

Higher Education in Saudi Arabia 1998 - 2008: Towards Building a Knowledge Society*

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Abstract

The paper aims at exploring the progress of higher education in the Kingdom of Saudi Arabia (KSA) in a decade (1998 - 2008), and studying and analyzing the challenges the sector of higher education (HE) has faced as well as the achievements it has accomplished. The paper uses the descriptive-analytical approach in treating the data and information and the issues it deals with. It overview the progress of HE in KSA in relation to international changes, to regional and Arab challenges, as well as to national changes and challenges. It presents a descriptive background of the Kingdome regarding geographical and demographic aspects and its implication in terms of offer and demand. Then there will be an explanation of the Strategy through which the MOHE responded to changes and challenges, by introducing a range of plans, initiatives and short and long term projects. Through these plans and initiatives it was possible for MOHE to gradually overcome the challenges and to transform them into productive programmes and projects so as to reach achievements on different level and areas. These have been shown through a number of performance indicators of development. The paper also presents a number of institutions, centers and bodies that emerged from the Development Strategy, in addition to implemented programmes and initiatives, along with the indicators of performance that were used to measure the efficiency of these programmes in developing the HE system and improving its quality and excellence.

I. Introduction

During the current decade, Higher Education is witnessing great dynamics and interest at both international and Arab levels. Many international bodies (like strategic planning centers, academic accreditation bodies, quality assurance organizations, etc) search for the most efficient strategies and appropriate methods to develop university education in a way that aligns with modern forms and methods. These are used to structure Higher Education Institutions and urge them to play an active role in building a knowledge society, developing scientific research, enhancing quality of the educational process, serving and developing society by balancing between globalization requirements in the 21st century and individual needs along with local society needs. HE in KSA

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is an influencing and influenced part of this developmental dynamics. It is in fact going through a great developmental phase in form, content, quantity, and quality, aiming at using the most recent global trends in HE literature, notably that of building a knowledge society and developing a productive knowledge-based economy. The development and modernization movement has encompassed structures, performance philosophies and trends, research, as well as the scientific, educational and developmental components of programs. It also included the establishment of a number of universities and colleges in different regions and provinces and the restructuring of a large number of departments and majors in compliance with overall national development requirements and labor market needs. All this was linked to issues related to quality and standards. The accelerated growth and development in the HE system along with surrounding factors and changes are necessarily reflected in the different HEIs in terms of their roles, input, processes, and output. Therefore, there is a need for a comprehensive scientific strategy to develop HEIs, to control and optimize development processes, and measure the expected level of performance that each educational institution should comply with in order to ensure quality and excellence.

A World Bank report entitled "Building Knowledge Societies: New Challenges Facing HE, 2002" indicates that HE has faced unprecedented challenges since the beginning of the 21st century, resulting from the impact of globalization, the information and communications revolution, and the increasing importance of knowledge as a development factor. However, there are opportunities emanating from these challenges, since the role of education in general and of HE in particular seems more influencing than ever in knowledge economies and knowledge-based societies. HE also plays a vital role in the creation of intellectual ability, as the production and use of knowledge depend on it. It promotes continuing education to renew the knowledge and skills of all individuals. At the same time, new types of HEIs and new forms of competition urge traditional institutions to accelerate the pace in changing their modes of operation and performance and to benefit from the great opportunities provided by new Information and Communication Technologies.

In accordance with these developments, a number of countries have sought to introduce radical shifts in their HE systems, particularly through changing funding and management methods, institutional excellence, establishing evaluation and accreditation mechanisms, reforming curricula and through technological innovation. However, development has been uneven and irregular with clear disparities between HE systems in developing countries and those of developed and industrialized countries. The report shows that most developing countries and countries in transition are struggling to overcome the difficulties resulting from inappropriate reactions to existing challenges. Certain issues have not yet been settled, notably, the sustainable expansion of HE coverage, reducing inequity in admission opportunities, the improvement of quality and educational relevance, and the adoption of efficient administrative structures and practices. Despite the fact that rates of enrollment in HE have risen significantly in all developing countries, the enrollment gap between most developed and developing countries has widened. In many countries, outdated administrative practices have prevented HEIs from adopting the change and implementing reforms and innovations.

This report confirms that in this context, developing countries and countries in transition face a double challenge: on the one hand, there is a need to settle existing problems surrounding their HE systems, such as coverage, equity, quality, and administration. On the other hand, the aforementioned countries are - like industrialized countries – confronted to new challenges resulting from the establishment of knowledge-based societies and democratic societies. The main concern is about the ability of these countries to adjust and form their own HE systems in a way that can help them confront these old and new challenges.

This paper considers a knowledge society as an integrated system (with knowledge economy as one of its components) that takes into account the production and use of knowledge in all fields including scientific, medical, engineering, human and social specializations. This suggests focusing on the two kinds of knowledge mentioned by Else and Roberts (2000): the frontier knowledge, produced by research, development and innovation and the transferable knowledge, interested in social and human knowledge and transferred from generation to generation. Bakri (2008) affirms that five axes should be considered while building a knowledge society system:

- **Strategy axis:** that works on developing the necessary plans.
- **Technology axis:** that involves the technologies we need or the technologies from which we can benefit.
- **Institutions axis:** that concerns institutions operating in the various knowledge fields, including education, scientific research, innovation and creativity institutions, media institutions, institutions that provide goods and services using renewable knowledge.
- **Knowledge environment axis:** that should contribute in enhancing knowledge cycle activities and benefiting from them, not obstructing them.
- **Knowledge cycle axis:** it is at the center of previous acts and includes knowledge production, dissemination and use, which lead to sustainable development.

