

A Review of Saudi Scholarship Programs to North American Higher Education Institutions

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Abstract

The Saudi Arabian Government believes that having students undertake study at leading international universities is a key pillar underpinning the development of an international standard workforce for the Kingdom. North America (Canada and the USA) has been the major destination for Saudi students wishing to study abroad for many decades. Indeed, over 60% of all Saudi students currently studying at universities outside the Kingdom are studying in North America. This paper reviews the nature and effectiveness of the scholarship programs provided by the Government of Saudi Arabia to support students wishing to study at North American Higher Education institutions. It identifies a significant range of personal benefits to Saudi students from their engagement with academic and community life in North America, but proposes that significant research needs to be undertaken in order to clearly identify the impact of students studying in North America on the Kingdom itself, particularly in areas such as social and economic development, education, business management, urban planning and health.

Keywords: Higher Education; scholarships; international study; acculturation

Introduction

This paper reviews the nature and effectiveness of scholarship programs provided by the Government of Saudi Arabia to support students wishing to study at North American Higher Education institutions. It begins with a brief overview of the Kingdom of Saudi Arabia and its Higher Education system, including the role of Higher Education in the future development of Saudi Arabia. The paper then discusses: the Saudi international student scholarship schemes, with a particular emphasis on the King Abdullah Scholarship Program; the status of Saudi scholarship students studying at universities in Canada and the USA; the issue of the acculturation of Saudi students into the different cultural environment of North America; and the perceived benefits for the Kingdom of Saudi Arabia, as well as individual Saudi students, of study at North American universities.

The Kingdom of Saudi Arabia (KSA) currently supplies around 12.08% of the world's oil requirements and possesses 20.03 % of the world's proven oil reserves. It follows, therefore, that the economy of Saudi Arabia relies heavily on oil production and associated petroleum products – a situation that can be expected to continue into the foreseeable future.

Nevertheless, international research and development activities are increasingly focussing on ways of decreasing the world's dependence on oil for the supply of energy – a fact about which the Saudi Government is well aware. As a consequence, the identification of alternative economic development strategies and processes for the Kingdom of Saudi Arabia (KSA) have become of immense relevance and interest to Saudi businesses, industries, academics and students, all of whom are now operating in a rapidly changing and increasingly global business world (Smith and Abouammoh 2013). It is generally held to be axiomatic that the economic capacity and innovativeness of a country's workforce is enhanced by exposure to world 'best practice', and the associated transference of higher-order knowledge and skills across geographical borders (Bukhari and Denman 2013).

It is not surprising, therefore, that the Saudi Government, with the strong support of Saudi business and industry, provides a significant scholarship program, designed to support Saudi students studying at quality international universities, as a way of markedly influencing the knowledge, skills, capacity and creativity of the Saudi workforce, particularly in relation to international standards.

The Kingdom of Saudi Arabia: A brief overview

With an area of over 2 million square kilometres, Saudi Arabia is the largest country in the Middle East. It is twice the area of Egypt, and indeed is approximately one-third the size of Europe. It is situated in south-west Asia, occupying most of the Arabian Peninsula. The country has no permanent rivers, and is mostly sand deserts or arid shrublands. The Capital city is Riyadh, which is geographically situated in the centre of the country. Currently, Saudi Arabia has an estimated population of around 28 million, based on predictions in the 2010 census (CDSI 2012). More than 30% of the population are foreign nationals working in Saudi Arabia (primarily from India, Pakistan, and Egypt), and just over 49 % of the population is female.

The Kingdom of Saudi Arabia is a monarchy ruled by the Al Saud family. The current monarch, and Custodian of the Two Holy Mosques at Makkah and Medinah, is King Abdullah bin Abdul-Aziz Al Saud. The Fundamental Law of Governance (Constitution) vests power with the King for all legislative, executive and judicial functions, Saudi Arabia operates according to Islamic Law (the Shariah) which is primarily derived from the *Qur'an* and the *Sunnah* – the teachings and practices of the Prophet Muhammad. The Shariah provides the principles, rules and regulations that guide all aspects of Muslim life (Smith and Abouammoh 2013).

