

DEVELOPMENT OF HUMAN RESOURCES

22.1 GENERAL EDUCATION

22.1.1 Introduction

The educational system is a cornerstone of development, for it impacts the aspirations and educational needs of individuals, while being directly linked to development of society in production and knowledge. From this perspective, future prospects of education and identification of its trends and the strategies needed for its development are main concerns of development plans.

The Ninth Development Plan underlines the central role of education in achieving and strengthening human development, through expanding options available to people for acquiring knowledge and skills and benefiting from gained capabilities.

Interest in education is evident in the significant increase in the number of students, with Saudi students at all levels of general and higher education constituting 28% of total Saudi population in 2008.

These achievements would not have been possible without full commitment to providing the necessary financial resources for expanding education at all levels. Financial allocations for human resources development (HRD) increased during 2005–2008 from about SR69.9 billion to about SR104.6 billion, an annual average growth rate of 14.4%, which confirms the commitment of the Kingdom to providing the required financial support for expanding educational opportunities¹.

¹ In 2006, the share of expenditure on education in GDP was 6.2%, compared with Turkey at 3.7%, Japan at 4.9%, Germany at 5.1%, and France at 6.0%.

With the accomplishment of a major expansion of educational opportunities, qualitative development has become the top priority for building a knowledge society.

This part of the chapter reviews the current conditions of the general education sector; the major developments that took place under the Eighth Development Plan, and the key issues and challenges that must be addressed under the Ninth Development Plan. Demand forecasts, future vision, objectives, policies and targets set for the sector in the Ninth Development Plan are also addressed.

22.1.2 Current Conditions

22.1.2.1 Kindergartens

Under the Eighth Development Plan, pre-primary education enjoyed significant support from the Ministry of Education. Royal Decree 7/B/5388 of 2002 instructed the Ministry to "develop a plan and a time schedule to be adopted by the development plan of the state for gradual expansion in establishing kindergartens throughout the Kingdom, benefiting from efforts of the private sector (private education) to achieve this goal", as well as to "develop an effective educational curriculum for kindergartens."

In consequence, the number of children enrolled in kindergartens increased from 96.1 thousand in 2004 to 103.1 thousand in 2008, an average annual growth rate of 1.8% (Table 22.1.1).

In addition, in 2009, Council of Ministers Resolution No. 60 was issued concerning minutes of the Ministerial Committee for Administrative Organization, which called for increasing suitable female employment opportunities in government agencies. The Resolution instructed that "efforts to make Kindergartens an integral part of education be accelerated, and that employment in them be restricted to women".

Table 22.1.1
Increase in Number of Kindergartens
Eighth Development Plan*

	2004	2008	Average Annual Growth Rate (%)
Kindergartens	1396	1472	1.3
Classes	5514	6568	4.5
Enrolled Children	96073	103125	1.8
Women Teachers	10049	10184	0.3

* Up to the end of the fourth year of the Eighth Development Plan.

Source: Ministry of Education, Annual Statistical Reports.

22.1.2.2 Primary, intermediate and secondary education

The significant expansion of primary education is a major indicator of the success of the educational policies pertaining to providing educational opportunities to children. Net enrolment rates in primary education rose from 76.8% in 1990 to 84.9% in 2008. In general, the number of enrolled students rose from 4.36 million in 2004 to 4.72 million in 2008, an average annual growth rate of 2%. The growth was accompanied by increased commitment of Saudi families to enrolling their children, boys and girls, in the educational system, with girls accounting for 47.5% of total Saudi students enrolled in general education in 2008. In the same year, schools for girls accounted for 49.7% of all schools and they had 51.6% of all teachers.

Expansion of general educational opportunities and the provision of requisite resources require a detailed review of educational indicators by region, in order to monitor distribution of opportunities among regions. Table 22.1.3 shows the distribution of educational opportunities and basic requirements, such as schools, classes and teachers, over the thirteen administrative regions. The data show that the rates of the regions are around the national averages.

Table 22.1.2
Growth of Primary, Intermediate and Secondary Education
Eighth Development Plan*

	2004	2008	Average Annual Growth Rate (%)
Number of Schools	23955	25902	2.0
Number of classrooms	196087	212109	2.0
Number of new entrants:			
- Primary	402356	420008	1.1
- Intermediate	332647	385519	3.8
- Secondary	306671	330511	1.9
Number Enrolled:			
- Primary	2385501	2469863	0.9
- Intermediate	1078026	1188898	2.5
- Secondary	892131	1058514	4.4
Total	4355658	4717275	2.0
Graduates of secondary schools	239379	321042	7.6
Number of teachers	379538	436526	3.6
Saudization of teachers (%)	93.0	94.3	

* Up to the end of the fourth year of the Eighth Development Plan.

Source: Ministry of Education, Annual Statistical Reports.

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Table 22.1.3
General Education (Primary, Intermediate and Secondary)
by Administrative Region
2008

Region	Schools	Classes	Students	Teachers	Teacher/Student	Student/School	Student/Class
Riyadh	5483	48467	1115031	100910	11	203	23
Makkah	4975	48088	1112374	96801	11	224	23
Madinah	1849	14463	335243	29620	11	181	23
Qasim	1868	12338	233308	25722	9	125	19
Eastern Region	2646	26613	681621	57790	12	258	26
Asir	3098	20034	371250	41257	9	120	19
Tabuk	794	6494	158732	12316	13	200	24
Hail	1044	6803	116309	13655	9	111	17
Northern Borders	359	2766	66280	6000	11	185	24
Jazan	1756	12620	257520	23453	11	147	20
Najran	535	4101	95359	8722	11	178	23
Baha	921	4968	75069	10146	7	82	15
Jawf	574	4355	99179	10134	10	173	23
Total	25902	212109	4717275	436526	11	182	22

Source: Ministry of Education, Annual Statistical Report.

For 2008, the teacher/ student ratios varied by region from 1:13 for Tabuk to 1:7 for Baha, while ratios for regions with high population density were equal to or close to the overall average ratio of 1:11. The low ratios by international standards are due to demographic considerations, with the Ministry of Education having to provide schools and teachers to small communities.

22.1.2.3 Secondary education outputs

Male and female students in secondary education attend a number of tracks that prepare them for entry into higher education and subsequent specializations. During 2004–2008, graduates of secondary schools tended towards the science tracks. The average annual growth rate of male graduates of science tracks was 9.4%, compared with 8.8% for female graduates. However, predominance of arts track graduates continued, though declining from 62.3% in 2004 to 57.8% in 2008. Given that universities aim to expand disciplines that require broader and deeper grounding in natural sciences, there is a need for encouraging enrolment in the corresponding science tracks in secondary education, especially for girls.

Table 22.1.4
Development of Secondary-Education Outputs
Eighth Development Plan^(*)

years	Male Students			Female Students			Grand Total		
	Total	Science	(%)	Total	Science	(%)	Total	Science	(%)
2004	118070	75872	64.3	121309	45792	37.7	239379	121664	50.8
2008	168949	108522	64.2	152094	64259	42.2	321043	172781	53.8
Average Annual Growth Rate (%)	9.4			8.8			9.2		

(*) Up to the end of the fourth year of the Eighth Development Plan.

Source: Ministry of Education, Annual Statistical Reports.

22.1.2.4 Contribution of private general education

The first private-school system started in 1938. Since then, the private sector played an important role in providing general education at all

levels, with the total number of students in private education institutions rising from 345.3 thousand in 2004 to 483.8 thousand in 2008 (Table 22.1.5).

