletic union for schools, broadcasting matches to encourage students and discover talents.

Periodic Assessment of Students in Accordance with International Standards

- **Program Description:** This program intends to evaluate the quality of the entire educational process, including curricula, teachers, and the educational environment through evaluating the level of students. This program applies international tests such as PIRLS and TIMSS periodically on random student samples from different schools and governorates. The cost of this program is high and implementation is expected to commence in 2020 and to be completed by 2025.

- **Key Elements:**

- Set policies to apply TIMSS and PIRLS tests periodically.
- Specify the type and format of the required examinations in Arabic and English as second languages and science and mathematics (in addition to TIMSS and PIRLS). This should be done annually and the educational levels to be included into the examinations should be specified according to international standards.
- Develop a mechanism to evaluate examination results, through results collection and analysis to identify the required continuing developments in the education and learning systems.
- Develop a database and mechanism to select random student samples representing the population.
- Create an incentive system for the participating sample, such as publishing the results of the best school in every governorate to encourage schools to participate in the examinations.

- Provide training for teachers to promote professional and educational efficiencies to increase their ability in qualifying students for tests.

Within the same context, the Ministry of Education deems the inclusion of some elements that are not considered in the Sustainable Development Strategy for Education and Training. We recommend that a special program should be assigned to each of them in addition to the eight programs included in the education and training strategy. These elements are as follows::

- Necessity of maximizing the ethical and moral values of employees in the sector (teachers and others).
- Enhancing the practices of the educational community (students and employees) towards the environment, since the environmental dimension is one of the three main dimensions of sustainable development.
- Necessity of extending a complete and major program focusing on improving students' performance at all stages of pre-university education in the fields of science, mathematics, and technology, since such fields are the mainstay of future development.
- Necessity of reforming and developing the educational processes governing systems to achieve a committed and efficient educational community, able to cope with ongoing developments, assuming the balance between centralization and decentralization to support the principles of good governance.
- Necessity of taking social justice into consideration while distributing educational resources among the beneficiaries.
- Reforms at the level of the Ministry and the school have been emphasized, ignoring the role of directorates and educational administrations in reform and development processes, in spite of the essential role played by both in achieving the sector's strategic objectives.

Technical Education and Training

Strategic Objectives for Technical Education and Training to 2030

The strategic vision addresses both supply and demand sides, and aims at empowering governance and its role in planning and monitoring. Demand for technical education and training services is expected to surge when citizens feel the actual value-added from quality education that meets global standards, at the level of the teacher, the curricula, and other media that enables competitiveness.

On the supply side technical education and training services must be available for all without discrimination including males and females, rural and urban dwellers, people with special needs, and distinguished and talented students. The Ministry of Education and its different subsidiaries should be able to plan, follow-up, and implement programs and policies without conflict of

interests. In this framework three strategic objectives determining the strategic trend of technical education and training have been set.

Objective	Definition
Improving the Quality of the Technical Education and Training System to Conform with International Systems	<ul style="list-style-type: none"> • Activating accreditation and quality rules to conform with international standards • Providing the student and trainee with necessary skills to meet the requirements of the labor market • Comprehensive and sustainable professional development for teachers and trainers • Continuous development of educational and training programs • Developing integrated vocational and technical training systems to meet development plans and labor market requirements. • Enable the learner and the trainee to have the requirements and skills desired by the labor market.
Providing Education for All without Discrimination	<ul style="list-style-type: none"> • Providing attractive schools and training centers that increase enrollment and achieve discipline • Achieving effective integration of schools and training centers according to demographics and economic activities • Enhancing the social perception of vocational and technical education through effective community participation.
Enhancing Competitiveness of the Technical Education and Training Systems and its Outputs	<ul style="list-style-type: none"> • Activating the dynamic relationship between the educational system's outputs and labor market requirements • Enhancing Egypt's rank in global indices of technical education and training.

7th Pillar:
Education & Training

The **First Objective** is entirely responsible for the quality of the educational system, including application of global accreditation and quality standards via local accreditation of schools by the National Authority for Education Quality Assurance and Accreditation. This will require modifying local accreditation rules to comply with global standards in a way that coincides with the special nature of technical education and training.

The **Second Objective** is responsible for providing adequate classrooms and training centers in rural and urban areas, for males and females, and for all classes of society. This objective also includes providing attractive schools in a way that help achieve discipline.

The **Third Objective** is related to competitiveness tied to quality and availability of education as the higher objective is to have a graduate able to interact and compete in the local and external labor markets in order to enhance the dynamic relationship between the educational process and the labor market's requirements.

Key Performance Indicators for Technical Education and Training to 2030

Quantitative Indicators

S.N.	Indicator Category	Indicator	Definition	Current Status	2020 Target	2030 Target
1	Strategic Results	Percentage of students with outstanding performance enrolled in technical education (scored more than 85% at preparatory stage)	Measures the ability of technical education to attract the largest number of excellent students from the preparatory stage. This indicator reflects the social perception of technical education and vocational training as well as the demand for it	4% (1)	12%	20%
2		Percentage of technical education graduates working in their fields of specialization	Measures the ability of technical education graduates to work in the fields they specialized in, and helps in identifying labor market requirements as well as measuring the employment rates of technical education graduates	30%(1)	60%	80%
3		Egypt's rank in the World Bank's Index for Technical Education	Measures the international competitiveness of Egyptian technical education. A composite indicator that considers the suitability of both technical education and training for the country's economic strategy. It also accounts for the private sector's contribution to the educational process and sector's overall satisfaction with it.	Score: 2/4(2)	Score: 3/4	Score: 3/4
4	Outputs	Percentage of enrolled students in vocational training to the total enrolled students in technical education	Measures the availability of vocational training relative to overall technical education.	4%(1)	16%	30%

S.N.	Indicator Category	Indicator	Definition	Current Status	2020 Target	2030 Target
5		Number of technical education schools according to demographics and economic activities	Measures the distributive efficiency of technical education institutions based on demographics and economic activities.	1929 schools (2)	Identifying the appropriate distribution based on the characteristics of each governorate from geographic or demographic aspects	
6		Percentage of technical and vocational institutions based on partnerships with civil society	Measures the level of civil society's contribution to establish technical and vocational training institutions in line with quality standards. Thus, the indicator measures the extent of civil society's contribution to the overall educational process.	3%(1)	12%	20%
7		Average number of students per classroom	Measures the availability of technical education in an encouraging environment. The indicator also measures the quality of technical and vocational education provided for students by assessing the student density per class, which directly impacts the student's ability to concentrate.	38 students /class(1)	30 students /class	30 students /class

(1) Unpublished statistics of the technical educations sector- Ministry of Technical Education and Training 2014.