As stated previously, Saudi Arabia is one of the largest producers and exporters of oil and petroleum products in the world, and large numbers of non-Saudi workers have been used to staff the petroleum industry. The policy of 'Saudi-ization', introduced in 1990, seeks to replace the large numbers of ex-patriate workers employed in Saudi businesses with Saudi workers. It particularly targets the large number of young Saudis who will be entering the job market in the near future.

The Saudi Higher Education System: A Brief Overview

Smith and Abouammoh (2013) propose four defining characteristics of Higher Education in Saudi Arabia:

1. A focus on the teaching of Islam;
2. A centralized system of control and educational support;
3. State funding of education at all levels; and
4. A general policy of gender segregation.

In 2011-12, there was an estimated 1,207,497 students enrolled in Saudi universities (MoHE 2013). Most students enrolled at Saudi universities are enrolled at the Bachelor and Associate Degree levels.

The first university in Saudi Arabia was King Saud University (KSU), established in 1957 in the capital city of Riyadh. King Saud is now the largest university in the Kingdom, and in 2010, was placed 221 in the Times Higher Education-QS World University Rankings – the highest for any Arab university. There are now 25 public and 9 private universities in Saudi Arabia in addition to the King Abdullah University for Science and Technology (KAUST). The private university sector currently comprises 4.5% of all higher education enrollments. All of the private universities and 17 of the public universities have been established in the last decade, which reflects a massive injection of government funding into the sector in recent times. Table 1 provides details of the total number of students enrolled in Saudi universities from 2003 to 2012, along with the percentage of female enrollments. The data indicates that enrollments have increased by a significant 129.8% over the decade.

Table 1: Enrolments in Saudi Higher Education 2003 to 2012

Year	Total enrolments	% female
2003	525,344	58.3
2004	494,752	64.9
2005	603,767	58.0
2006	636,445	57.9
2007	674,412	54.7
2008	714,877	54.7
2009	757,770	54.7
2010	903,567	52.4
2011	1,021,288	51.3
2012	1,207,497	49.5

Source: MoHE statistics 2013

Saudi education policy stipulates the separation of male and female students at all levels of education, with four exceptions: kindergarten, nursery school, some privately-run elementary schools, and some medical schools in universities. However, the curriculum for male and female students is essentially the same (except for physical education and home economics). All except three Saudi universities now have both male and female students on campus. The three exceptions are the King Fahd University for Petroleum and Minerals (KFUPM) in Dhahran and the Islamic University in Madina (both male-only universities), and Princess Nora bint Abdulrahman University (PNU) in Riyadh, which is a female-only university.

Largely because of increased international oil prices (which contribute more than 90% of Saudi income), the KSA national budget has increased more than 80 % over the last five years. As shown in Table 2, about one-quarter of that income has been directed to education and training. As also shown in Table 2, the proportion of the education and training budget allocation provided to the Higher Education sector has increased from 34% to 49% over that period, indicative of the very high priority being placed by the Saudi government on post-secondary education.

Table 2: KSA Budget Allocations to Education

Year	KSA budget (billions of Saudi Riyals)	Budget % to education and training (E&T)	% of E&T to higher education (HE)
2009	475	26	34
2010	540	26	38
2011	580	26	39
2012	690	24	48
2013	853	24	49

Source: Ministry of Finance 2013

The Ministry of Higher Education was established in 1975 with responsibility for planning, coordinating and supervising the higher education system in Saudi Arabia. Its activities are supported by a number of specialist centers, including: the National Centre for Assessment in Higher Education (NCHAE), the functions of which include responsibility for the standard tests for entry to Saudi universities; the National Commission for Academic Assessment and Accreditation (NCAAA), which has overall responsibility for the achievement and maintenance of quality standards in Saudi universities; the Centre for Higher Education Statistics, which collects and analyses statistical information about the higher education sector; and the Centre for Higher Education Research and Studies (CHERS), which undertakes system-level research in order to inform both policy and practice.