Table 22.1.5
Contribution of Private General Education
2008

Stage	Schools			Students			Teachers		
	Total	Private	%	Total	Private	%	Total	Private	%
Kindergarten	1472	650	44.2	103125	52821	51.2	10184	4810	47.2
Primary	13479	1021	7.6	2469863	200324	8.1	229686	19475	8.5
Intermediate	7691	786	10.2	1188898	83774	7.0	116349	7361	6.3
Secondary	4731	602	12.7	1058514	146837	13.9	90491	10476	11.6
Total	27373	3059	11.2	4820400	483756	10.0	446710	42122	9.4

Source: Ministry of Education, Annual Statistical Reports.

Private education students constituted 10% of total students in general education in 2008. At 41.4% of all students enrolled in private education, the percentage of students enrolled in private primary schools is the highest.

Under the Ninth Development Plan, the Ministry of Education will seek to promote private education, both quantitatively and qualitatively.

22.1.2.5 Eradication of illiteracy

Development experiences underline the priority of illiteracy eradication, for without a literate society and an educated workforce, it would be difficult, even impossible, to achieve sectoral objectives, let alone make effective progress towards a knowledge society.

Data of the General Census of Population in 2004 and data of the 2007 demographic survey show that illiteracy among males and females aged 15 years and older decreased from 25.8% to 23.6% for females and from 9.8% to 8.6% for males, and that illiteracy among young people (15–24) declined to 4.3% for males and 4.8% for females.

Hence, the immediate task is to eradicate illiteracy among people of working age (15–45), particularly since work is afoot to provide universal access to primary education, thereby ensuring eradication of illiteracy.

Table 22.1.6
Development of Adult Education
Eighth Development Plan*

Year	Schools	Classes	New Entrants	Total Enrolled	Total of Saudis Enrolled	Graduates
2004	3621	9298	34095	80544	63410	23815
2008	4528	10801	38661	101537	82362	28861
Average annual growth rate (%)	5.7	3.8	3.2	6.0	6.8	4.9

* Up to the end of the fourth year of the Eighth Development Plan.

Source: Ministry of Education, Annual Statistical Reports.

Data of the Ministry of Education for the academic year 2008 (Table 22.1.6) show that adult education classes numbered 1,693 for males and 9,108 for females, while there were 17.1 thousand Saudi male students and 65.3 thousand Saudi female students. Data from the 2007 demographic survey indicate that there were 187.2 thousand illiterate males and 759.9 thousand illiterate females. Given the existing capacity of adult education schools, it is clear that eradicating illiteracy of this magnitude will require mobilization of exceptional efforts.

22.1.2.6 Institutional and organizational development

The Ministry of Education is seeking to restructure the public education sector through an integrated system covering all legislative, planning, organizational and operational aspects, while promoting private sector education.

King Abdullah Bin Abdul-Aziz Public Education Development Project (Tatweer), issued by Royal Order No. 1087/m b of 2007, is a

cornerstone of institutional and organizational development. The Project consists of four major programmes that aim to:

- Develop educational curricula in response to modern scientific and technical developments to meet the moral, knowledge, professional, psychological, physical, mental and lifestyle needs of students.
- Re-qualify teachers to prepare them for carrying out their educational duties in the service of the objectives of advanced curricula.
- Improve the educational environment to enable utilization of information and communication technology (ICT) for delivering digital curricula, thereby creating an environment conducive to learning and to the achievement of a higher level of education and training.
- Strengthen personal and creative capabilities, develop skills and hobbies, satisfy psychological needs of students, and consolidate citizenship and social cohesion through extra-curricular activities of various kinds.

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Royal Decree M/75 of 2008, licenses the Holding Company, Tatweer. The purpose of this company is to provide all basic educational services and supporting services; develop, establish, operate, and maintain educational enterprises; and conduct relevant business activities. The company is entrusted with implementing King Abdullah Bin Abdul-Aziz Public Education Development Project and additional development programmes.

22.1.3 Issues and Challenges

22.1.3.1 Rates of success, repetition and dropout

Rates of success, repetition and dropout are important indicators of performance of an educational system, for detailed data on these rates enable monitoring the performance of both students and educational institutions. Such monitoring contributes to curriculum development

and improvement of teaching and learning methods. However, the quality of these measures is largely influenced by the quality of examinations and the reliability of their outcomes.

Studies of the internal efficiency of the educational system under the Eighth Plan point to an improvement in the rates of repetition and dropout. The average percentage of repeaters for classes from grade one up to and including grade twelve under the Eighth Plan ranged between 3% and 14.6%, compared with 4.83% and 21.39% under the Seventh Plan. Nevertheless, there is still an urgent need for conducting extensive, detailed studies of the internal efficiency of the education system at all levels upon which to base efforts aimed at enhancing teaching efficiency and modernising curricula and teaching methods.

22.1.3.2 School environment

States are interested in improving the school environment, as it is an important factor of raising attainment levels. The school environment, inside and outside the classroom, is an important factor of teaching, learning, and training. It helps teachers to perform the work entrusted to them at a high level of efficiency and quality, and it encourages students to participate, interact, apply self-learning and raise the level of their academic achievement. A good school environment requires adequate resources, including: computer labs, language labs, laboratories, classrooms equipped with e-learning equipment, activity rooms, and cultural and sports halls; in addition to the use of ICT.

Providing such an environment requires school buildings to replace unsuitable rented premises. All related problems, particularly provision of land, need to be solved and implementation of the building projects needs to be entrusted to highly competent contractors.

22.1.3.3 Raising quality of education

Raising the quality of education is the most important and most challenging issue for the Ninth Development Plan. Quality is the essential element in ensuring that graduates of the educational system

contribute actively to development, rather than being a burden on it.

Proliferation of knowledge requires of the educational system to improve its ability to adapt to scientific progress, by reassessing curricula; updating, deepening and renewing knowledge, experience and skills, and equipping students with self-learning capabilities. The Ministry of Education is undertaking a set of quality development projects, including: comprehensive development of curricula, development of a secondary-school course system; development of mathematics and science curricula; and development of English language curricula. By covering the key elements of enhancement of the quality of education in the Kingdom, the King Abdullah Project for Development of Education represents a quantum leap in renewal, modernization and advancement of the educational system.

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The educational process is centred on availability of competent qualified teachers to teach generations capable of proper understanding, assimilation, development and innovation. Hence there is the need for re-qualifying teachers, upgrading their efficiency, and developing their teaching and leadership capabilities, through continuous interactive training. In addition, there is a need for providing teachers with ICT skills and expertise to enable them to employ it in teaching, as well as for developing their positive qualities and fostering their spirit of belonging and their loyalty to the country and the teaching profession. All of these objectives would be served by regularly measuring the requisite competencies and raising the standards of entry to the teaching profession.

Raising the quality of education is not limited to a period of time or to any one plan; it is a multidimensional, continuous, permanent process. Long ago, the Kingdom began taking measures to upgrade and advance the education sector. What is required is to sustain, consolidate, and develop these efforts, while providing the necessary support for their success.

22.1.3.4 Fostering early-childhood education

Global interest in developing and expanding early-childhood care is growing, with the objective of promoting the welfare of early-age children and converting that into programmes that develop all aspect of their lives. Saudi Arabia has given this matter a high priority, particularly with regard to health and education. However, an aspect of early-childhood educational care is still in need for support; namely, kindergartens that should constitute the basis for programmes offered by the state to develop and promote the cognitive and linguistic skills and social development of pre-school children, with kindergartens complementing the care children receive at home.

Despite the importance of pre-school education, the proportion of Saudi children of the age group concerned who are enrolled in kindergartens is still about 10%, compared with 18% for Arab States as a whole. This calls for a change in the prevailing perception of kindergartens, towards considering them as an investment that yields socioeconomic benefits in the long run. Many public kindergartens are still attached to primary schools, with poor absorptive capacity. Thus, demand is weak and so is the potential for expanding it and the capacity to absorb it if and when it grows. Hence, special efforts to address these problems are required.