Al Qotob (2008) indicates that the philosophy of excellence in university education is based on the following pillars:

- The comprehensive analytical critical vision of the reality of university education in its interaction and its relation with social reality namely its changes, crises and forward movement.
- Establishing methodological paths that university education should follow and that are explored through excellence in international experiences, expertise and models.
- Monitoring principles and norms adopted by university education and goals that should be attained in the future.
- Introducing new organizational visions to university education so that it overcomes current obstacles and crises, uses global experiences and adopts national characteristics as dynamic mechanisms confirming their existence.

1. Purpose of the paper

This paper aims at examining the evolution of HE in KSA during the period 1998- 2008 by studying and analyzing the challenges it has faced and the achievements the HE sector has made. KSA seeks to build a knowledge society and an economy that is based on the production, dissemination and use of knowledge to accompany contemporary world trends and develop the HE system in all fields. Moreover, this paper also intends to highlight the most important features of the Ministry's strategy to develop the university education system and to show the most prominent performance indicators related to the strategy's axes.

2. Questions

This paper is based on a central question: What are the main features of the HE evolution in the country during the period 1998 -2008 and what are the most important axes of the strategy used to develop the HE system in KSA?

Two other questions emerge from this central question:

- What are the development programs and plans included in the short term path of the strategy?

- What are the development programs and plans included in the long term path of the strategy?

3. Methodology

This paper used the analytical descriptive approach to process data and information and study the cases handled, which means that it does not only describe the data and information, but also explains and analyzes them to deduce the main indicators.

The presentation and discussion methodology is based on the following four sections:

Global changes: This section deals with the changes the HE sector faces at the global level.

General descriptive background of KSA: It provides descriptive information on the country from geographic and demographic viewpoints and deals with the growth of the HE sector and in the context of supply and demand.

Local changes and challenges: It seeks to identify the challenges and changes that influence HE locally.

The Ministry's response to the changes. This section reviews plans and initiatives and the strategy adopted by the Ministry to respond to, or address, different changes, including introducing developmental programs for the Ministry and for HEIs and the ways to benefit from opportunities and to decrease pressure on the system.

II. Global changes facing HE

The main global changes that face HE are as follows (World Bank report, 2002, Ammal, 2006, Cooke, 2002, Frank & Richard, 2004):

1. Human societies have gone through major shifts from agrarian societies to industrial ones up to knowledge societies that focus on the production, dissemination and use of knowledge in various productive activities and services,
2. The growing and developing role of service sectors in keeping abreast of such shifts,
3. The development in the role, resources, and mechanisms of HE as a service sector to respond to these shifts,
4. The quality of training of citizens and the vital role that HE plays in making competent individuals, and empowering them in terms of their command of information, skills and applied knowledge. In addition to the quality of the programs offered by HE,
5. The transformation of knowledge into a profitable investment through promoting new ideas such as science parks, technology incubators, intellectual property, global pioneering, etc.
6. The restructuring of the plans, programs, and methods of universities in order to provide students with the necessary knowledge and skills and enable them to go into a labor market that relies on knowledge,
7. The increase in admission capacity in accordance with the growth of social demand to higher education, as a consequence of the global demographic explosion,
8. The emergence of new concepts in HE literature that international organizations have adopted and to which local policies have responded. On the quantitative level, there are concepts like: right to education, education for all and equal opportunities. On the qualitative level, there are concepts like: quality, academic accreditation, educational return, cost, the developmental role of education, and the internal and external efficiency,
9. The emergence of modern means of communication, the accelerating progress in

- technology, the sweeping orientation towards globalization and internet access, as well as the new educational forms like distance learning, E-learning, and virtual universities,
10. The diversification of HEIs funding sources,
 11. The importance given to HE relevance,
 12. HEIs administration, its particularity and program quality.
 13. Quality enhancement at different levels in HE.
 14. Coping with these changes requires large financial resources and qualified staff.

III. General descriptive background of KSA

As an introductory remark to this section, a number of Saudi geographic, demographic and social features need to be highlighted:

1. KSA covers a vast geographical area equivalent to 2.250.000 km which is close to a quarter of Europe's area and fourfold the area of an industrialized country like France;
2. KSA has one of the highest population growth rates in the world (2.5%);
3. The young constitute the largest proportion of the Saudi population. The Saudi age structure is as follows (Ministry of Economy and Planning, 2007):
 - 0 - 14 years: 40%
 - 15 - 24 years: 22%
 - 25 - 64 years: 34%
 - 65 years and above: 4%
4. The geographical distribution of communities is characterized by a wide dissemination over an area that almost equals that of a continent.
5. There is a gap between supply and demand (number of high school graduates and available seats in HEIs); the number of high school graduates has actually increased by 400% between 1993 and 2008.