The Role of Higher Education in the Future Development of KSA

Human capital theory provides a robust framework for asserting a strong link between higher education and economic outcomes and future development (Desjardins and Schuller 2006). Higher education adds “competency to the national capacity for economic growth” (Thomson 2008, p.5) by providing high level knowledge, skills and creative ways of thinking. Higher education also helps individual students to understand themselves better so that they can achieve their personal potential and act as change agents in industry and the community (Thomson 2008). Further, quality higher education provision has been found to be strongly linked to higher employment levels, decreased levels of poverty, lower crime rates, personal and societal health, and levels of industry and community participation (Baum and Payea 2005).

The government of Saudi Arabia has recognised, in both policy and practice, the importance of having a university system that achieves international quality benchmarks. In this respect, processes have been enacted to significantly increase student access to and participation in Saudi universities – in disciplines, modes of teaching and research training directly relevant to the future social and economic growth of the country (Smith and Abouammoh 2013). In particular, the research capacity and productivity of the higher education sector has been highlighted as a critical component for achieving the social and economic aspirations of Saudi’s National Development Plans.

In response, the Ministry of Higher Education (MoHE) has allocated resources to support research productivity by establishing Research Chairs and Centres of Research Excellence in several universities, a research park, and technology incubators (Al-Ohali and Shin 2013). The major areas targeted for Centres of Research Excellence are corrosion, renewable energy, petroleum and petrochemicals, nanotechnology, and Islamic banking and finance.

The Saudi Higher Education sector is also heavily involved in the implementation of the National Science Technology and Innovation Plan (NSTIP), which is funded in a similar way to the National Science Foundation (NSF) in the USA. The core of the NSTIP is the *King Abdulaziz City for Science and Technology* (KACST), and the long-term aim of NSTIP is to provide the internationally competitive science and technology infrastructure necessary to develop the Kingdom as an advanced knowledge-based economy (Al-Ohali and Shin 2013). The major research and technology priorities of the NSTIP are water, oil and gas, petrochemicals, nanotechnology, biotechnology, information technology, electronics and communications, space and aeronautics, energy, environment, and advanced materials. University researchers can apply for funding directly from the NSTIP, and are taking major advantage of this opportunity.

Further, some Saudi universities are involved in joint research projects with universities outside the Kingdom; for example, King Fahd University of Petroleum and Minerals is working with MIT in the United States to investigate aspects of solar energy, the desalination of seawater, and other technologies related to the production of fresh water and low-carbon energy in Saudi Arabia, and with Stanford University in the areas of nanotechnology, petroleum engineering and geosciences.

Science Parks have recently been established on university campuses in Riyadh, Dhahran Jeddah and Makkah . A number of multi-national industrial partners (such as Saudi Aramco, Schlumberger, Baker Hughes, General Electric, Halliburton, Yokogawa, Siemens, and Honeywell) occupy sites on these science parks (or ‘techno-valleys’), each working in close collaboration with Saudi universities and research staff.

Saudi universities and their staff are also heavily involved in a number of important social initiatives introduced in recent years by King Abdullah of KSA to support national development and international understanding, including: the King Abdul-Aziz Centre for National Dialogue (KACND); the King Abdullah bin Abdul-Aziz International Centre for Interreligious and Intercultural Dialogue (KAICIID); and the proposed Centre for Islamic Intra-faith Dialogue.