Implementation of a leading programme for providing additional opportunities for enrolment of children in kindergartens requires adequate financial allocations to provide buildings, equipment, qualified and trained educationalists, and specialised curricula. Moreover, the private sector and charities ought to play an active role in this expansion and the state ought to provide sufficient support and incentives to stimulate private sector participation.

22.1.4 Demand Forecasts

Under the Ninth Development Plan, the Ministry of Education will provide educational opportunities, improve enrolment rates at various levels, and enhance the contribution of private education, as follows:

22.1.4.1 Kindergartens

It is projected that by the end of the Ninth Development Plan, the rate of enrolment of children in kindergartens would reach about 16%, bringing the number enrolled to about 156 thousand, the number of kindergartens to 1,818, and the number of teachers to 10.2 thousand. This requires buildings for kindergartens separate from primary schools, providing training to all kindergarten teachers and administrators, and development of a set of mechanisms to stimulate the establishment of private kindergartens.

Table 22.1.7
Forecast Demand for Kindergartens (Children Enrolled)
Ninth Development Plan

Region	2009	2014
Riyadh	33567	48668
Makkah	24333	37610
Madinah	5256	7704
Qasim	4397	6704
Eastern Region	17951	23853
Asir	4678	8731
Tabuk	3010	4553
Hail	1339	2989
Northern Borders	1495	3559
Jazan	3001	4989
Najran	1372	1715
Baha	978	1774
Jawf	1768	3053
Total	103145	155902

Source: Ministry of Economy and Planning

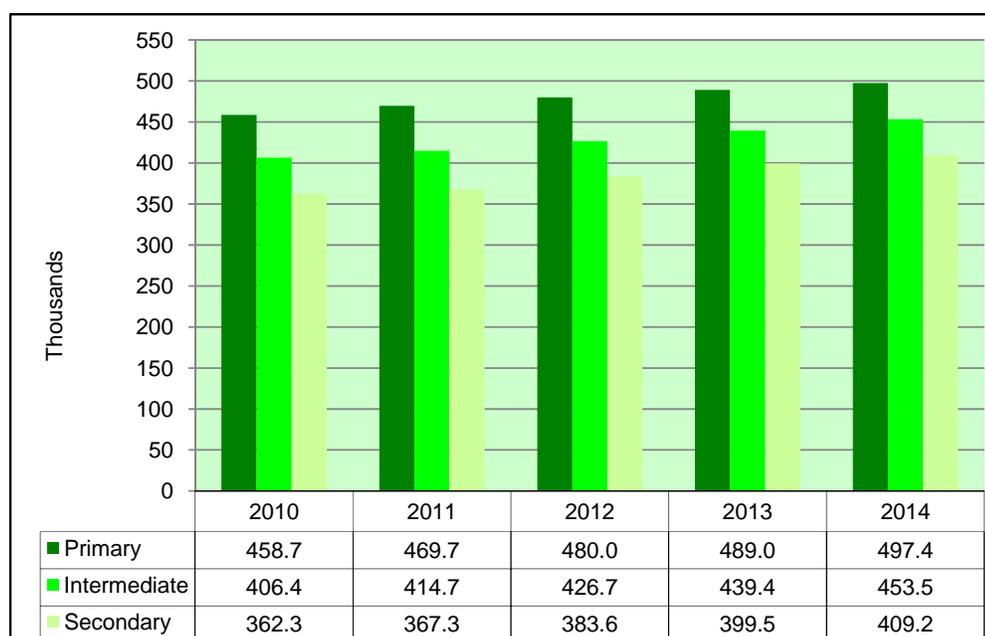
22.1.4.2 Primary, Intermediate and Secondary Education

□ *Students*

An average annual growth rate of new entrants into primary school of 2% is envisaged, which will lead to a rise in enrolment in the first grade of primary school to 100%, in pursuance of compulsory primary education. To this end, the Ministry of Education will undertake

developing effective mechanisms to ensure enrolment of 6-year old children in the first primary grade, along with maintaining a continuous assessment programme to advance students from one grade to the next. Moreover, a rate of 98% or more is envisaged for enrolment in the first intermediate grade, thereby achieving an average annual growth rate of new entrants of 2.8%. In addition, a success rate of 97% is envisaged by the end of the Ninth Plan.

Figure 22.1.1
Forecast of New Entrants by Education Level
Ninth Development Plan



Source: Ministry of Economy and Planning.

The Plan seeks enrolment rates in the first secondary grade of not less than 95%, with an average annual growth rate of new entrants of 3.1%, while raising success rates to 95% by the end of the Ninth Plan. Also envisaged is expansion of the science track so that its male and female graduates will constitute about 60% of total secondary school graduates by the end of the Ninth Plan.

Table 22.1.8
Forecast Numbers of Students Enrolled in General Education
(Primary, Intermediate, Secondary)
Ninth Development Plan

Region	2009	2014
Riyadh	1132220	1259391
Makkah	1119992	1249838
Madinah	358558	374155
Qasim	234649	264828
Eastern Region	693615	759456
Asir	371690	414490
Tabuk	168614	180445
Hail	118077	129495
Northern Borders	65740	76423
Jazan	231573	299324
Najran	98763	105613
Baha	71704	80138
Jawf	96578	113573
Total	4761773	5307169

Source: Ministry of Economy and Planning.

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Table 22.1.9
Forecast Distribution of Graduates of Secondary School
by Track
Ninth Development Plan

Year	Male				Female			
	Arts	%	Science	%	Arts	%	Science	%
2010	66866	35.8	119910	64.2	93178	56.5	71738	43.5
2011	64130	33.1	129615	66.9	93062	54.3	78323	45.7
2012	65138	32.3	136528	67.7	94136	52.7	84491	47.3
2013	65519	31.7	141164	68.3	96143	51.6	90180	48.4
2014	65978	30.9	147542	69.1	98718	50.7	95993	49.3

Source: Ministry of Economy and Planning.

□ School buildings

School building requirements are determined according to population growth, replacement of rented buildings, separation of schools attached to others, and substitution of dilapidated existing school buildings, in accordance with the controls on opening and closing schools in cities and villages stipulated by Royal Decree No. 7/ B/ 5652 of 2002.

About 6,050 school building projects are needed, including educational complexes, model schools of various types, small model schools, large secondary model schools, and schools for villages and hamlets. The Ninth Development Plan aims to implement 3,750 school building projects, representing about 62% of total requirements, in addition to 1,351 projects that have been approved among projects financed from budget surpluses.

Table 22.1.10
Forecast Demand for School Buildings
Ninth Development Plan

Region	Total Demand for School Buildings	Target Under Ninth Development Plan	Projects Financed from Surplus Budget Revenues
Riyadh	1253	807	216
Makkah	1205	749	255
Madinah	456	277	86
Qasim	427	268	88
Eastern Region	808	512	107
Asir	559	353	146
Tabuk	120	74	44
Hail	217	130	83
Northern Borders	167	66	38
Jazan	421	249	127
Najran	112	67	72
Baha	138	88	32
Jawf	167	110	57
Total	6050	3750	1351

Source: Ministry of Education and Ministry of Economy and Planning.

22.1.5 Development Strategy

22.1.5.1 Future Vision

An integrated educational system that aspires to establish a solid foundation for general education, supported by highly trained and qualified educational competencies, capable of developing students

and equipping them with cognitive and innovative skills, guided by the requirements of the knowledge society.