IV. Local changes and challenges that HE faces

The major local changes and challenges that HE faces are the following (Al- Ohali, 2007):

1. The large geographical area of the country, it nearly equals that of a continent and is almost a quarter of Europe's area.
2. The rapid population growth; KSA has one of the highest population growth rates in the world. One example that clearly shows this is the number of high school graduates that has increased by 400% during the 14 years between 1993 and 2008.
3. The young constitute the largest proportion of the Saudi population (ages from 15 to 24 those who are destined for enrollment in HEIs).
4. The large geographic distribution of communities in an area that almost equals that of a continent, their different structures and age categories have added another burden on HEIs.
5. The Saudi economy was almost totally dependent on one resource (petrol), which exposes the economy to many changes and shifts according to the local, regional and international circumstances.
6. The increase in the number of high school graduates and the widening gap between supply and demand (number of high school graduates and available seats in HEIs). The admissions problem reached a peak in 1995 because of the lack of alternatives to

universities, especially in technical and vocational education. The government had made great efforts to solve the admissions problem.

7. For different economic and local reasons (notably after the 1991 Gulf war and its economic repercussions), the evolution of HEIs did not proceed at a normal pace, which resulted in some decline in the implementation of the Ministry's plans.
8. The plurality and diversity of HEIs supervising authorities, which reduces the effectiveness, integration, and productivity level of the HE system.

V. How did the Ministry respond to the changes and challenges?

Despite all the global changes and local challenges faced by HE, there have been some clear and obvious achievements made by Saudi universities, particularly their efforts aimed at ensuring the manpower for the last 50 years in both the public and private sectors. Universities have also contributed in development-related research and studies. As for the response to the above-mentioned global and local changes, the Ministry and universities did not address HE issues blindly; as they based their action on an integrated scientific approach with essential pillars. These notably include: taking into account the goals, policies and programs resulting from the country's five year development plans, benefiting from international experiences in developing the HE system through a set of programs and procedures; and short, middle, and long term plans. Thus, there are two development paths:

- The short term path: It concentrated on admission, capacity and HE relevance.
- The long term path: In addition to continuing focus on admission and relevance issues, HE addressed the following: quality, diversification of financial resources, scientific research, overseas scholarships schemes, modernization of administrative regulations, international partnerships and strategic planning.

Developmental initiatives, plans and programs had the following distinctive features and characteristics:

1. Diversity and comprehensiveness of all HE sectors.
2. Flexibility in responding to local, regional, and international changes.
3. Taking society's needs into consideration and keeping up with development requirements.
4. Benefiting from international experiences and dealing with globalization positively.
5. Creating a competitive environment among universities and providing the necessary support to promote creativity and excellence.
6. Ensuring total quality criteria in programs and institutions and guaranteeing attainment of highest quality levels.
7. Allowing universities and HEIs to mutually benefit from their experiences through inter-learning and ensuring that they become learning organizations.

To have a clear comprehensive vision of the adopted strategy in the development of the HE system in KSA, in both paths regarding plans and initiatives, the questions in this paper will be addressed as a comprehensive central question allowing the reader to see the principal components of the strategy. This section of the paper relied on a number of Ministry reports (Ministry of HE, 2006, 2007, 2008, and 2009). For organizational and methodological purposes related to the nature of this paper, the plans and initiatives were distributed into the following themes:

1. Admission and capacity
2. Compliance with development needs and the labor market
3. Quality

4. Diversification of funding sources
5. Scientific research
6. Overseas scholarships schemes
7. Modernization of administrative regulations in HE
8. International partnerships
9. Strategic planning

As mentioned previously, the Ministry's response to changes and challenges can be summarized in two paths: short term plans and programs and long term plans and programs.

1. Admission and capacity

Short term planning: With the widening gap between supply and demand, between high school graduates and available seats in HEIs and the increase by 400% of the number of high school graduates between 1993 and 2008, the Ministry has begun implementing the following initiatives:

- a. Reducing the gap between supply and demand by increasing admission opportunities in universities and boosting capacity, which led to the following:
 - 1) Increase of admissions in both private and governmental universities, which soared from 68,000 seats in 2004 (before the affiliation of Girls' Colleges and Teachers Colleges to the MOHE) to almost 205,000 seats in 2008, an increase of up to 201%.
 - 2) The number of admitted students during the first semester of 2008 in all HEIs (including universities) reached 250,000 male and female students.
 - 3) The universities capacity rate in 2008 reached 88% of the number of overall high school graduates, which is one of the highest world admission rates.
 - 4) The number of private HEIs stood at 7 universities and 20 colleges. More than 100 preliminary permits have been issued to allow the establishment of more private colleges. 10,000 scholarships were awarded to outstanding male and female students in private colleges and universities.
- b. The expansion of Community Colleges. The establishment of Community Colleges refers to the importance of HE program diversification to ensure a qualified workforce to meet society's needs and carry out development plans. Their academic achievement and cooperative training characterize Community Colleges, which offer applied and vocational majors required by the labor market. As examples of these majors include: Applied Medical Sciences, Computer and Network Technology, Biology and Microorganisms Laboratory Technician, English Language, Marketing, Financial Management, Accounting, and others. Some programs were even designed in coordination with the chambers of commerce.

Community Colleges have two main programs:

- 1) Developmental programs that prepare high school graduates to go into the labor market in productive areas and consolidate their skills through training programs.
- 2) Transition programs that provide an opportunity for outstanding students to pursue a university education.
- c. The development of applied programs and diplomas presented by universities through deanships of community services and applied studies colleges. These programs and diplomas are characterized by the following:
 - 1) They are designed according to labor market needs.
 - 2) They focus on applied and skilled aspects.