The reality is that Saudi Arabia currently relies too heavily on overseas experts and the outputs from overseas research to drive its industry-based research and development. The Higher Education sector, however, is playing a very active role in developing and promoting processes for significantly increasing the knowledge, skill and creativity of the Saudi workforce, individually and collectively. As Smith and Abouammoh (2013, p.190) conclude: “Saudi Arabia openly acknowledges the need for change in its relatively young higher education system, and the importance of having its major universities and academics acknowledged internationally as world class. It has allocated a generous budget to its university system, and it is moving to provide relevant systemic agencies and systems to support the development of individual universities and their staff”.

Saudi Scholarship Programs for Overseas Study

The Saudi Government has clearly identified, through its various development plans, the important link that exists between high-achieving Saudi students undertaking study at leading international universities and the development of an international standard workforce that will underpin the future economic development of the country. Benefits of international study identified in the last two five-year national development plans include:

1. Assisting students to meet their higher education goals in ways that are not available, or not widely available, in KSA;
2. Helping meet national labor market needs;
3. Exposing students to an international learning environment, thereby broadening their understanding of the nature and potential global impact of important initiatives;
4. Giving students the opportunity to participate in world-class learning environments at highly-regarded international universities;
5. Helping students to develop an understanding of different cultures and ways of thinking, and the implications for Saudi Arabia in an international trading environment;
6. Helping the Saudi workforce attain competence, knowledge, and skills that are acknowledged as international standard;
7. Improving the standard of academics in Saudi universities through students who have worked alongside some of the world’s best academics in some of the world’s best universities; and
8. Introducing Saudi culture and values to various nations and regions of the world in a way that will improve mutual respect and understanding.

As shown in Table 3, in 2012 there were 126,745 Saudi students studying at universities outside the country (MoHE 2012). This represents a growth of almost 900% in the last decade. Approximately one-quarter of Saudi students studying abroad are female. The most popular destinations for Saudi international students are, in order, the USA, United Kingdom, Canada, Australia, Egypt and Jordan. Around 85% of Saudi students studying at international universities are supported by government funding, primarily through the King Abdullah Scholarship Program (KASP).

Table 3: Number of Saudi Higher Education Students Studying Abroad

Year	Number of students	% female
2002	12,838	28.11
2003	13,658	28.64
2004	15,728	25.45
2005	25,441	19.74
2006	40,019	20.30
2007	42,806	18.99
2008	58,710	20.72
2009	80,827	22.44
2010	116,121	23.52
2011	120,645	23.94
2012	126,745	24.80

Source: MoHE statistics 2013

Table 4 provides details of Saudi students studying abroad in 2012 according to the level of award being pursued. As shown, 32.8% of all enrolments are in graduate programs. Females represent only 15% of enrolments in Bachelors level courses, but their engagement in graduate courses is a much higher proportion of the total (approaching half of all enrolments at Masters level). It is also worth noting that there were 14,478 persons accompanying scholarship holders during their overseas study in 2012.

Table 4: Saudi Students Studying Abroad by Level of Award, October 2012

Degree level	Number of students	% of total	% female
Bachelors	75,265	59.4	14.8
Masters	31,034	24.5	43.4
PhD	7,788	6.1	35.4
Fellowship	2,768	2.2	27.9
Other	9,890	7.8	33.9
TOTAL	126,745	100.0	24.8
Accompanying persons	14,478		

Source: MoHE statistics 2013

Table 5 provides details regarding the number of Saudi students studying abroad in October 2012 according to their primary discipline area. As shown, the largest number of enrolments are in 'Social Science, Business and Law' (44,320), followed by 'Engineering and Construction' (25,767), 'Health and Social Services' (21,599) and 'Science' (20,100). The discipline area with by far the least number of enrolments was 'Agriculture' (109). Females comprise the majority of enrolments in two discipline areas: 'Education' (54.9%) and 'Humanities and Arts' (50.7%). Females are least represented in the areas of 'Engineering and Construction' (4.4%) and 'Services' (6.5%).