22.1.5.2 Objectives

- Developing an educational environment that meets the quantitative and qualitative requirements of the next phase.
- Developing advanced educational curricula that achieve comprehensive development of students to enable them to contribute to build their society.
- Improving the qualitative efficacy of educational human resources to enable them to assimilate the objectives of modern curricula.
- Providing sound non-class activities to build an integrated balanced Islamic character in the service of religion, society and the nation.
- Improving the internal and external efficiency of the educational system.
- Fostering early-childhood education and prepare early-age children for entry into general education.
- Developing the administrative systems and their components and reducing centralization.
- Upgrading educational systems for the gifted and groups with special needs and adults.
- Applying quality systems and their standards to education.
- Expanding community participation in education.

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22.1.5.3 Policies

- Intensifying efforts to improve the school environment, rendering it stimulating and attractive.
- Expanding the use of ICT and integrating it into the educational process and providing the school environment with the required technological resources.

- Ensuring compulsory primary education for boys and girls, providing the facilities and equipment necessary for accommodating the increased numbers of students, and adopting the school-map technology as a tool in the deployment of educational services.
- Widely distributing Holy-Quran and Islamic teaching schools and developing related curricula to meet the actual needs of the community.
- Developing educational programmes to keep pace with knowledge and technological advances and enable learners to interact positively with world cultures; developing appropriate secondary education to meet the requirements of comprehensive development; and intensifying English language teaching at all levels of education.
- Raising the capacity of the educational system in the application of ICT and adopting continuous requalification and training.
- Adopting a system of periodic requalification of teachers every five years; applying standard proficiency tests periodically; and developing selection mechanisms for teachers.
- Developing incentive systems to ensure retention of excellent educators.
- Enhancing recreational educational programmes designed to invest in leisure; developing educational programmes for the gifted in science and creativity, enabling students to explore and develop their aptitudes and talents; and enhancing the contribution of female students to various activities.
- Modernising early-childhood programmes and activities and encouraging the private sector to invest in kindergartens.
- Extending more powers to educational leadership, reducing centralization, strengthening and developing school administration, in order to achieve a modified formulation of the school self-management system.
- Upgrading special-education systems in line with contemporary trends and global standards, and providing appropriate physical

environment and educational facilities for people with special needs.

- Eradicating illiteracy and delivering adult education and literacy programmes in areas of need, and providing parallel educational channels to accommodate dropouts from the educational system.
- Continuing to evaluate and update general education systems to become more responsive to development plans and the needs of society.
- Promoting and intensifying private sector participation in providing educational opportunities.

22.1.5.4 Targets

- Reducing dropout rates to 1% for all levels of education, and reducing repetition rates to 3% at the intermediate-school level and 5% at the secondary-school level.
- Enhancing national attainment standard tests and conducting diagnostic tests to monitor difficulties faced by students in various subjects.
- Establishing a research unit for the gifted and qualifying existing centres to enable them to design, develop and implement special programmes for the gifted.
- Expanding the science track so that its graduates constitute 60% of all secondary-school graduates by the end of the Ninth Plan.
- Continuing to support implementation of the development of teaching strategies project and the overall curriculum development project.
- Supporting establishment of the digital curriculum and formulation of a model partnership with the private sector and building an e-learning portal.
- Achieving 100% enrolment rate at primary schools (compulsory education).
- Achieving an enrolment rate of 98% at the intermediate-school level and 95% at the secondary-school level.

- Encouraging use of educational laboratories by modernizing and equipping school laboratories, and securing mobile laboratories for schools that do not have fixed laboratories.
- Implementing a system of comprehensive evaluation of schools at an annual rate of 20% of all schools.
- Implementing an educational accreditation system for private schools.
- Encouraging the private sector to increase its participation in school expansion to accommodate students of general education, attaining a participation rate of 15% by the end of the Ninth Plan.
- Expanding kindergartens to ensure an absorption capacity of 16% of children aged 4–5 years.
- Developing an adult-literacy plan that involves all agencies concerned, in order to achieve eradication of illiteracy, according to a specific timetable and starting implementation.
- Increasing the percentage of those having the higher-educational qualifications required by the educational system.
- Supporting expansion of educational research into qualitative development objectives, studies of test results, repetition and dropout at various educational levels.
- Continuing to implement a comprehensive health programme, in coordination with the Ministry of Health (medical examination and vaccination campaigns and treatment of students).
- Enhancing cooperative school-transport services and expanding private-sector transport services for girls.

22.1.6 Financial requirements

The financial requirements of the general education sector (Ministry of Education) under the Ninth Development Plan amount to SR498.4 billion.

22.2 HIGHER EDUCATION

22.2.1 Introduction

Under the Eighth Development Plan, the higher-education sector achieved remarkable progress in accommodating the output of secondary education and satisfying the desire of graduates to continue their university education in disciplines needed by the labour market. A number of universities were established in all regions and governorates, bringing the total number to 24, in addition to King Abdullah University of Science and Technology.

Moreover, under the Eighth Development Plan, 152 new colleges were established, with their outputs linked directly to labour market requirements in science, medicine, engineering, administration, and computer science and information technology, in order to provide national competencies that serve development objectives; in addition to 12 university hospitals carrying out medical research.

Contribution of the private sector to higher-education provision also increased: there are now 8 private universities and 19 private colleges, accommodating more than 26 thousand students.

The Ministry of Higher Education is implementing King Abdulaziz Foreign Scholarships Programme, with the total number of scholarships exceeding 70 thousand.

This part of the chapter reviews the current conditions of higher education, the major developments that took place under the Eighth Development Plan, and the key issues and challenges that must be addressed during the Ninth Development Plan. It also provides forecasts of future demand and highlights the future vision, objectives, policies and targets set for the sector in the Ninth Development Plan.

22.2.2 Current Conditions

22.2.2.1 Accepted, enrolled and graduate students

- The number of students enrolled in higher-education institutions increased from 571.8 thousand students in 2004, representing 42% of the 19–22 years age group, to about 759.9 thousand students in the fourth year of the Eighth Plan (2008), representing 51% of the same age group. This reflects an average annual growth rate of 7.4% (Table 22.2.1).
- The number of students accepted for entry into higher education institutions increased from 215.6 thousand in 2004 to 280.5 thousand students in 2008, an average annual growth rate of 6.8%. Those accepted constitute 68.2% of total secondary school graduates, but regular students constitute 51.2% (Table 22.2.1).
- The number of university graduates increased at an average annual growth rate of 7.9%, from 82.6 thousand in 2004 to 112 thousand in 2008, with the number of graduates amounting in that year to 84.7% of the target (Table 22.2.1).

Table 22.2.1
Numbers of New entrants, Graduates and Enrolled Students
Eighth Development Plan^(*)

	2004			2008			Average Annual Growth Rate (%)		
	Enrolled	New entrants	Graduates	Enrolled	New entrants	Graduates	Enrolled	New entrants	Graduates
Total in government universities	479250	178161	64413	659860	226754	96274	8.32	6.21	10.57
Total in other higher-education institutes	92563	37402	18208	100054	53764	15681	1.96	9.50	-3.67
Grand Total	571813	215563	82621	759914	280518	111955	7.37	6.81	7.89

(*) Up to the end of the fourth year of the Eighth Development Plan.

Source: Ministry of Higher Education.

The following table shows the numbers of new entrants, graduates and enrolled students by region in 2008.