- 3) They are so diverse that they admit high school graduates and theoretical major graduates, and develop them to conform with the available labor opportunities in the public and private sectors.
- d. The establishment of parallel education programs in universities that cater for students who are unable to enroll in morning (regular) programs and disciplines. Parallel education programs are presented with the same quality of original programs with just the timing difference as they are provided during the evenings.

Long-term planning:

It focuses on completing growth in the following aspects:

- Geographical growth
- Quantitative growth
- Qualitative growth

Long-term planning is also about developing the elements of the academic environment.

These include:

- The learning environment
- The faculty member
- The student
- The learning programs and plans

Development also included the two sectors of HE:

- Governmental universities and colleges (HE)
- Private universities and colleges (HE)

Long-term planning contains a set of strategic plans, programs and projects such as:

- a. Completing the quantitative and qualitative growth in HEIs. The main indicators for this growth until the end of 2008 were:
 - 1) The establishment of 12 new governmental universities, with applied scientific faculties covering different majors such as all branches of the Health Sciences (Medicine, Dentistry, Pharmacy, Applied Medical Sciences, Nursing), Engineering Colleges, and Computer and Business Techniques. Thus, the number of governmental universities is now 20.
 - 2) In four years, the number of universities has increased from 8 to 20. Studies will be transferred within the next two years to new university campuses for the following universities: Jazan University, Najran University, Al-Baha University, University of Tabuk, AlJouf University, Northern Borders University and colleges in other provinces.
 - 3) The number of faculties has reached 423 in 76 provinces; they used to cover 16 provinces in the past. Nearly 700,000 male and female students attend them today.
 - 4) The number of accredited colleges in new universities is 190, attended by over 170,000 male and female students.
 - 5) There are 7 private universities and 20 private colleges that have scientific and applied majors in different fields.
 - 6) More than 100 preliminary permits have been issued to allow for the establishment of private colleges. In 2008, 9 definitive licenses were issued, as well as 19 preliminary licenses, 6 general accreditation licenses and 10 special licenses.

Due to this expansion in university education, the number of colleges has increased as shown in the table 1:

Table 1: Indicators of growth in universities and colleges affiliated to the Ministry of HE

	Unit	2002 /2003	2008*	Growth rates
		Total	All faculties affiliated to the Ministry after adherence of Girls' Colleges, Teachers Colleges and Health Colleges	
1	Governmental universities	8	20	% 150
2	University Colleges	199	423	%113
3	Colleges of Medicine	7	19	%171
	Colleges of Dentistry	3	11	%267
	Colleges of Pharmacy	3	13	%333
	Colleges of Applied Medical Sciences	3	24	%700
	Colleges of General Health and Health Informatics	0	1	-
	Nursing Colleges	0	5	-
	Health Colleges and institutes	0	50	-
	Engineering Colleges	7	26	%271
	Colleges of Sciences	7	27	%285
	Colleges of Computer	3	18	%500
	Community Colleges	20	52	%160
4	Teaching hospitals (included in the universities budgets)	3	12	%300
5	Private Universities	1	7	%600
6	Private Colleges	4	20	%400
7	Number of students enrolled in governmental and private colleges and universities affiliated to the Ministry	67,855**	205,000	%201

* Data after teachers and girls colleges as well as health Colleges were affiliated to the Ministry on 21/6/2007 (5/6/1428 AH).

** These statistics do not include students who enrolled in Teachers Colleges and Girls' Colleges not affiliated to the Ministry at the time.

These colleges had the necessary financial allocations for installations and equipment. They also assigned the qualifications of teachers and faculty members they needed.

- b. Completing the plans for university education expansion in different regions and provinces. In addition, facilitating HE opportunities for all male and female students in their regions in line with any development plans. The main indicators are:
- 1) An increase in the number of regions where HE opportunities are available from 9 to 13 administrative regions.
 - 2) An increase in the number of provinces to 76.
 - 3) An increase in the number of Colleges from 199 to 423.
 - 4) The growth rate in different sectors:
 - Governmental universities: 150%
 - Private universities: 600%
 - University colleges: 113%
 - Private colleges: 400%
 - Enrolled students: 201%

Table 2: Geographical distribution of colleges in different Saudi regions

	Unit	2002/ 2003	2008*	Growth rates
		Total	All faculties affiliated to the Ministry after adherence of Girls' Colleges,	
1	Number of regions where HEIs are found	13	13	% 0
2	Number of provinces where HEIs affiliated to MOHE are found	65	76	%17
3	Number of university colleges in the regions	199	423	113%
3	Riyadh	46	105	128%
	Mecca	42	74	76%
	Medina	15	33	120%
	Kassim	15	28	87%
	Eastern Area	26	49	88%
	Asseer	18	38	111%
	Hael	5	12	140%
	Tabouk	5	12	140%
	Baha	6	12	100%
	Northern Frontiers	4	12	200%
	Jouf	7	21	200%
Jazan	7	14	100%	
Najran	3	13	333%	

* Data after teachers and girls colleges as well as health Colleges were affiliated to the Ministry on 21/6/2007 (5/6/1428 AH).