(2) The World Bank, the World Report SABER 2012.

(3) Strategic plan for pre-university education 2014.

Suggested New Indicators

S.N.	Indicator Category	Indicator	Reason	Measurement Mechanism
1	Strategic results	Average training hours per employee in each sector of the labor market	Measures the development and enhancement of the employee's capabilities by providing various training means without discrimination	Number of training hours provided to all employees from all sectors compared with the number of attendants

S.N.	Indicator Category	Indicator	Reason	Measurement Mechanism
2		Percentage of technical and vocational education graduates with professional licenses	Measures the competitiveness of technical and vocational education graduates by identifying the number of individuals with professional licenses	The number of fresh graduates applying for a professional license immediately after the completion of the educational stage
3		Private institutions and employers' level of satisfaction regarding the technical and vocational education of graduates	Measures the quality of technical and vocational education provided as well as the graduates' competitiveness through assessing the quality of services provided to employers that represent labor market	Opinions of private institutions and employers who previously worked with technical and vocational education graduates will be surveyed for measuring the effectiveness of technical and vocational education regarding the quality of provided services. Reports will be prepared with recommendations to continuously develop the educational process
4		Percentage of developed educational curricula and programs in line with the National Qualifications Framework of each sector	Measures the ratio of curricula and programs of technical and vocational education developed according to the National Qualifications Framework in each sector (industrial, agricultural, and other) relative to the total number of educational programs	Percentage of developed educational curricula and programs in line with the National Qualifications Framework in each sector through comparing such curricula and programs to the National Quality Standards and accrediting the conforming programs. Finally, a schedule for developing the non-conforming ones to be accredited will be set
5	Outputs	Percentage of training curricula and programs in line with the National Qualifications Framework of each sector	Measures the percentage of training curricula and programs developed according to the National Qualifications Framework to the total number of educational programs	Percentage of developed curricula and training programs in line with the National Qualifications Framework in each sector through comparing such curricula and programs to the National Quality Standards and accrediting the conforming program. Finally, a schedule for developing the non-

S.N.	Indicator Category	Indicator	Reason	Measurement Mechanism
				conforming ones to be accredited will be set
6		Percentage of technical education institutions accredited by the National Authority for Education Quality Assurance and Accreditation	Measures the progress achieved in regards to accrediting the largest number of technical education institutions by the Quality Assurance Authority	Through counting all the technical education institutions applying for accreditation, then assessing those institutions' eligibility to be accredited. In addition, a schedule for developing the non-accredited institutions to increase their percentage by time will be set.
7		Percentage of training centers accredited by competent authorities	Ensures the quality of provided training through measuring the progress achieved in regards to accrediting the largest number of technical training centers by the competent authorities	Through counting all the technical training centers applying for accreditation, then assessing those institutions' eligibility to be accredited. In addition, a schedule for developing the non-accredited institutions to increase their percentage by time will be set
8	Inputs	Percentage of teachers achieving more than 90% in teachers' comprehensive assessments	Measures the progress achieved in regards to increasing the percentage of teachers who got more than 90% in the teachers' comprehensive assessment	Through conducting a comprehensive assessment for all technical and vocational education teachers to identify those achieving more than 90% as well as setting up training programs for other teachers to increase such percentage by time ensuring the quality of technical and vocational education
9		Rate of providing equipment and tools per student	Measures the ability of the Ministry to provide the necessary equipment and tools for technical and vocational education students. This is a composite indicator for measuring required supplies including machines, raw materials, and other tools	Through measuring the amount of supplies, equipment, and raw materials utilized in all specializations per student and comparing that to the percentage of required tools for each specialization to ensure availability

S.N.	Indicator Category	Indicator	Reason	Measurement Mechanism
10		Rate of transition from one stage to another in technical and vocational education	Measures the student's transition rate from one stage to another, indicating the availability of attracting schools to achieve a low dropout rate	Through comparing the number of students progressing to a higher stage to the total number of students in prior stages

Challenges of Technical Education and Training

The challenges of technical education and training are divided into **three sets**.

The first set is known for its large impact and the relative flexibility to control. Therefore, it becomes first priority; and includes:

- **Scarcity of teachers in some specializations and their inefficient distribution.** There are not enough competent teachers, and there is an inefficient distribution of teachers when it comes to both specializations and geographical locations.
- **Overlooking laws obliging schools to seek accreditation during a specific period.** This reduces the number of schools applying for accreditation and diminishes the perceived importance of acquiring accreditation in the technical education and vocational training system.
- **Deterioration of the social perception of vocational training and technical education and work associated with such education.** It is essential to change the social perception of technical education from a channel to deal with the least successful students in public education to a key educational system that tackles unemployment and develops the economy.
- **Disparities in geographic and program specializations coverage,** due to the absence of a mechanism able to link specializations in technical education and training with geographic and qualitative distribution of industries. Geographical gaps have emerged in all governorates in terms of the industries covered by appropriate training schools. The absence of such a mechanism has resulted in a mismatch between the specializations needed, particularly for females in Upper Egypt.

The second set of challenges is secondary priority and is characterized by a relatively limited impact and ease in controlling them, including:

- **Inefficient assessment, monitoring, and incentives systems.** Poor implementation of such systems has resulted in the deterioration of the quality of technical education.
- **Necessity of integration between technical education, vocational training, and other educational forms.** Basic educational outputs are inputs for technical education,

and likewise; the outputs of technical education are inputs for higher education, in case technical education graduates advanced to the level of higher education.