Table 5: Saudi Students Studying Abroad by Discipline Area, October 2013

Discipline area	Number of students	% of total	% female
Education	3,714	2.9	54.9
Humanities and Arts	5,302	4.2	50.7
Social Sc., Business & Law	44,320	35.0	24.1
Science	20,100	15.9	29.2
Engineering & Construction	25,767	20.3	4.4
Agriculture	109	0.1	12.8
Health & Social Services	21,599	17.0	35.2
Services	1,619	1.3	6.5
Other	4,215	3.3	32.1
TOTAL	126,745	100.0	24.8

Source: MoHE statistics 2013

The King Abdullah Scholarship Program (KASP) was introduced in 2005 in order to: allow Saudi students to attend specialized programs, especially in fields for which there is great demand in the Saudi labor market; and to expand educational opportunities to educate students with high skills and to build upon their capacity to become more entrepreneurial (Lindsey 2010). Its vision is to “prepare distinguished generations for the knowledge society built upon a knowledge-based economy”, and its mission is to “prepare and qualify Saudi human resources in an effective manner” (MoHE 2013).

KASP is believed to be the largest fully-funded government scholarship program that any nation has ever sponsored (Bukhari and Denman 2013). It covers all travel, tuition, insurance and living expenses for recipients, their spouses and their children. For reasons of personal safety and general well-being, as well as for cultural and religious reasons, being accompanied by one’s immediate family is considered to be extremely important. If the students were working at the time of receiving their scholarship, the period of the scholarship is deemed to be a continuance of their work experience.

Majors explicitly supported under the KASP program are: medicine; dentistry; medical sciences; pharmacy; nursing; mathematics; physics; chemistry; biology; engineering; computer science; networking; e-commerce; accounting; finance; insurance and marketing.

Bukhari and Denman (2013) conclude that available evidence suggests that the King Abdullah Scholarship Program has been successful in both achieving its stated aims and in improving the capacity of the students involved to engage internationally.

Saudis studying in North America

The Kingdom of Saudi Arabia (KSA) began supporting scholarship programs for students to undertake study in the USA in 1947 (SACM 2013) when 30 students transferred from the American University of Beirut in Lebanon to Texas State University. In 1951, the first Saudi Cultural Office was established in New York City for the purpose of supervising and supporting Saudi students studying in the USA. In 1975, the Saudi Cultural Office was transferred from New York to Houston, Texas where it remained until 1987 when the position of Saudi Cultural Attaché was positioned in Washington DC. The Saudi Cultural Attaché was given the necessary academic authority, budget and human resources to appropriately support the rapidly increasing number of Saudi students attending university in the USA.

Support for Saudi students studying at Canadian universities began in 1978 when the Saudi Arabian Cultural Bureau (SACB) was established in Ottawa. In that year, a medical program was established in Canada for study by Saudi post-graduate doctors (SCBC 2013).

As shown in Table 6, the total number of Saudi students attending university studies in North America (Canada and USA) in October 2012 was 76,274 – 60.2% of all Saudi students studying at a university outside of the country. The great majority of the students studying in North America (82.9%) are enrolled in universities in the USA. Female students account for 22.58% of all Saudi enrolments in North American universities, with Canada having a slightly higher percentage of female enrolments than the USA.

Table 6: Number of Saudi students studying in North America, October 2012

Location	Number of students	% female
Canada	13,036	24.74
USA	63,238	22.13
North America TOTAL	76,274	22.58

Source: MoHE statistics 2013

Table 7 shows that of the 76,274 students studying at North American universities, 46,374 (60.8%) are enrolled in Bachelors level courses, 20,036 (26.3%), are enrolled in Masters level courses, and 2,790 (3.7%) are enrolled in doctoral programs. The percentage of Saudi students enrolled at each degree level at universities in the USA and universities in Canada are not markedly different, even though the total number of students enrolled at universities is almost six times the number for Canadian universities. Saudi female students at North American universities constitute almost half of all enrolments in Masters programs, but only 10% of enrolments at Bachelors level.