2. Compliance with development needs and the labor market

Its main indicators until the end of 2008 were:

- a. The Ministry of HE in coordination with universities has restructured colleges, programs and majors. The main indicators are:
 - 1) The reduction of admissions in some departments, the merging of existing departments, the separation of departments, the transformation of some facilities into Colleges, limiting studies to postgraduate level or shutting down some departments in light of the labor market needs. The admission rate this year (2008) in labor market-related majors is 82.73%.
 - 2) Opening new colleges and departments was limited to required majors in the labor market like Medical majors, Engineering, Computer Science, Information Systems and Biology. All recently opened Colleges (the number being 104) have majors that are included in those directly related to labor market requirements. This has led to an increase in the rate of admissions in market-oriented majors (85.57%) for male students and (70.21%) for female students in governmental and private colleges affiliated to the Ministry of HE.
- b. The expansion of private HE which is a great aid in implementing the policies of compliance with development needs and the labor market. The private HE list of regulations stipulated that majors provided by private colleges' majors should be compliant with market needs. In light of that, the majors in private HE were mainly those related to Health, Applied Sciences, Engineering, Computer and Business, all are 100% related to labor market needs.
- c. King Abdullah Overseas Scholarship Program, which is an essential project to achieve HE graduates employability. In fact, these scholarships are only given for scientific and applied majors that are fully related to development needs.



3. Quality

Its main indicators until the end of 2008 were:

- a. Review of the plans and curricula in light of outcome-based learning. This is a recent trend that the majority of global universities have started to focus on due to its importance in improving output quality. It is aligned with another trend in university education: problem based learning. The most important indicators are:
 - 1) Many universities have reviewed the plans and curricula of some departments and developed them according to the recent world trends, development requirements and labor market needs. Thus, the admission rate in majors needed in the labor market has increased to reach 82.73%.
 - 2) All new governmental and private universities and colleges plans and curricula are 100% based on development and labor market needs.
 - 3) Community College plans and curricula have been linked to labor market needs in coordination with chambers of commerce.
- b. Development of university education output through a two-path plan:
 - 1) The academic specialized path concerned with students' development in their field of specialization.
 - 2) The skilled practical path that focuses on developing students' skills in communication, the use of technology and personal skills. This is through identifying the skills contained in the programs of prestigious universities and some applied universities



in advanced countries and through linking students to a real working environment during their studies.

- 3) To achieve the goals of this program, some universities have implemented the preparatory year program (called deanship in certain universities) and have made it compulsory for some majors.
 - 4) Centers were established to develop and refine personal skills, communication, research and self-learning skills for male and female students.
 - 5) Many agreements have been concluded with a number of partners and institutions to train students and organize periodic field visits.
- c. Increasing universities' external efficiency by controlling the output and verifying its quality through the National Commission for Academic Accreditation and Assessment (NCAAA).

The main indicators until the end of 2008 were:

- 1) The NCAAA completed the self assessment requirements for institutions, as well as the national qualifications framework. It also ensured the commitment of programs, students, administration and faculty members to quality requirements among many other requirements.
 - 2) During the last 3 years, the NCAAA has sought the help of European, American and Australian experts and has examined assessment, accreditation and quality assurance models in a number of countries.
 - 3) Assisted by many experts, the NCAAA started its pilot actions, then made the preliminary assessment of its mechanisms,
 - 4) A number of Engineering programs in some universities have been accredited by the Accreditation Board for Engineering and Technology (ABET).
 - 5) Administration programs in some universities have been accredited by the Association to Advance Collegiate Schools of Business (AACSB)
 - 6) Dentistry programs in some universities have been accredited by the Association for Dental Education in Europe (ADEE), so has the Educational Diploma Program by the British quality foundation and the blood bank by the American Association of Blood Banks (AABB).
- d. The establishment of deanships or agencies for academic development at universities. Its main indicators until the end of 2008 were:
- 1) Quality and development deanships, agencies, units and offices were established.
 - 2) Twin relations have been established with some international programs. There has also been cooperation with global universities to benefit from their experiences in HE administration and to optimize the educational process (this will be presented in detail in the section on international partnerships).
- e. Increasing universities' internal efficiency through assuring the quality of university education input. The National Center for Assessment in Higher Education (NCAHE) can guarantee this by developing admissions tests at universities, in particular: the abilities test and achievement test.
- 1) Using admission tests has resulted in reducing waste, decreasing the number of years students spend to graduate and in reducing failure and dropout rates.
 - 2) In identifying students' performance weaknesses, admission tests have enabled the MOHE to develop general curricula and learning environment in a convenient way.
 - 3) The NCAHE's test results were accepted by HEIs in the Gulf region and in some foreign countries like Britain and the USA.

- 4) The MOHE considered it as a good indicator for nominating students for scholarships abroad through the King Abdullah Overseas Scholarship Program.
- f. Supporting the centers of excellence in research and preparing them for their research programs.

Its main indicator until the end of 2008 was the approval to support 12 research centers of excellence. Table 3 shows these centers.