- **Disparities in distribution of schools and training centers according to geographical and industrial requirements.** This is the outcome of the absence of a clear plan linking the geographical distribution of industries and their expected growth and a clear plan to develop appropriate schools and classes. This violates the concept of equal opportunity in education.
- **Poor, outdated, and disintegrated curricula,** which is present between industrial requirements and educational institution curricula regarding skills and information. This leaves the relevant beneficiaries on both sides dissatisfied with the current curricula.
- **Limited readiness of schools and training centers for accreditation.** To achieve the required standards of quality and be ready to apply for accreditation, schools and training centers should receive financial support that ensures they can provide resources such as classes, workshops, and training centers. Those financial resources would also help provide the required supplies such as equipment and materials. In addition to the financial resources, human requirements including trained and efficient teachers and trainers are needed.
- **Limited capabilities of the Quality Assurance Authority.** The Authority requires highly efficient staff and adequate financial resources to be able to fulfill its role when it comes to accrediting all technical education and vocational training schools according to the newly developed standards.
- **Absence of a unified national authority for accrediting qualifications and issuing licenses.** The government will establish a national authority for certification and accreditation and issuing licenses for technical and vocational education graduates to obtain professional licenses. The actual objective of enforcing issuing the license is to ensure that graduates' skills and competencies meet the requirements of the labor market and are able to support the national economy. Enforcing the license also provides a mechanism to facilitate the classification and ranking of the graduates in various degrees and levels that will reflect on their wages and salaries.
- **Low educational and economic return of accreditation.** The lack of financial and non-financial incentives for schools obtaining accreditation reduces the number of schools applying for it.
- **Absence of an entity responsible for accrediting the training centers.** No entity is currently responsible for accrediting training centers, while the National Authority for Quality Assurance and Accreditation of Education is only responsible for school accreditation.
- **Inefficient supervision over curricula and absence of binding regulations for curricula development.** This is one of the major causes of the impaired integration

between technical educational and vocational training curricula on one hand and the requirements of labor market on the other.

- **Absence of binding regulations for graduates to obtain licenses.** The government intends to issue laws requiring technical education and vocational training graduates to obtain professional licenses. In addition, the government shall monitor the system's ongoing implementation in order to make sure that it is applied by the employer and the graduates, provided that licenses are renewed to reflect the training they receive in a way that leads to an increase of the employee's wages and the incentives.

The third set of challenges is of lower priority, but this does not indicate lack of importance. These include:

- **Lack of adequate budget and its resources.** This results in the lack of available financial resources for the educational institutions as well as a shortage in required technical schools and training centers.
- **Mismatch between graduates' skills and labor market requirements.** Through earlier surveys, it has been shown that employers are not satisfied with the efficiency and competency level of employees who come out of the technical and vocational sector. This adds to deterioration of the social perception of technical and vocational education and reflects the urgent need for a radical change in this system.
- **Inadequacy of the current technical and vocational education quality assurance system.** No special standards are available in the National Authority for Quality Assurance and Accreditation regarding technical education and vocational training schools, while, in fact the schools differ in nature from the pre-university basic education schools.
- **Absence of a clear plan linking vocational education and training system outputs to labor market requirements.** This results in a mismatch between the technical education and training specializations and curricula on one hand and the labor market requirements. This may lead to the lack of balance between the number of vocational school graduates who are employees, technicians, and engineers on the one hand and the labor market's requirements on the other.
- **Professional inefficiency of some teachers.** Teachers in vocational schools lack professionalism in different specializations, especially in scientific subjects. Teachers are not receiving adequate training to keep up with modern and accelerated technological advancements.
- **Deteriorating infrastructure of most schools,** caused by the lack of financing has resulted in the decline of the infrastructure of most schools, which hinders providing a healthy environment capable of attracting students. This is a challenge that obstructs the schools development. The lack of adequate numbers of equipped classrooms leads to high classroom density and the increase in the ratio of students to teachers, in addition to

the unavailability of supporting environment for students in a way that increases the number of school dropouts.

- **Infeasibility of acquiring practicing license.** Some industries such as the ready-made garment and tourism industries pay low wages, reducing the economic feasibility of obtaining professional licenses due to the absence of actual added value.
- **Lack of necessary resources and increasing costs of technical and vocational education equipment.** Technical and vocational schools are in need of workshops and laboratories and require supplies such as equipment, machines, and raw materials. Providing such resources requires substantial funding.

Technical Education and Vocational Training Programs to 2030

In addition to the preset educational development programs in the government program for the period 2016-2018, the most important chosen programs expected to contribute significantly in achieving such vision, objectives, and indicators are as follows:

Programs Related to Mechanisms of Execution

Develop a mechanism for encouraging the private sectors' contribution to technical education development.

- **Program Description:** this program targets increasing the technical education student and trainee's share of total spending on education. It also targets providing highly-efficient, well-equipped schools through creating non-traditional resources for financing. This program is included within low-cost programs and its execution is expected to begin in 2015 and be complete by 2020.
- **Key Elements:**
 - Develop a mechanism for establishing mutual benefit partnerships with the private sector to increase investments. An example for such partnerships would be to agree with factories to provide the practical aspects of the curricula to students inside the factory. This, in return, would reduce the burdens of establishing workshops while, simultaneously, providing workforce for the factories.
 - Set policies to achieve earnings and profits covering the costs of the schools. An example for such policies would be The Productive School project which raises the income of teacher and student through providing services to the private sector.
 - Set motivational policies for the private sector to contribute to establishment of schools or to provide required resources for school equipment. Privately-owned companies could place such endeavors under the umbrella of corporate social responsibility. Such partnerships would provide mutual benefit for both parties.