Table 22.2.2
New Entrants, Graduates and Enrolled Students
By Region in 2008

Region	New entrants		Graduates		Enrolled	
		(%)		(%)		(%)
Riyadh	78012	27.81	30531	27.27	202457	26.64
Makkah	81574	29.08	30575	27.31	214653	28.25
Madinah	19080	6.80	8091	7.23	52935	6.97
Qasim	12018	4.28	6492	5.8	37391	4.92
Eastern Region	31985	11.4	13859	12.38	95293	12.54
Asir	17171	6.12	8776	7.84	55469	7.3
Tabuk	4802	1.71	1787	1.6	9913	1.3
Hail	7250	2.59	2600	2.32	18086	2.38
Northern Borders	3542	1.26	1509	1.34	11258	1.48
Jazan	7668	2.73	2484	2.22	21788	2.87
Najran	4280	1.53	1186	1.06	9014	1.19
Baha	6194	2.21	2157	1.93	16684	2.19
Jawf	6942	2.48	1908	1.7	14973	1.97
Grand Total	280518	100.00	111955	100.00	759914	100.00

Source: Ministry of Higher Education

22.2.2.2 Postgraduate students

The numbers of postgraduate students at universities increased at an average annual rate of 12.03%, from of 11,335 students in 2004 to 17,855 students in 2008, which constitutes 3.7% of total undergraduate students enrolled in that year. PhD students constituted 14%, and Master students 68%, while fellowship and Higher Diploma students comprise 18%.

22.2.2.3 Faculty members

The number of faculty members at the universities rose at an average annual rate of 11.42%, from 18,362 members in 2004 to 31,536 in 2009, of whom Saudis constituted 59.65%.

In 2008, the number of university lecturers and teaching assistants on scholarships or study missions totalled 3,408, of whom 872 were studying at home and 2,536 were studying abroad.

22.2.2.4 Absorptive Capacity

Under the Eighth Development Plan, significant geographical expansion of the higher-education sector to cover all regions and most governorates was achieved, in an effort to meet aspirations of students in various regions to complete their university education. 12 new universities and 152 new colleges were established over all regions and governorates.

Private-sector contribution to higher education also expanded. The number of private universities rose to 8 and private colleges to 19, with a total student population of more than 26 thousand.

In addition, the Custodian of the Two Holy Mosques King Abdullah bin Abdul Aziz Scholarships Programme contributes to supporting disciplines where there is a shortage, such as medicine and medical science, and engineering and technology. More than 70 thousand male and female students have been sent to attend advanced international universities, in more than 23 countries, including the United States, Canada, Australia, New Zealand, France, Japan, and Malaysia.

22.2.2.5 Scientific research activity

Through scientific research programmes, centres of excellence and scientific activities associated with them, universities continuously contribute to social and environmental development and the advance towards a knowledge economy. In 2008, research centres at universities, which are powerhouses of scientific expertise, numbered 72 and they undertook more than 1,700 research and scientific publications. The total number of research studies and scientific papers authored or co-authored by faculty members published in scientific journals was more than 3,600 in basic and applied sciences, humanities and social sciences.

In addition, King Abdullah University of Science and Technology, which is a unique educational establishment made tangible, distinguished contributions to scientific research and postgraduate studies.

22.2.2.6 Institutional and organizational development

Higher education is developing rapidly to meet the needs of sustainable, balanced development in all regions. In the last year of the Seventh Development Plan, three new universities were established in the Makkah region, in the Madinah region and in Buraida in the Qassim region. In the second year of the Eighth Development Plan, seven new universities were established in each of the following regions: Hail, Tabuk, Jawf, Najran, Jazan, Baha, and the Northern Borders. In the last year of the Eighth Development Plan, four new universities were established in Dammam, the Eastern Region, Kharj, Shaqra, and Mujamah in Riyadh region, to accommodate the growing numbers of secondary-school graduates. Noteworthy is the establishment of the University of Princess Noura Bint Abdul-Rahman in Riyadh city, which incorporated all girls colleges in the city of Riyadh. Moreover, girls and teachers colleges affiliated with the Ministry of Education were incorporated into the regional universities. Furthermore, a Royal decree approved annexation of health colleges and institutes of the Ministry of Health to universities.

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22.2.3 Issues and Challenges

22.2.3.1 Quality of education

Quality of education is one of the main issues of concern to many people in the Kingdom, whether engaged in education or interested in it, for assuring quality of education ensures outputs that can contribute actively to development.

Relentless efforts by the Ministry of Higher Education and institutes of higher education have contributed to enhancing the quality of education, and to achieving advanced ranking in a number of

international classifications. For example, King Saud University ranked 247 globally and first among Arab universities in the Times-QS classification, while King Fahd University of Petroleum and Minerals ranked 266 globally and second among Arab universities. In addition, King Saud University was the only Arab university to figure in the 2009 Shanghai classification, which is the toughest and the most widely regarded academic classification.

In spite of the excellent positions in international rankings of universities achieved by some higher-education institutes, others are not included, which calls for further efforts towards improving quality of higher education in all institutions in the country.

22.2.3.2 Quality absorptive capacity of higher education

Consideration of the absorptive capacity of secondary-school graduates in higher education is of great importance, for it is linked to a range of issues, including: the gap between the growing demand for university education and available capacity, student desire for joining certain colleges or disciplines in greater numbers than the capacity of the labour market, the anxiety regarding unemployment of secondary-school graduates in the event of not being able to enrol in higher education, and the needs of the labour market for graduates in particular higher education disciplines.

As a result of the mounting desire of Saudi families for their children to complete higher education, the share of secondary-school education in total general education is increasing rapidly, at annual growth rates exceeding those pertaining to primary and intermediate-school education. In the academic year 2008, the total number of male and female students enrolled in secondary schools exceeded a quarter of a million. At the same time higher-education institutes made an effort to expand admissions and succeeded in offering places to more than 90% of secondary-school graduates in 2009.

However, not all secondary-school graduates join universities; some join the military colleges, some will be sent abroad to pursue their

studies, and others will enter the labour market. Manpower statistics for 2008 show that 26.8% of all Saudi workers (15 years or older) are secondary- school graduates who chose to enter the labour market directly rather than attend university. This calls for a change in secondary-education curricula and programmes to prepare students not only for continuing their education, but also for joining technical colleges to be ready for the labour market, a working life and society.

To ensure the quality of inputs into Higher Education, the Ministry of Higher Education established The National Centre for Assessment in Higher Education in 2000. The Centre has contributed to the development of criteria for admission to universities, and helped to improve their input by the aptitude test and the attainment test administered by it to serve as additional admission criteria alongside the results of the secondary-school examination. The Ministry of Higher Education has managed to narrow the gap between supply and demand through developing modernized admission mechanisms, rather than relying entirely on general examinations. However, there is a need for constant review of admission systems, as well as for a comprehensive information system to assist students in choosing among the options available to them.

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22.2.3.3 Identifying changing needs of labour market

Renewal and development of Saudi society need to take account of future changes and their consequent rapid transformations. Since education generally, and higher education in particular, is the cornerstone in the formation of the intellectual abilities and skills upon which change and development are based, the tasks entrusted to higher education become pivotal.

Table 22.2.3 presents data on distribution of students by discipline in higher education.

Comparing the distribution of new entrants by discipline at various levels of higher education in the Kingdom with that of graduates in selected countries (22 countries from various regions of the world) reveals a tendency towards the study of humanities and poor enrolment

in important disciplines, such as medicine, engineering and natural sciences, which calls for review and reconsideration, with the aim of enabling higher-education institutes to meet the needs of the labour market, thereby reducing unemployment.