Table 3: Centers of Excellence in Research in Saudi universities

	Name of the center	University
1	Center of Excellence in Environmental Studies	King Abdulaziz University
2	Center of Excellence in Genomic Medicine Research (CEGMR)	King Abdulaziz University
3	Center of Excellence Research in Petroleum Refining and Petrochemicals	King Fahd University
4	Center of Excellence Research in Renewable Energy	King Fahd University
5	Center of Excellence for Research in Engineering Materials	King Saud University
6	Center of Excellence In Biotechnology Research	King Saud University
7	Date Palm Research Center	King Faisal University
8	Excellence Research Center for Contemporary Issues (phase II)	Al - Imam Muhammad ibn Saud Islamic University
9	Excellence Center of Science and Mathematics Education (phase II)	King Saud University
10	Center of Excellence in Osteoporosis Research (phase II)	King Abdulaziz University
11	Center of Excellence in Desalination Technology (phase II)	King Abdulaziz University
12	Center of Research Excellence in Corrosion (phase II)	King Fahd University

- g. Supporting the innovation and excellence project of the faculty members, first implemented by the Ministry during the previous year.

Its main indicators until the end of 2008 were:

- 1) In pursuing the implementation of the project for the second consecutive year after its success was praised by the faculty members of Saudi universities. These members have benefited from the training programs implemented by the project in many fields. These include fields related to the development of teaching methods, the use of technology in teaching, keeping pace with world developments in the research field and in the skills of information sources diversification.
- 2) The Ministry has encouraged universities to compete in offering training programs. Universities have presented 180 programs to the Ministry. After the scientific and financial arbitration, 41 training programs were funded and implemented through 174 training sessions.

- 3) The number of Saudi faculty members participating in training programs at some universities has sharply increased compared to the previous year. The increase rate has even attained 100% in many programs.
- 4) Some universities have contracted with distinguished trainers at foreign universities. The following table shows the names of foreign universities and houses of expertise that have been consulted in order to provide qualified trainers for the program this year.

Table 4: Foreign expertise contracted by Saudi universities in the innovation and excellence project

	University	Foreign expertise
1	Al - Imam Muhammad bin Saud Islamic University	University of Pennsylvania, USA
		University of New England, Australia
		Gulf Arab States Educational Research Center
		De Bono Thinking Center
2	King Saud University	Centre for University Teaching, University of Ottawa
		Biggio Center for the Enhancement of Teaching and Learning, Auburn University
		POD Network in HE
		Oregon State University, USA
3	King Abdulaziz University	Virginia Tech University, USA
		The World Bank Group - Middle East and North Africa
		University of Bristol, Department of Continuing Education, Britain
		Australian Universities Quality Agency
		University of Manchester, UK
4	King Fahd University	Centre for University Teaching, University of Ottawa
		York University, Canada
		University of Illinois, USA
		Tony Bates Associates Ltd, Canada
		University of Kansas, USA
5	Taibah University	Dokeos Company, Belgium

4. Diversification of financial sources

The main achievements in this field until the end of 2008 were:

- a. The increase of public support. The Saudi government boosted its support for HE in all branches and levels. Suffice to say that the Ministry's budget 3 years previously was 325 million riyals and it has now reached 10 billion riyals. 8 billion of the last two years' budget surpluses were allocated to new universities and colleges.

- b. A threefold increase in the budgets of certain universities over the last 4 year (335%).
- c. A 130% increase in the Ministry's expense rate over the last years, at an average of more than 32% per year for both public and private sectors.
- d. Adoption of the concept of productive university through research institutes, studies and research.
- e. Development of university resources: consultations, endowments, donations, and research chairs.

5. Scientific research

The main achievement in this field is the focus on many patterns of scientific research:

- a. Basic scientific research
- b. Contract research; institutes that focus on contract research with public and private sector institutions and bodies were put in place:
 - 1) The Research Institute at King Fahd University carried out many types of contract research that amounted to over 400 million riyals.
 - 2) King Abdullah Institute for Consulting and Research carried out research worth more than 250 million riyals.
 - 3) King Abdulaziz Institute for Research and Studies prepared research that amounted to more than 100 million riyals.
- c. Science parks are a new trend aimed at developing the knowledge economy and narrowing the gap between scientific innovation and commercial application. Its main indicators until the end of 2008 were:
 - 1) The establishment of the Dhahran Techno-Valley at King Fahd University, with an area of 450000 m². Long-term contracts were signed with a group of global and local companies.
 - 2) The establishment of the Riyadh Techno Valley at King Saud University, with an area of 1,000,000 m². The project was inaugurated and contracts were signed with local and foreign companies.
 - 3) The establishment of a fully developed science park by King Abdulaziz University. The park was preceded by the establishment of 4 research chairs in the fields of incentives, osteoporosis, AIDS and water.
- d. Centers of excellence: It is worth noting that despite the financial difficulties that scientific research faced in the past, a large number of our universities' staff managed to obtain patents that were registered in America, Japan and some European countries. A number of these were awarded the King Abdulaziz medal of excellence and first order.

6. King Abdullah Overseas Scholarship Program

The main achievements in this field until the end of 2008 were:

- a. Within this program, the state allocated more than 7 billion riyals for scholarships in prestigious universities in a number of countries. These included: the USA, Britain, Germany, Italy, Spain, the Netherlands, Canada, Australia, New Zealand, France, Japan, Malaysia, China, India, Singapore, and South Korea.
- b. More than 28,000 male and female students obtained scholarships abroad during the previous 3 years (2005- 2007). Over 7,000 male and female students are expected to benefit from such scholarships in the year 2008.
- c. The number of students who have scholarships was 2,600 at the beginning of the project

in 2005. It has now reached more than 54,000 and the program is still being supported and in progress.