Enhancing the quality of educational and training facilities

- **Program Description:** This program targets increasing the efficiency of educational and training facilities. This would be achieved through activating the quality system and setting approved quality standards through which such educational and training facilities would be accredited. This program is included within medium-cost programs and its execution is expected to begin in 2015 and be completed by 2020.
- **Key Elements:**
 - Develop the capabilities of the National Authority for Quality Assurance and Accreditation to accredit technical and vocational education institutions to enable it to achieve such tasks.
 - Allocate a designated authority responsible for accrediting training centers. Then, provide the authority with the required cadres, resources, and set of authorities to be able to accredit new training centers and renew accreditation.
 - Accelerate issuing a law that obliges technical education and training institutions to acquire accreditation within a limited time starting from the date of establishment.
 - Define the period of accreditation extension to ensure the quality of all technical education and training institutions as well as keeping them in alignment with international standards.
 - Develop national standards of assessment, quality, and accreditation considering the following:
 - Special nature of technical and vocational education schools relative to basic education schools.
 - Wide diversity of training centers and their variety in terms of content and sectors served.
 - International standards applicable to the Egyptian environment. Develop a system for the continuous development of the assessment and quality standards in light of international standard to ensure international competitiveness.
 - Establish a quality assurance department and define its roles in the light of the roles played by directorates, zones, and schools with the objectives of achieving broader school coverage as well as accelerating the implementation and qualifying the institutions. This should facilitate the accreditation process. In addition, the existence of such institution will enhance cooperation with the municipal training centers to provide the required trainings of high quality.
 - Design a program that provides incentives for institutions to apply for accreditation. Such a program should include financial and non-financial recognition for accredited institutions. The program should also tie the teachers' and trainers' promotions with the success of schools/training centers to acquire accreditation.

Professional Development Program for Teachers and Trainers

- **Program Description:** This program targets increasing the efficiency of teachers and trainers and developing one of the most important factors of technical and vocational education—the human factor. This should be achieved through enhancing the teachers' and trainers' skills as well as creating a comprehensive system for teacher assessment. This program is included within medium-cost programs and its execution is expected to begin in 2015 and be completed by 2020.
- **Key Elements:**
 - Create a mechanism to develop an evaluation and assessment systems for teachers and trainers that ensures their ongoing development and achieves equal accountabilities.
 - Develop tests based on a comprehensive assessment for teachers examining the teachers' educational and vocational capabilities and their expertise in their specializations.
 - Adopt legislation that ties the results of teacher and trainer assessments to their financial incentives and salaries. This should ensure establishing a promotion and reward system that encourages teachers' continuous development.
 - Develop a training system with the objective of raising the scientific and practical efficiency of teachers and trainers that takes their levels and specializations into consideration.
 - Send the scientific subject teachers to missions abroad for training and education as well as developing a system for observing their development. Training courses should also be designed to enable the returning teachers to transfer their acquired expertise to other teachers. Such a program is expected to result in achieving international standards and increase international competitiveness.

Attractive School Project

- **Program Description:** This program targets increasing the efficiency of technical and vocational education schools through developing those schools and ensure they are provided with required equipment and tools necessary for training and educating technical and vocational school students. This program is included within high-cost programs and its execution is expected to begin in 2020 and be completed by 2025.
- **Key Elements:**
 - Develop a system to manage resources and assets that ensures the ongoing maintenance and preservation of school assets as well as the best utilization of resources such as equipment, tools, and raw materials.
 - Develop a mechanism to attract and motivate students through providing training in relevant companies and industry. This could be achieved through executing

agreements with those private sector institutions to activate the association between educational outputs and labor market requirements. Another advantage for such agreements is that they provide opportunities for students to acquire practical experience and to apply the education gained in the technical schools to actual work that produces income.

- Develop a new system to increase sporting and cultural school activities, helping students to acquire 21st Century skills.
- Activate a comprehensive reform system for schools to provide a healthy educational environment for the student that includes:
 - o Restructuring school infrastructure
 - o Equipping schools and providing resources
 - o Establishing equipped classes and workshops.
- Providing a meal in the schools located in poor and disadvantaged areas as a tool for encouraging the attendance of students and easing their families' financial burdens.

Programs Related to Specific Topics

Raising Awareness and Enhancing Social Perception

- **Program Description:** This program aims at raising national awareness regarding the importance of technical and vocational education and its positive impact on the economic sector. The program should result in improving the social perception of the technical and vocational student. This program is included within medium-cost programs and its execution is expected to begin in 2020 and be completed by 2025.
- **Key Elements:**
 - Develop a national communication mechanism for enhancing the social perception of technical and vocational work. This strategy shall include:
 - o Integrated communication plan set with all media channels
 - o Social awareness plan highlighting success stories.
 - Allocate a dedicated governmental body that shall be responsible for raising awareness and implementing programs that help with enhancing the social perception for this kind of education. Such programs shall guarantee the achievement of the desired results and enhancement of the accountability principle.
 - Adopt policies that provide incentives for industry leaders and private sector organizations to finance meaningful media campaigns that aim to improve the social perception of the vocational worker through including such campaigns under the umbrella of corporate social responsibility. The participation of the private sector contributes to the achievement of credibility and demonstrates the real role of technical and vocational education in society.

An Efficient and Integrated Labor Market Information System

- **Program Description:** this program aims to link the needs of the labor market to the curricula of technical and vocational education through the establishment of a database for the Egyptian labor market. This program is included within medium-cost programs and its execution is expected to begin in 2015 and be completed by 2020.
- **Key Elements:**
 - Develop a mechanism to monitor industries in terms of fields, geographical distribution, human resources needs, and expected growth.
 - Develop a system for planning schools and training centers in terms of number and distribution based on economic growth and various industrial needs. The current institutions shall be included in this system and there is a possibility for transforming their current specialization to another; i.e. transforming a commercial technical institution to a hotel technical institution, aiming to achieve flexibility and efficiency.
 - Allocate an authority/unit to be liable for collecting the data related to industry, schools, labor market, and submission of reports to decision makers.
 - Develop a database within the governorates to facilitate information collection and use in the decision-making process.
 - Adopt policies that oblige the various bodies in the labor market to submit the required information at the specified time, so as to guarantee the integration and accuracy of data.

Develop and Activate the Egyptian National Qualifications Framework for Technical Education and Vocational Training

- **Program Description:** this program is designed to construct an integrated system, ensuring the linkage of vocational and technical education with labor market needs, in addition to the development of programs, training, and educational curricula in line with national objectives. This program is included within medium-cost programs and its execution is expected to begin in 2015 and be complete by 2020.
- **Key Elements:**
 - Accelerate the completion of the Egyptian National Qualifications Framework by the National Authority for Quality Assurance and Accreditation of Education in light of:
 - The economic vision and labor market requirements for technical education
 - Training needs in each sector
 - International models, taking into consideration the nature of the Egyptian environment
 - Develop educational and training programs based on the Egyptian National Qualifications Framework to ensure achieving integration between training and

technical education on the one hand and the requirements of the labor market on the other.