Table 22.2.3
Distribution of Students by Discipline
in Higher Education

(%)

Field of Study	Intermediate Diploma			Bachelor Degree			Postgraduate Education		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Science	16.3	44.1	22.5	19.2	17.6	18.2	8.7	18.0	12.2
Engineering	21.2	–	16.5	5.1	0.2	2.1	5.5	0.2	3.5
Agriculture	1.2	–	0.9	1.9	0.5	1.0	1.9	–	1.2
Health	12.8	28.1	16.2	4.4	2.9	3.4	2.4	6.5	3.9
Education	1.9	1.6	1.8	2.3	3.7	3.2	31.3	25.6	29.2
Humanities	2.2	0.7	1.9	29.5	57.5	46.6	26.9	32.4	29.0
Social Sciences, Business, Law	31.3	13.9	27.5	13.3	13.4	13.4	12.6	11.0	12.0
Preparatory Programmes	11.8	5.2	10.3	5.9	1.3	3.1	—	—	—
Other	1.3	6.4	2.4	18.4	2.9	9.0	10.7	6.3	9.0
Total	100	100	100	100	100	100	100	100	100

Source: Ministry of Higher Education

In addition, it is necessary to review the distribution of students in higher education between university and sub-university programmes, especially that development needs require practical, technical and vocational specialisations that could be better met by intermediate diplomas.

22.2.4 Demand Forecasts

To keep pace with the growing numbers of secondary-school graduates and meet their aspirations to continue their education in specialisations needed by the labour market, the absorptive capacity of institutes of higher education, both at the university and sub-university levels, was expanded under the Eighth Development Plan. The Ninth Plan aims to admit in its first year, 2010, about 315,300 students and increase this number gradually to about 375,300 students in its last year, 2014, an average annual growth rate of 4.5%. In addition, the Plan projects that over the same period, the number of graduates will increase from 240,800 to about 318,300, an average annual rate of 7.2%.

It is worth mentioning that all over the world, distribution of students in higher education between university and sub-university programmes is determined by the needs of the labour market. The share of university education in the Kingdom to all new entrants to higher education in 2006 was 75.4%, but it increased to about 91% in 2009, the last year of the Eighth Development Plan. This rate approximates the highest rate achieved in the world.

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22.2.5 Development Strategy

22.2.5.1 Future vision

A university education that competes for leadership and contributes to building the knowledge society and meets requirements of socioeconomic and environmental development.

22.2.5.2 Objectives

- Increasing internal and external efficiency to meet the requirements of development.
- Improving the quality of education.
- Applying modern management systems.
- Optimally using ICT.
- Expanding and diversifying post graduate programmes.

- Supporting and enhancing scientific research and increasing contribution to production of knowledge.
- Effectuating the principle of partnership with local communities.
- Developing cooperation and coordination with scientific institutes at home and abroad to achieve development goals.

22.2.5.3 Policies

- Rationalizing admissions to disciplines that are not in demand in the labour market and development programmes.
- Relating expansion of higher education to programmes and disciplines that are in high demand in the labour market.
- Incorporating the knowledge, skills and attitudes required by the labour market into the curricula and courses of higher education.
- Identifying the skills required of higher-education graduates by the labour market, whether locally, regionally, or globally and taking account of them in the plans for developing higher education.
- Expanding intermediate higher education, in line with the needs of development and the labour market.
- Identifying higher-education quality indicators pertaining to students, faculty members, educational programmes, and effective teaching hours.
- Studying performance of graduates of higher education to determine the standard and quality of their work in the labour market.
- Reviewing plans, curricula, and programmes periodically in view of the need for linking the educational process to the quality of its outputs.
- Establishing advisory boards composed of local and international highly qualified persons to participate in shaping the future of the university with regard to its global competitiveness.
- Improving the quality of higher education outputs academically and technically.

- Increasing the flexibility of the scientific programmes of higher-education institutes.
- Completing implementation of academic assessment and accreditation of programmes.
- Establishing at universities centres for educational innovation in some disciplines.
- Attracting outstanding faculty members.
- Enhancing modern management of higher-education institutions and benefiting from relevant successful experiences.
- Developing and documenting work procedures and disseminating them among university communities.
- Developing human resources management in higher education.
- Establishing university information bases and networking them.
- Stimulating interaction among institutes of higher education through an information network, and updating their websites.
- Promoting publication of distinguished research in international scientific journals.
- Incentivizing the brightest students to enrol in postgraduate programmes at universities, especially in applied disciplines.
- Expanding postgraduate programmes at universities, and providing all the necessary resources: teaching staff, laboratories, and libraries; and encouraging postgraduate students to orient their research towards serving society and development.
- Expanding scientific research in universities, by establishing research centres of excellence in fields such as nanotechnology and biotechnology.
- Focussing research on national priorities and objectives and supporting it financially and with human resources.
- Establishing criteria and indicators for the quality of scientific research informed by global trends.

- Enhancing partnership between scientific research centres at universities and private-sector institutions.
- Establishing digital libraries and providing information sources and data banks in all institutes of higher education.
- Promoting the culture of participation and knowledge interaction at the university, directing scientific research to lay the foundations of the knowledge economy, and enhancing safeguards of intellectual property rights.
- Continuing to have university-community weeks to foster understanding and cooperation between higher-education institutes and community institutions.
- Improving selection mechanisms of scholarship students and directing them towards distinguished programmes in prestigious universities in disciplines needed by the community.
- Expanding establishment of scientific chairs at universities through support and finance from the private sector.
- Establishing a base for partnership between research centres at universities and the private sector.
- Expanding consulting services offered by higher-education institutes.

22.2.5.4 Targets

- Continuously assessing university curricula.
- Establishing new university faculties, departments and programmes to keep pace with development requirements and needs of the labour market.
- Improving the internal efficiency of higher-education institutes, and reducing the average number of years spent by students in these institutes before graduation to 4.5 years for four-year programmes, 5.5 years for five-year programmes, and to 6.5 years for six-year programmes.
- Achieving a teacher/student ratio of 1:22 in theoretical fields, 1:17 in science, and 1:5 in medical fields.

- Giving scholarships to at least 10% of faculty members to obtain PhD degrees, according to the needs of each university and discipline.
- Increasing the number of postgraduate students in higher-education institutes to no less than 5% of all university students.
- Establishing new Master and PhD programmes, with a focus on engineering, applied sciences, medical sciences and natural sciences.
- Expanding deployment of cooperative learning mechanisms in higher-education institutes and colleges that are suited to this type of education.
- Meeting public and private sector requirements of manpower, through coordination between higher-education institutes and the public and private sectors.
- Conducting follow-up studies for graduates of higher-education institutes in their workplaces to identify their strengths and weaknesses and develop programmes accordingly.
- Establishing consulting centres in higher-education institutes to provide technical consultancy for both government and private institutions.
- Supporting private-sector higher-education institutes and encouraging them to expand private higher education.
- Developing a communications network and a mechanism for the flow of information among the kingdom's universities, agencies, and other scientific institutions, for the purpose of scientific and cultural exchanges, and coordinating this effort with the relevant authorities.
- Coordination between higher-education institutes in the Kingdom and the Secretariat of the GCC.
- Promoting cooperation between Saudi higher-education institutes and universities and scientific bodies abroad through faculty exchanges, student grants and all related areas.

- Building the capacity of scientific research centres in universities to enable them to perform their duties in the service of society.
- Expanding establishment of specialized scientific societies and expanding their activities.
- Supporting and expanding scientific research projects at universities, conducting the necessary studies for qualitative development of the university, and diversifying scientific research.
- Increasing the number of courses and qualifying programmes, parallel education, and the number of enrollees in line with the needs of the labour market.
- Maintaining full Saudization of leadership and administrative positions.
- Raising the proportion of Saudis among faculty members in higher-education institutes, in auxiliary professional jobs, and in technical and health jobs.
- Improving the level of functional performance by holding training courses for administrative and technical support members.
- Developing student services and activities: healthcare; student housing; sports, scouting, and cultural and social activities; social care for needy students; access to libraries; meals; transport services; and university textbooks.

22.2.6 Financial Requirements

The financial allocations for the higher-education sector (Ministry of Higher Education, Universities) under the Ninth Development Plan amount to SR200.2 billion.