- d. King Abdullah Overseas Scholarship Program aims at awarding scholarships to ensure a quality global HE output in majors the country needs in all degrees: Bachelor, Masters, PhD, or medical fellowships. The following areas of study are included in the program:
- 1) Medicine, Dentistry and Health Sciences
 - 2) Engineering, Information Technology for postgraduate studies
 - 3) Law, Regulations and Arbitration for postgraduate studies
 - 4) Engineering for bachelor degree in Germany in cooperation with DAAD.
 - 5) Scholarships for persons with special circumstances (orphans) in cooperation with the Ministry of Social Affairs.
 - 6) Civil Aviation specializations in cooperation with the high authority for civil aviation.
 - 7) Special Education specializations in cooperation with Prince Sultan bin Abdulaziz Charitable Foundation.
 - 8) Specializations in Human Sciences at Oxford University in cooperation with Prince Sultan University.
 - 9) Political and Financial Sciences at the Science Po University, France. - Public management and Public Policy for postgraduate studies in cooperation with Lee Kuan Yew Institute, Singapore.
 - 10) Touristic specializations in cooperation with the Supreme Commission for Tourism.
 - 11) Disability specializations in cooperation with Prince Salman Center for Disability Research.

7. Modernization of administrative regulations in HE

The main achievements in this field until the end of 2008 were:

- a. A unified HE sector. In fact, decisions were adopted to affiliate Girls' Colleges and Teachers Colleges to the Ministry of HE. All programs and majors in these colleges were thus restructured in the following manner:
 - 1) Programs and majors were restructured in more than 100 Girls' Colleges and were adjusted to labor market needs. There were 573 departments including 672 sections with new names and new sections.
 - 2) As for Teachers Colleges, their majors were restructured to comply with development and labor market requirements with a special focus on Sciences, Mathematics, Computer science and English Language.
 - 3) Recently, 50 Health Colleges and a Health Institute were transferred from the Ministry of Health to the Ministry of HE. These colleges are now being developed and restructured and their departments modernized.
- b. A number of special rules and regulations related to HE have been adopted, like those related to university professors, students, tests, scientific research, equivalence of diplomas, etc. These rules and regulations are periodically reviewed to reflect local and international developments.
- c. Conducting scientific studies on how to improve the performance of faculty members on the basis of "reward for performance". This arrangement aims at motivating university professors; creating a competitive academic environment; and encouraging creativity, innovation and production, taking into account all scientific educational changes. After these studies, the government approved, in its meeting on 22008/9/, a number of incentives and honorarium to encourage faculty members.

8. Establishment of international partnerships with reputable global HEIs

The main achievements in this field until the end of 2008 were:

- a. The establishment of links and partnerships with a number of international programs, and cooperation with global universities to benefit from their experiences in HE system development, and improvement of educational process at both old and newly established universities. In this regard, the Minister of HE, with a delegation consisting of a number of university directors, visited ministries, universities and centers in France, Britain and Germany this year. A number of agreements were signed during these visits. The Ministry agreed on a number of cooperation memorandums and executive programs with other ministries in the following countries: India, Azerbaijan, Italy, South Africa, Korea, Iran, China, Jordan, Syria, Sudan, Algeria, the Philippines, Pakistan, France, Malaysia, Austria, Poland, Tunisia, Uzbekistan, Russia, New Zealand, the Czech Republic, Australia, Singapore, Morocco, Ireland and Argentina.
- b. The Ministry provided support for certain universities to conclude agreements and partnerships with world colleges and research centers. For example, King Fahd University concluded around 54 agreements with universities and research centers in France, the USA, Britain, India, China, Germany, Sweden and Singapore. King Abdulaziz University also concluded over 25 agreements with world colleges and research centers. King Fahd University of Petroleum and Minerals established strategic and cooperative links with global institutions and local centers. The number of active agreements reached more than 21. The National Center for e-learning and distance education has contracted with a global think tank and had a successful encounter with Meteor Group, Malaysia.
- c. Support for programs at some universities through contracting with outstanding teachers and Nobel Prize winners scientists. Saudi universities seek to attract outstanding researchers and professors to teach and supervise postgraduate students. For example, King Saud University signed service contracts with 14 Nobel Prize winning scientists. King Fahd University of Petroleum and Minerals has also attracted a group of outstanding foreign professors.
- d. Support for the establishment of international advisory boards at some universities. Their philosophy is based on attracting distinguished global advisors and benefiting from them to develop the university. For example, King Fahd and King Abdulaziz Universities created each International Advisory Board and organized many advisory meetings for these boards.
- e. Development of the innovation and excellence project for the faculty members. The Ministry had embarked on the project the previous year through contracting with some universities and outstanding trainers at foreign universities. It also established partnerships with international houses of expertise to provide qualified trainers for the program this year. For example, Al - Imam Muhammad Ibn Saud Islamic University contracted with the University of Pennsylvania, USA, De Bono Thinking Center and New England University, Australia. Kin Saud University contracted with Oregon State University, USA, Centre for University Teaching, University of Ottawa and POD Network in HE. As for King Fahd University, it contracted with the University of Illinois, USA, York University, Canada, and the University of Kansas, USA.