- Adopt legislation that enforces developing the training and educational programs based on the Egyptian National Qualifications Framework to ensure their quality.
- Develop a system that links professional standards and career progression in all sectors to the Egyptian National Qualifications Framework, so as to achieve quality and efficiency for the employees and the various sectors.
- Issue legislation that requires the employer and the trainee to abide by the standards and levels of national skill that is based on the Egyptian National Qualifications Framework in order to achieve quality and efficiency for employees and industry.

Establish an Academy with Specialized Faculties to Graduate Teachers Qualified for Technical Education and Vocational Training

- **Program Description:** this program aims at qualifying teacher specialized in their fields and acquainted with their specializations that are able to provide the students with real value. This program is included within high-cost programs and its execution is expected to begin in 2020 and be completed by 2025.
- **Key Elements:**
 - Develop an effective system to identify needed specializations in light of labor market requirements and their expected impact on technical education. This ensures providing qualified teachers that are knowledgeable in their fields and are able to maximize the value added to the students. This system should take into consideration the different specializations related to woman so as to promote the role of girls and women in the economy through, for example, the integration of the clothing industry and creation of other specializations for women.
 - Develop a system to identify the curricula and evaluation systems for each specialization based on international standards in accordance with the Egyptian environment. Moreover, an effective system for updating the curricula and evaluation systems should be put in place so as to achieve appropriate abilities in the teaching staff.
 - Adopt legislation required to integrate the specializations of training and technical education within the Faculties of Education or grant the bodies responsible for graduating teachers for technical education and training with the necessary legal authorities to create various specializations.

Professional Practicing License Program for Vocational and Technical Education Graduates

- **Program Description:** this program aims to oblige the graduates of vocational and technical education to obtain a professional license so as to enhance their efficiency, ensure their competency, and ensure that they meet the labor market's requirements.

This program also works on regulating the labor market itself, limiting the informal sector. This program is included within high-cost programs and its execution is expected to begin in 2020 and to be completed by 2025.

• **Key Elements:**

- Adopt required legislation to oblige the graduates of vocational and technical education to obtain a professional license. The legislation should specify the time period related to license renewal to ensure the vocational and technical employees' competitiveness
- Allocate a body to be responsible for providing licenses in various areas of vocational and technical education. The body should also be responsible for accrediting the vocational and technical education graduates.
- Develop systems to achieve continuous communication with the various syndicates in order to specify and update the standards related to obtaining licenses.
- Adopt required legislation to oblige employment entities to hire only applicants that have a professional license to practice the profession at the vocational and technical sector to ensure the quality of services provided to employment entities as well as providing an incentive to the graduates to apply for the license.
- Develop a system to provide training programs for the graduates and the employees, so as to help them acquire a professional license.

University or Higher Education

Strategic Objectives for Higher Education to 2030

The strategic vision addresses both the supply and demand sides, and aims to empower governance and its role in planning and monitoring. Demand for higher education services is expected to surge when citizens feel the actual value-added from quality education that complies with global standards, at the level of the teacher, the curricula, and other media that enables competitiveness. On the other hand, the supply side addresses the availability of higher education for all without discrimination, including males and females, rural and urban dwellers, taking into consideration geographic distribution. The Ministry of Higher Education and its different subsidiaries should plan, follow-up, and implement programs and policies without conflicts of interests. In this framework three strategic objectives determining the strategic trend of higher education to 2030 have been set forth.

Objective	Definition
Improving Educational System Quality to Conform with International Systems	<ul style="list-style-type: none"> • Activating quality and accreditation rules that conform to international standards.

	<ul style="list-style-type: none"> • Enabling the learner to acquire skills needed for the 21st Century. • Supporting and developing capabilities of faculty members and administrative staff. • Developing innovative and diverse academic programs and evaluation patterns. • Developing the organizational structure of the ministry and its institutions to achieve flexibility and quality of education. • Reaching the effective technological and electronic forms for presenting knowledge and scientific research, so as to be considered by the students, the teachers, and the individuals of the community.
Providing Education for All without Discrimination	<ul style="list-style-type: none"> • Providing educational opportunities at higher education institutions. • Developing the admissions systems and policies at the educational institutions.
Enhancing Competitiveness of the Educational Systems and its Outputs	<ul style="list-style-type: none"> • Improving competitiveness rank in international education reports • Activating a dynamic relationship between outputs of the education system and labor market requirements.

The **First Objective** is entirely responsible for the educational system’s quality, including application of global accreditation and quality standards via local accreditation of high education institutions by the National Authority for Education Quality Assurance and Accreditation. This objective is represented in having a student capable of innovation and creation, one that can keep pace with the labor market and create job opportunities to advance the economy to reach a sustainable up-to-date economy.

The **Second Objective** is responsible for providing high-quality educational services for all students, including the provision of adequate classrooms in rural and urban areas, for males and females, and for all classes of society.

The **Third Objective** covers increasing quality, accessibility, and competitiveness. This strategy aims at activating the dynamic relationship between the educational process and the labor market’s requirements through graduating students that are able to seize market opportunities and even create such opportunities in order to achieve sustainable economic development that is based on knowledge and innovation.