22.3 TRAINING

22.3.1 Introduction

Technical and vocational training is an important element of the development of human resources, distinguished by its strong link and response to the labour market and economic activity. Moreover, it is an ongoing process that is not confined to a specific life stage or age. Hence, the training system contributes to activating human resources participation in economic activities.

Over the past two decades, the Kingdom has put a great deal of effort into training. It has established specialized training institutions and encouraged the private sector to expand its manpower training and qualification work, on the premise that training at various different levels is an effective way for meeting the accelerated needs for skilled labour. Under the Eighth Development Plan, the absorptive capacity of training institutions increased; technical and professional training programmes and methodologies developed; and regulatory conditions were reviewed. The review culminated in Council of Ministers Resolution No. 268 of 2007, which ordered reorganization of the Technical and Vocational Training Corporation (TVTC).

The Ninth Development Plan pursues efforts to provide high-quality training that responds effectively to the needs of the labour market for skilled manpower.

This part of the chapter reviews the current conditions of training, the major developments that took place under the Eighth Development Plan, and the key issues and challenges that ought to be addressed under the Ninth Development Plan. It also presents forecasts of future demand and highlights the future vision, objectives, policies and targets set for the sector by the Ninth Development Plan.

22.3.2 Current Conditions

22.3.2.1 Technical and Vocational Training Corporation (TVTC)

The TVTC is the principal government agency responsible for technical education and vocational training provided in technical colleges, higher technical and industrial vocational institutes, and training centres. It also provides training programmes jointly with the public and the private sector. Table 22.3.1 shows the evolution of the training activity of the TVTC during 2004–2008. The number of training units rose from 100 to 143, and total enrolment rose from 77.7 thousand trainees to 87.2 thousand; an increase of 12.2%.

Table 22.3.1
Training Activity of TVTC
Eighth Development Plan^(*)

Description	2004			2008		
	Technical colleges	Higher-Technical Institutes for Girls ^{**}	Industrial Vocational Institutes	Technical Colleges	Higher - Technical Institutes for Girls ^(**)	Industrial Vocational Institutes
Number of training units	24	9	67	35	9	99
Students enrolled (000)	39.5	1.9	36.3	62.9	4.1	20.2
New entrants (000)	19.15	1.9	-	38.8	2.1	13.2
Graduates (000)	10.7	-	13.5	12.4	-	12.6
Teaching staff	2.4	0.077	3.8	4.3	0.118	2.7
Ratio of trainer/ trainee	1/16	1/25	1/10	1/15	1/35	1/8

(*) Up to the end of the fourth year of the Eighth Development Plan.

(**) Under the Council of Ministers Resolution No. 3108/M of 2005, supervision of vocational training for girls was incorporated under the TVTC.

Sources: *Technical and Vocational Training Corporation, Ministry of Economy and Planning.*

Table 22.3.1 indicates two very important issues. The first is the expansion of training opportunities for females, which underlines commitment to enabling female students to hone their skills through technical and vocational training that qualifies them to participate in economic activity. The second is the importance of providing support

to TVTC to enable it to meet the needs of the labour market of technical and skilled manpower, for the availability of training opportunities is still limited.

In addition to the above programmes, TVTC is undertaking joint training programmes, including:

- The Vocational Military Training Programme, in cooperation with the sectors, which was launched in 2004 and currently absorbs about 10 thousand trainees annually.
- The Vocational Training Programme for Prisoners, in cooperation with the Ministry of Interior, with more than 26 new institutes established under the Eighth Development Plan.
- The joint training programme between Chambers of Commerce and Industry in the regions and the Human Resource Development Fund.
- The strategic partnership programme with the business sector, which resulted in signing a number of agreements for establishing training institutes, which numbered 22 in 2008.
- The Cooperative Training Programme, which includes one training class for cooperative training, where the trainee is given the opportunity of experiencing a work environment. More than 50 thousand students from TVTC benefit from this programme annually.
- The Community Service Programme, which offers training and qualifying courses to various community groups and summer training for students. 142,083 trainees benefited from this programme under the Eighth Development Plan.

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22.3.2.2 Institute of Public Administration (IPA)

The mission of IPA is to upgrade competency of civil servants in an effort to improve performance of government. The training activity of IPA grew steadily under the Eighth Development Plan. It now provides annually more than 300 training programmes in fifteen fields, about 20 preparatory training programmes to qualify graduates of secondary and

tertiary education, and 30 workshops for senior administrators of government agencies. This is in addition to special programmes outside the annual schedule to meet requirements of government agencies. Table 22.3.2 shows the development of the institute's activities under the Eighth Development Plan.

Table 22.3.2
Activities of IPA
Eighth Development Plan^(*)

Description	2004	2008
Preparatory programme participants	1877	2044
In-service training enrolees	16777	45920
Enrolees in special programmes	1060	1944
Number of scientific symposia	6	5
Number of consultancies	77	64
Number of scientific works (scientific research and translation)	5	7

(*) Up to the end of the fourth year of the Eighth Development Plan.

Source: IPA.

22.3.2.3 Training in government agencies

Several government agencies provide their employees with training, including, for example: the Royal Commission of Jubail and Yanbu, the Ministry of Water and Electricity, the General Authority of Civil Aviation, the Saudi Ports Authority, Saudi Basic Industries Corporation (SABIC), Saudi Aramco, and the Saudi Electricity Company. In 2007, 133.5 thousand male and female trainees enrolled in such training and 128.8 thousand graduated.

22.3.2.4 Training in the Private Sector

The private sector plays an important role in providing technical and vocational training. In 2008, the number of private training institutes and centres were 994, in which 94,158 male and females trainees were enrolled, of whom 56 thousand graduated.

22.3.3 Issues and Challenges

22.3.3.1 Absorptive Capacity

Economic development has led to a growing need for technically and professionally qualified national employees, and, hence, to increased demand for technical and vocational training programmes. However, limitedness of available possibilities and insufficient capacity preclude absorption of all applicants. In 2008, 34% of male applicants and 8% of female applicants for technical training, and 51% of applications for vocational training were actually trained. The increasing number of trainees in line with the increasing needs for professional and technical manpower is one of the main challenges facing the sector.

The Ninth Development Plan aims at overcoming this challenge by establishing technical colleges for boys, higher-technical institutes for girls, and vocational-training institutes for boys in the governorates and major cities, as well as by expanding existing institutes; in addition to expanding joint training programmes by government agencies and the private sector.

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22.3.3.2 Vocational examination system

There is a need for improving the quality of vocational practice, which calls for clear functional standards and recognized licensing mechanisms. To address this issue, the Ninth Development Plan will focus on establishing a system of vocational examinations, relying on the private sector to setup examination units, under supervision by TVTC. Council of Ministers Resolution No. 3108 / m b of 2005 entrusted the Ministry of Labour with carrying out vocational examinations of expatriate workers. Accordingly, the Minister of Labour and Chairman of the Board of Directors of TVTC issued Resolution No. 204 / 1 of 2005, which set a general framework of vocational qualifications and for conducting vocational examinations to ensure that expatriate workers possess the requisite knowledge and technical and vocational skills. Hence, there is a need for putting in place laws and executive regulations for the organization of vocational examinations, classification of national vocational qualifications

through a national system, building a database of vocational examinations, establishing specialized vocational examination centres, and developing a mechanism for approval of expatriate qualifications.