9. Strategic planning

The main achievements in this field until the end of 2008 were:

The Ministry of HE has embarked on a comprehensive development process. It prepared a long term plan for university education within the country to promote its positive aspects and face the present and future challenges in a project called “The Future Plans for HE in the Kingdom of Saudi Arabia” (AFAQ). The scope of the project was limited to university education, including governmental and private universities and colleges affiliated to the Ministry of HE while taking into account common subjects with other relevant stakeholders.

The project aimed at preparing a 25 - year plan that defined the HE vision, its mission, needs, types, output quality and funding methods. It also developed an executive plan for the first 5 years and put in place a mechanism to adopt strategic planning methods in HEIs.

The planning process relied on a number of basic principles emerging from commitment to the teachings of Islam and aspirations and directives of the political leaders who took care of different developmental aspects, particularly education. It also relied on achieving HE policy goals and building on initiatives and the achievements of the recent years in the university education sector. These principles are: planning based on a futuristic vision, harmonization with other national plans, keeping up with global experiences and trends in HE, expansion of stakeholders’ participation and including their aspirations, building strategic planning culture at universities and commitment to ensure quality.

To guarantee the strategy’s comprehensiveness of all HE aspects, they were distributed into 8 tracks; admission and capacity, faculty members, staff and students, programs and curricula, research and innovation, governance (organization and management), financing, IT and infrastructure.

Strategic goals of the future plan for higher education:

1. Ensure admission of qualified students in HEIs and respond to the increasing demand.
2. Meet future requirements to increase knowledge, satisfy labor market needs, develop society and increase external efficiency.
3. Increase internal efficiency of HEIs.
4. Ensure a balanced ratio of students’ numbers to faculty members so it can be in line with the overall rate of world best practices.
5. Increase the rate of faculty members who hold a PhD, develop their skills, motivate and retain them.
6. Upgrade staff performance, increase their qualifications and develop their skills.
7. Increase students’ competitive abilities, develop their skills and enhance their aptitude.
8. Promote the educational content, teaching and learning methods and evaluation patterns with the use of innovation and diversity.
9. Enhance the quality of academic programs, and obtain local and global accreditation.
10. Provide sufficient numbers of researchers in line with world rates.
11. Increase spending on scientific research adjusted to the overall rate of world best practices.
12. Raise research and innovation productive capacity and enhance its quality.
13. Strengthen scientific research management methodology, ensure its consistency and provide an encouraging environment.
14. Promote flexibility and response while maintaining institutional accountability within the university education system.
15. Excel in leadership, cooperation and transparency with the university education system.



16. Keep providing free university education and diversifying financial sources.
17. Provide a high-speed, low cost communication internet network among HEIs.
18. Ensure harmonization and integrity of IT strategies, systems, educational, research and administrative applications in HEIs.
19. Produce and publish a digital cognitive content in all fields to be made available to HE staff and students and society.
20. Continue the development of infrastructure and create a motivating environment for the educational process and scientific research.

VI. Conclusion

This paper has examined the strategy adopted by the Ministry in coordination with universities to respond to, or address, various local and international changes and challenges. It also addressed relevant developmental programs inside the Ministry and HEIs along with the ways to benefit from opportunities and decrease pressure on them. International experiences were in fact used to develop the HE system through a set of programs, procedures, short, middle and long term plans. The development strategy can be summarized in two paths:

- The short-term path: It concentrated on urgent strategic issues, like admission, capacity and HE graduates employability.
- The long-term path: It focused on the issues of admissions; HE graduates employability and other strategic matters. These included: the development of academic environment elements (educational environment, faculty members, the student, plans, study programs), the development of girls' HE, quality promotion, King Abdullah Abroad Scholarship Program, the compliance between education output and the labor market, new university projects, the promotion of private HE, the development of scientific research, the modernization of rules and regulations, optimal use of HE administrative technique (transformation of the ministry and universities to electronic institutions), global partnerships and international cooperation, and the strategic HE plan in KSA for 25 years (AFAQ).

This paper also examined a group of institutions, centers, and bodies that emanated from the development strategy as well as implemented programs and initiatives. It mentioned the performance indicators that measure the program's efficiency in the HE system development and the rise of quality and excellence levels.

The following indicators were the most important to carry out this developmental strategy:

1. An increase in the admission and capacities in HEIs; the rate even reached 88% of overall secondary school graduates for 2008.
2. An expansion in the establishment of governmental universities; their number reached 21 encompassing several scientific, engineering, applied, medical and administrative majors.
3. An expansion of private Higher Education; the number of private colleges reached 7, beside 20 private colleges, where all majors (100%) are linked to the labor market and development needs.
4. Granting external scholarships to over 50,000 students in majors closely related to developmental needs and the labor market within the King Abdullah Overseas Scholarship Program.
5. Establishment of 13 excellence research centers in various scientific, engineering and technical fields.



The Ministry will pursue the development of the strategic and institutional process through the following steps:

1. Continue the expansion of HE so it covers all cities and provinces in the country.
2. Keep working on establishing a strong relationship with the sectors of finance, business, scientific and social institutions.
3. Benefit from useful globalization trends like the enhancement of the transparency level, governance and modern administration, development of HEIs and their infrastructure according to the most recent international criteria.
4. Enhance the quality level and address quality by guaranteeing its inputs.
5. Promote research, development and excellence whether at one university or through several universities and link scientific research to national development needs and labor market requirements.
6. Continue to establish partnerships and alliances with outstanding Arab and global HEIs.

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