Key Performance Indicators for Higher Education

Quantitative Indicators

S.N.	Indicator Category	Indicator	Definition	Current Status	2020 Target	2030 Target
1	Strategic Results	Global competitiveness index (higher education and training)	Egypt's rank compared internationally based on elements, including enrollment rates and the quality of education.	Ranking 118/148 3.1 degree (1)	Ranking 75	Ranking 45
2		Unemployment rate among university graduates to total unemployed according to specialization (%)	Measures the gap between higher education outputs and labor market requirements.	35.1% (2)	30%	20%
3		Number of Egyptian universities listed among top 500 universities in the world (Shanghai Index)	Measures the Egyptian higher education capacity to respond to the increased global demand for higher education	One university(3)	3 universities	7 universities
4	Outputs	Growth rate of published scientific research in internationally reviewed scientific journals	Measures the increase in scientific research published in different fields internationally.	13.6%(3)	15%	20%
5		Percentage of higher education institutions accredited by the National Authority for Quality Assurance and Accreditation	Takes into consideration new institutions applying for accreditation in addition to the already accredited institutions.	7.50%(4)	30%	80%
6		Higher education enrollment rate (18-22 years old)	The ratio of the population aging from 18–22 enrolled in higher education	31%(2)	35%	45%

S.N.	Indicator Category	Indicator	Definition	Current Status	2020 Target	2030 Target
7		Percentage of faculty members with research scholarships from international universities	Measures the extent of teacher and faculty members development through research grants, whether foreign missions or joint supervision	0.2%(2) (Foreign Missions)	1%	3%
8		Percentage of foreign students to total students enrolled at Egyptian universities according to specialization	Reflects competitiveness and attractiveness of the Egyptian higher education system in various programs and specializations	2%(2)	3%	6%
9	Input	Public spending per student on higher education (per specialization)	Expresses the extent of prioritizing education by the government, since spending includes investment and salaries.	LE 7,600 per student (2012 average) (2)	* Targets will be set in accordance with the economic pillar and the Ministry of Higher Education; to identify the requirements of different specializations.	
10		Number of students per faculty member according to specialization	Measures the direct impact in student educational achievement, as well as the burdens borne by the faculty members	1:42 (Average) (2)	1:38 (Average)	1:35 (Average)*
11		Number of higher education institutions according to density, specialization, and geographical distribution	Measures the capacity of higher education through the number of universities and faculties available in different governorates and specializations (programs)	44 universities **(2)	50 universities	64 universities ***

(1) World Competitiveness Report

(2) General Framework of the Strategic Plan for Higher Education 2012-2013.

(3) Shanghai rank

(4) National Accreditation and Quality Assurance Authority, 2014

*Provided that the maximum limit shall be 1:60 for the theoretical specializations and 1:25 for the scientific specializations

** 23 governmental universities include 371 faculties and 21 private universities include 126 faculties.

*** 20 new public, private, and civil universities, 7 new electronic universities, and 200 new programs

Suggested New Indicators

S.N.	Indicator Category	Indicator	Definition	Measurement Mechanism
1	Outputs	Number of scholarships from international universities according to specialization.	Indicates the level of recognition of Egyptian universities and their competitive advantage. Most demanded specializations should be identified.	A mechanism to be developed for monitoring and collecting data about students studying abroad, and identifying the ratio of students who were granted scholarships by the government.

Challenges of Higher Education

Challenges are divided into three sets. **The first set** is known for its greater impact and its relative flexibility to control.

Therefore, our **first priority** includes:

- **Deficiencies in monitoring indicators and statistics about the labor market and education.** The absence of a mechanism for collecting information and data about the labor market, its growth rate, the various industries, and information about higher education in terms of annual graduation rates and the different fields of the employees, results in lack of information and systemic data and leads to inconsistencies in the statistics.
- **Absence of binding regulations for accreditation in a specified period.** The current legislative framework does not oblige higher education institutions to apply for accreditation. This leads to weakening the importance of accreditation in the vision of higher education institutions and does not deliver the correct message that higher education is a priority for the government, particularly within the framework of decentralization and the independence of the higher education institutions.
- **Weak capacity of current higher education institutions.** It is necessary to expand the capacity of the current higher education institutions and establish new ones in order to accommodate increasing enrollment rates while providing an encouraging and healthy environment for students.
- **Limited foreign language proficiency of some teachers and students.** This is an obstacle to the internationalization of higher education institutions, whether at the teacher or the student level. Consequently, this affects the rates of foreign students, the quality of scientific research, and the number of research papers published in peer-reviewed scientific journals.

The second set of challenges is characterized by a relatively limited impact and ease in controlling them. They include:

- **Weak assessment, follow-up, and incentives systems.** The current faculty evaluation system suffers from weakness and lack of clarity. Clear criteria and measurement indicators are required both at the level of operations, including the attendance rates of faculty members, and at the output level, such as student results. Moreover, the lack of integration between the results of teacher evaluations and their incentives does not motivate the faculty member to further development.
- **Diminishing role of civil society and the private sector in the educational process.** This has occurred despite the existence of some private higher education institutions and other non-profit institutions. The role of private and civil society should be expanded in respect to the establishment of higher education institutions and the development of joint academic programs and electronic universities, in order to achieve accessibility, the principle of equal opportunity, and reduce the burden borne by the State.
- **Absence of a clear policy for marketing scientific research results.** There is no policy or mechanism for marketing scientific research and its results, which is a challenge in maximizing the role of scientific research at society's level as a whole and within higher education institutions. Overlooking the importance of scientific research in different sectors and its significant role in boosting the quality of the educational process leads to low rates of published research in well-known international journals.
- **Academic grades are the only criterion for acceptance into the higher education system.** Admissions to higher education depends entirely on the results of the secondary stage examinations, which leads to graduate students who are not passionate about their faculty or specialization because the desires and skills of the students are not taken into consideration. Moreover, the current admissions system lead to a lack of efficiency in the educational process as a whole, emphasizing the student's test results as the only priority. This emphasis directs all the student's efforts into memorizing in order to achieve the highest marks, rather than understanding, analyzing, and thinking creatively, as well as participating in student activities.
- **Lack of integration between higher education institutions and the labor market.** In addition to the absence of a mechanism to collect information about the labor market and its needs and the insubstantial relationship between the curricula and the labor market, the absence of a national entity responsible for connecting the graduates of higher education institutions to industries reduces the links between higher education and the labor market.
- **Readiness of higher education institutions for accreditation.** Financial resources required for organizing higher education institutions should be provided, in addition to providing such institutions with the resources required to obtain accreditation. Teaching staff and trained faculty managers should also be recruited, so as to achieve the principles

of good governance and to increase the quality of higher education institutions, thus facilitating obtaining accreditation.