22.3.3.3 Actual training needs

The lack of reliable data on employment needs is one of the impediments to assessing the required expansion of training opportunities, by profession and level, and, hence, to identifying training programmes that meet the needs. Two types of training are pertinent: training to satisfy the needs of the labour market for technical and vocational workforce, which is the responsibility of TVTC; and training of employees of government agencies, which is the responsibility of IPA. Closer coordination among the various training agencies is needed, in order to set training plans corresponding to the needs of economic activity for skilled labour, expand private sector involvement, and, eventually, adopt a national training plan.

22.3.4 Demand Forecasts

Forecasts of demand for technical and vocational training were based on several factors, the most notable of which are forecasts of population growth and the large numbers expected to join technical and vocational training programmes. To meet this demand, TVTC aims, under the Ninth Development Plan, to establish about 60 technical colleges, 39 technical higher institutes for girls, and 150 industrial vocational institutes, covering all regions of the Kingdom. Table 22.3.3 summarises estimated demand for basic training programmes at colleges, higher institutes, and industrial institutes affiliated with TVTC.

Table 22.3.4 shows the projected increases in the numbers of training personnel in technical colleges, higher technical institutes training for girls and industrial vocational institutes, in line with the projected increase in the total numbers of males and female trainees at the end of the Ninth Development Plan.

Table 22.3.3
Forecast of Demand for Basic Training Programmes by TVTC
Ninth Development Plan

Major Programme	Total Training Units	Total Classes and Workshops	Total New Entrants (Males and Females)	Total Trainees (Males and Females)	Total Graduates (Males and Females)
Base year of Plan (2009)	146^(*)	5855	65500	117000	29854
Forecast by end of Plan	395	15640	178900	323100	97854
Forecast increase under Plan	249	9785	113400	206100	68000
Technical Colleges	60	5598	74600	136400	35400
Higher-Technical Institutes for Girls	39	2340	11300	27700	6500
Industrial Vocational Institutes ^(*)	150	1847	27500	42000	26100

(*) Including institutes of architecture and construction and vocational institutes in prisons.

Source: TVTC.

Table 22.3.4
Forecast of Increase in Numbers of Training Staff
Ninth Development Plan

Major Programme	Members of Teaching Staff	Administrative and Auxiliary Administrative Jobs
Base year of Plan(2009)^(*)	9860	3900
Total by the end of Plan	17690	7311
Total targeted increase under Plan	7830	3411
Technical Colleges	4394	1913
Higher-Technical Institutes for Girls	1716	748
Industrial Vocational Institutes ^(**)	1720	750

(*) Approved jobs in budget.

(**) Including institutes of architecture and construction and vocational institutes in prisons.

Source: TVTC.

Table 22.3.5 shows the projected number of male and female trainees in joint, government, private sector and community-service programmes, which are expected to increase at the rate of about 10% under the Ninth Development Plan.

Table 22.3.5
Forecast of Total Number of Male and Female Trainees in Joint, Government, Private Sector and Community-Service Programmes
Ninth Development Plan

Fiscal Year	Joint Training	Community Service	Private-Sector Training	Sub-total	Cooperative Military Vocational Training ^(*)	Annual Total
2009	8100	27300	90100	125500	3250	128750
2010	8700	29200	96400	134300	10000	144300
2011	9300	31300	103100	143700	10000	153700
2012	10000	33500	110400	153900	10000	163900
2013	10700	35800	118100	164600	10000	174600
2014	11400	38400	126400	176200	10000	186200

(*) Fixed Numbers.

Table 22.3.6 shows projected number of trainees in programmes aimed at raising efficiency of employees of government agencies.

Table 22.3.6
Major Training Activities Planned for IPA
Ninth Development Plan

	2010	2011	2012	2013	2014	Total
A. Planned number of participants in higher programmes:						
Number of workshops	93	94	95	96	97	475
Number of participants in Workshops	1761	1782	1803	1824	1845	9015
B. Planned number of participants in training programmes:						
Total trainees	42627	43350	43959	44784	45570	220290
C. Planned number of students in preparatory programmes						
Total of students	2425	2450	2475	2500	2500	12350

22.3.5 Development Strategy

22.3.5.1 Future vision

To enable citizens to participate effectively in socioeconomic and environmental development, through providing adequate technical and vocational training of quality, as required by the labour market, while ensuring the use of modern technologies and innovative methods in training and responsiveness to the requirements of a knowledge-based economy.

22.3.5.2 Objectives

- Accommodating the largest possible number of persons interested in technical and vocational training.
- Qualifying and developing national technical and vocational human capacity in line with labour market needs.
- Providing efficient training programmes of quality that qualify the trainee for the right job in the labour market or make the trainee capable of self-employment.
- Building strategic partnerships with the business sector to implement technical and vocational training programmes.
- Encouraging investment in the private technical and vocational training sector.
- Strengthening the relationship and integration between educational and training agencies.
- Expanding advanced training in support of national plans, and participating in and developing technology transfer.
- Providing the needs of various regions of training centres and vocational qualifications in fields and disciplines appropriate to their development projects, particularly the sites of new economic cities and technology zones.
- Linking the incentives offered to national and foreign private investment with the extent of their contribution to the training and qualifications of national employment.

- Benefiting from specialist bilateral international commissions and international organizations in training and qualification of national employment in the service of the shift towards a knowledge-based economy and an information society.

22.3.5.3 Policies

- Expanding recruitment programmes to attract outstanding training staff.
- Ensuring geographical spread by increasing the number of training units for boys and girls in the governorates and cities and increasing their capacity.
- Expanding on-the-job training and joint programmes.
- Investing in training facilities available in government and private agencies through partnerships.
- Supporting expansion of technical and vocational training programmes.
- Expanding programmes that provide technical and vocational training for people with special needs.
- Developing, organising and updating national vocational qualifications and vocational examinations.
- Designing and implementing periodic training programmes.
- Providing a stimulating supportive environment to ensure that training and supervisory staff remain in interaction with the labour market.
- Monitoring performance of graduate trainees in the labour market.
- Establishing programmes to develop training techniques, distance training, and on-line training.
- Forecasting labour market trends and technical and vocational development, and continuously assessing the national plan for technical and vocational training.

- Following-up and benefiting from global technical and vocational training trends.
- Building strategic partnerships with internal and external agencies to operate training units.
- Expanding community service programmes and continuous training.
- Developing occupational safety and security regulations and enforcing them in training sites.
- Encouraging trainees to pursue excellence and creativity and fostering those who excel to help them become outstanding future trainers.
- Coordinating with funding organizations to support private-training programmes.
- Engaging the private sector in the development of regulations for private-sector training.
- Enabling outstanding graduate trainees to complete their studies in general and higher-education institutions.
- Building standards for national vocational qualifications based on the needs of national plans in support of technical and industrial development and modernization.

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22.3.5.4 Targets

- Increasing the number of male and female enrollees by the end of the Ninth Development Plan, to about 136 thousand in colleges of technology, about 28 thousand in higher-technical institutes for girls, and about 42 thousand in vocational institutes.
- Increasing the number of new male and female training entrants, by the end of the Ninth Development Plan to about 75 thousand in technical colleges, about 11 thousand in higher-technical institutes for girls, and about 28 thousand in vocational institutes.
- Increasing the number of male and female graduates, by the end of the Ninth Development Plan, to about 35 thousand graduates

from technical colleges, about 7 thousand graduates from higher-technical institutes for girls, and about 26 thousand graduates from vocational institutes.

- Training of at least 11 thousand trainees under the National System for Joint Training by the end of the Ninth Development Plan.
- Continuing periodic review of curricula by specialist committees to ensure conformity with labour market requirements.
- Developing a system to evaluate the performance of training staff and adopting a professional licensing system.
- Completing and enforcing national vocational skills standards.

22.3.6 Financial Requirements

The financial requirements for the training sector (TVTC and IPA) under the Ninth Development Plan amount to SR26.4 billion.

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