- **Limited capacity of the National Authority for Quality Assurance and Accreditation of Education to perform its role in accreditation.** The National Authority for Quality Assurance and Accreditation of Education needs financial resources and qualified staff in order to carry out its role in the accreditation process. There are many forms and several programs at higher education institutions, including universities, institutes, and faculties, that raise the need for specified standards for each one of them.
- **Absence of follow-up and communication policies with graduates.** There is no system to continuously communicate with graduates to identify the employment ratio, the challenges facing the graduates, and the turnover rates of employees, leading to a lack of accurate data.
- **Infeasibility of accreditation (economic and educational).** In order to stimulate higher education institutions to apply for accreditation there should be clear added value resulting from accreditation, as opposed to the current situation that lacks financial or educational return for higher education institutions to seek accreditation.
- **Weak incentives to motivate efficient human resources.** There is a need for a mechanism for selecting faculty members, including--but not solely depending on--standards that involve academic excellence, to raise the efficiency of faculty members. Incentives such as pay raises should also be provided to attract required competencies and skills.
- **Weakness of current research centers and dependency on faculty members.** The current research centers are characterized by their limited number and depend on faculty members. There is no clear system for managing or expanding the centers, nor for increasing their financing resources, achieving sustainability, or maximizing their benefit.
- **Poor supervision over educational curricula and inability to develop them.** Faculty members develop and set the curriculum, and given the independence of higher education institutions. Developing a supervisory role over the curriculum is necessary in order to guarantee the provision of high quality education at the student level in the governorates and in the different specializations.

The third set of challenges is of lower priority, but this does not indicate they should be ignored. These include:

- **Poor financing through one main source:** governmental funding. The State budget is the main resource for financing the different activities related to higher education in Egypt, whether in respect to higher education, postgraduate studies, or funding foreign missions. Despite increases in governmental funding, both inflation and enrollments have risen, leading to an insufficiency in this financing to expand the establishment of higher education institutions.

- **Limited graduate skills compared with labor market requirements.** The skills shown by graduates of higher education institutions in relation to the labor market's requirements are insufficient, as the result of the absence of ongoing revision of the curricula so as to keep pace with labor market needs. In addition, there is a lack of funding for student activities. This raises the need for training about the requirements of different job vacancies in various fields.
- **Declining ratio of research published in recognized international journals.** Scientific research relies on postgraduate studies as well as on the research centers. Lack of funding leads to the paucity of research published in well-known international journals.
- **Relative scarcity of available resources and inefficient use of those that are available.** The financial resources available to provide supplies and equipment to the higher education institutions including classrooms, workshops, laboratories, and hospitals are scarce. Those that are available are not best used. This results in either wasting resources or keeping them idle for example, through storing them instead of making them available for the students.
- **Outdated organizational structures of some educational institutions.** There is a need for structuring the different higher institutions governance systems and organizational entities, each of them according to its kind, rules, and regulations. In addition, clear mechanisms should be developed in order to achieve transparency, internal and external control through incentives, rewards, audit systems, and reviewing of documents.
- **High costs of establishing higher education institutions and providing required resources.** The cost of founding a higher education institute must include funds to cover costs of the establishment of workshops, laboratories, and research centers and hospitals for various specializations.

Higher Education Programs to 2030

Within the vision and strategic objectives of Education and Training, in addition to KPIs that have been set for measuring the extent of achievement, and in addition to the preset educational development programs in the government program for the period 2016-2018, the most important chosen programs expected to contribute significantly in achieving such vision, objectives, and indicators are as follows:

Programs Related to Execution Mechanisms:

Establishing higher education institutions in partnership with civil society and the private sector:

- **Program Description:** This program aims to ease the financial burden incurred by the government due to the high cost of the expansion of higher education institutions, whether through the establishment of new institutions or the expansion of current ones.

This program is included within medium-cost programs and its execution is expected to begin in 2015 and be completed by 2025.

- **Key Elements:**

- Specification of a body vested in communicating with the private sector and international entities, determining the needs required for expanding higher education institutions, in addition to the development of a national map to ensure the geographical distribution for the current institutions based on specialization.
- Development of a system to provide grants for excellent students at private universities as well as motivating private universities to accept such students through, for example, providing support required for these universities to obtain grants from donors in return for being accredited.
- Development of new programs such as credit hours systems in order to create funding opportunities, redistribute the financial support provided by the government, and ease the burden on the existing programs.
- Boosting the establishment of some Egyptian- international universities in some specializations that serve labor market such as the current Egyptian–Chinese cooperation.
- Expansion of electronic universities and promotion of distance learning systems in order to save the costs related to building and equipping classrooms, so as to achieve wider coverage.

Building distinctive teaching cadres at higher education institutions:

- **Program Description:** Higher education depends substantially on the teachers and professors since the work of faculty members at higher education institutions extends to include the development of curricula and specification of evaluation systems. Accordingly, the development of teaching staff becomes a key prerequisite for increasing the quality of higher education as a whole and its influence on the students. This program is included within high-cost programs and its execution is expected to begin in 2015 and be completed by 2020.

- **Key Elements:**

- Develop a new mechanism for selecting lecturers that includes the academic aspect, required skilled competences, and their experiences at various domains, instead of solely depending on their academic supremacy, to ensure the overall competency of the lecturers.
- Develop training system for lecturers to develop research capacities, teaching efficiency, and assessment mechanisms.

- Introduce a mechanism to integrate student feedback and evaluations regarding the faculty members into the Faculty Members Evaluation Systems, so as to maximize its influence on the students.
- Develop a system to increase the number of grants and faculty members exchange programs and activate international agreements in order to develop education and scientific research at the faculty level and in higher education as a whole. Develop a mechanism for evaluating the system's effectiveness.
- Develop a mechanism to accredit centers related to developing the skills of faculty members and managers internationally in order to enhance the efficiency of the faculty members.
- Restructure the current promotions system taking into account the evaluation systems and focus on scientific research.

Improving quality of higher education institutions:

- **Program Description:** This program aims to enhance decentralization of higher education through maximizing the ability of higher education institutions to achieve efficiency and commit to quality standards. This program is included within medium-cost programs and its execution is expected to begin in 2015 and be completed by 2020.
- **Key Elements:**
 - Enactment of a law that obliges higher education institutions to obtain accreditation within a specific period of time to ensure immediate compliance, and encourage higher education institutions to keep pace with quality standards. This law should stipulate the period required for renewing the accreditation.
 - Specify the required quality standards based on international standards in accordance with the Egyptian environment.
 - Develop an incentive programs to motivate higher education institutions to apply for accreditation such as recognition programs or incentives system—provided to faculty members and administrative management—linked to the accreditation of the institution, e.g. the provision of training courses of low price in return for the accreditation.
 - Specify a national entity accredited internationally to develop the skills and capabilities of administrators and administrative management in order to maximize efficiency in higher education institutions and optimization of resources, including human resources, as well as achieving quality standards, thereby increasing the institution's capacity to be independent and achieve decentralization.

Programs Related to Specific Topics:

Activate the role of Research Centers at Higher Education Institutions:

- **Program Description:** Scientific research indicates the student's ability to learn independently and the quality of education he has received. It also indicates the development level of faculty members. This program aims to maximize scientific research since it is seen as the path for continuous education and not limited only to educational stages. These centers form a link between theory and practice and are a channel that supports the economy due to the research it provides that contributes to the development of practical life. This program is included within high-cost programs and its execution is expected to begin in 2015 and be complete by 2020.
- **Key Elements:**
 - Provide financial support required for the establishment of research centers in all higher education institutions and to expand current research centers.
 - Develop incentive systems to stimulate higher education institutions to expand their research centers. For example, start recognition programs for the best research center in the governorate or the research center with the highest number of published scientific papers.
 - Develop a mechanism to motivate faculty members and directors of research centers to rapidly achieve the activation and optimization of the role of their research centers.
 - Develop a system to integrate academic research within the curriculum to familiarize students with the concepts of scientific research and to encourage them to use research centers.
 - Restructure curriculum in all stages of higher education in order to integrate scientific research, i.e. embedding the principles of scientific research in the practical aspect of the student's education.
 - Develop a system to activate and increase electronic gates, digital libraries, and automation of libraries so as to grow and diversify the resources of research centers as well as maximize their contribution.
 - Develop a system that facilitates signing agreements between research centers, the associations of businessmen, and donor entities in order to provide required support for the centers. Capitalize on the knowledge and capabilities of faculty members and apply modern systems to fill the gap between the theoretical and the practical. This can be performed against remuneration that supports the research activities of these centers.

Link Graduates to Employment Institutions at the Local, Regional, and International Levels:

- **Program Description:** This program aims to emphasize the dynamic relationships between the graduates of higher education and the labor market, ensuring the qualification of the graduates. This program is included within high-cost programs and its execution is expected to begin in 2015 and be complete by 2020.
- **Key Elements:**
 - Establish a competent national authority that serves as an employment forum, linking students and employing bodies, whether from the private or public sector.
 - Provide resources required by the authority, including trained staffs and financial resources in order to perform its role properly.
 - Grant the authority the license required to establish branches in governorates and at the various higher education institutions in order to achieve broad coverage and quick results.
 - Develop systems related to career counseling programs at higher education institutions in order to provide advice to students regarding available job opportunities and how to apply for them.
 - Develop training programs to prepare graduates to be able to communicate, think positively, and accept and create job opportunities suitable for their specializations and interests.
 - Develop systems to consult students and provide advice at the initial stages of higher education concerning the selection of specialization and the type of job opportunities available for the different specializations so as to obtain a qualified graduate eager to work in his/her specialization.

Adopt the Egyptian Diploma Equivalence System and Recognition of Higher Education Certificates:

- **Program Description:** This program aims to internationalize Egyptian universities through the equivalence of diplomas. It is considered to be an ongoing initiative, since higher education systems are continually updated. This program is included within high-cost programs and its execution is expected to begin in 2020 and be complete by 2025.
- **Key Elements:**
 - Establish a unit responsible for setting effective partnership agreements and joint academic programs between Egyptian universities and their counterparts internationally. These programs should aim at fulfilling the needs of the local and international labor markets.

- Develop a system to provide study programs that qualify students for examinations of certification, as well as integrating them within the higher education stages as an optional stage.
- Provide training programs for faculty members to enable them to teach the study programs required for the equivalencies.
- Develop required policies to gain the authority to apply the equivalency examinations in Egypt.
- Develop centers at the universities in order to help the students to apply for scholarships at international universities.
- Develop a mechanism to specify the requirements for scholarships at international universities and guide the students as they make applications for such scholarships.
- Develop a system to inform students of available scholarships.

Developing Curricula Based on the National Qualifications Framework:

- **Program Description:** This program aims to enhance the quality of higher education through the continuous development of the curriculum based on the National Qualifications Framework to keep pace with the requirements of the labor market and international standards. This program is included within high-cost programs and its execution is expected to begin in 2020 and to be complete by 2025.
- **Key Elements:**
 - Identify National Qualifications Framework standards with the concerned bodies based on labor market requirements and international standards in line with the Egyptian environment.
 - Enact legislation required to develop the study programs and evaluation systems based on the National Qualifications Framework, as well as integrating them in the different subjects.
 - Provide training required for faculty members on how to integrate National Qualifications Framework Standards into the curricula, in order to maximize the added value of the developed curricula.

Update the Admission Systems at Higher Education Institutions:

- **Program Description:** This program handles the lack of efficiency of the current admission systems and its entire reliance on the students' grades regardless of their desires, which is considered one of the most significant challenges that face higher education. Accordingly, the update of the admissions systems becomes a fundamental mean for acquiring successful students passionate about their fields and specializations. This program also contributes to the decentralization of higher education. This program

is included within low-cost programs and its execution is expected to begin in 2020 and be complete by 2025.

- **Key Elements:**

- Develop an admissions system that takes into account the capabilities and desires of the students and does not depend entirely on grades as a criterion, addressing the gaps and the reasons for lack of efficiency in the current situation.
- Develop a system to introduce the admissions systems gradually and completely.
- Develop policies for university admission in conformity with the real capabilities of the students and their desires, providing students with interviews with the specialists in different fields and discussion of results with the students.
- Institute a mechanism to announce the available specializations, explain them, and indicate the subjects listed under each specialization. Use a sample of student and graduate opinions from each specialization to enable each student to clearly identify the field that is in line with his/her abilities based on a set of integrated and accurate information.