Table 7: Saudi Students Studying in North America by level of Award, October 2012

Degree level	Students enrolled USA	% female students USA	Students enrolled Canada	% female students Canada	North America total	% female North America
Bachelors	38,392	10.4	7,982	7.8	46,374	10.0
Masters	16,891	42.8	3,145	66.4	20,036	46.5
PhD	2,347	37.1	443	35.4	2,790	36.9
Fellowship/residency	1,159	35.0	877	28.8	2,036	31.6
Other	4,449	33.3	589	18.7	5,038	31.6
TOTAL	63,238	22.1	13,036	24.7	76,274	22.6

Source: MoHE statistics 2013

Currently, the Saudi Cultural Attaché in Washington DC employs around 500 administrative, financial and academic staff to manage and support Saudi students studying in the USA. Similarly, the Saudi Arabian Cultural Bureau in Ottawa, Canada currently employs around 245 administrative, financial and academic staff. These high employment levels reflect the strong commitment of the Saudi Government to supporting Saudi students in accessing and successfully completing higher education studies in North America.

The most popular fields of study for Saudi students who have recently graduated from universities in the USA are Business Administration, Engineering, Computer Science and Social Studies, while the most popular fields of study for Saudi students graduating from Canadian universities are Medicine, Engineering, Science, Computer Science, Business Administration and Law. The medical program for Saudi post-graduate doctors at Canadian universities is of particular interest and importance as Saudi doctors assume medical residency and fellowship training in Canadian medical schools alongside their Canadian colleagues in joint learning teams. Since 1978, more than 4,000 Saudi doctors have completed advanced medical training through this program, and there are more than 1,000 Saudi doctors currently training in Canada. Indeed, graduates of the Canadian program now form the majority of university staff in some Saudi medical schools (Abaalkhail 2011).

Benefits of Saudi Students Studying in North American Universities

The major benefits for Saudi Arabia and Saudi Arabian students from studying in North American universities appear to be (Abouammoh 2012, Al-Buraidi 2007, Al-Olayan 2008, Bin Taleb 2011, Denman and Hilal 2011):

1. Exposure to leading academics and state-of-the-art scientific environments, technologies and processes significantly improves the scientific and technological competency of the Saudi students, and in turn, contributes to economic and technological development for KSA when the students return to work in industry or undertake research and development projects in their homeland;
2. The requirement to communicate for most of their study period in the English language helps students to improve their oral and written communication skills, to develop powerful professional networks, to participate actively and productively in important international conferences and forums, to publish in major academic journals, and to better pursue innovative scientific and social innovations in their areas of expertise;

3. Interacting with peers, teachers, and business and community members of the ‘different’ North American society increases mutual understanding, tolerance of other cultures and philosophies, enhances co-operation, and strengthens the bonds of friendship between both individuals and nations;
4. Studying in North America allows Saudi students to communicate the nature and values of Arab culture and society to North American peers in a positive and unambiguous manner, thus lessening the negative perceptions held by some Americans and Canadians about Arabs and Muslims; and
5. Studying in North America helps many Saudi students to strengthen a number of important work and social habits and attitudes, such as: discipline; punctuality; teamwork; commitment to work and product quality; perseverance; and the importance of tolerance for the views of others.

Issues of ‘Acculturation’

If Saudi students are to live and study successfully in North America, it is reasonable to assert that they will need to adapt their behaviours, attitudes, perceptions, feelings and ‘ways of thinking’ so as to allow them to communicate and interact effectively in their new environment. This is generally referred to as ‘acculturation’. ‘Acculturation’ is the process of modifying one’s own cultural beliefs and behaviours in response to contact with one or more different cultures (Fan 2004, Abouammoh 2012). Acculturation can affect a student’s behaviour as well as their physical and psychological well-being. Not all students experience the same acculturation issues or degree of impact and concern.

A number of recent studies in the USA have addressed the issue of acculturation for Saudi students (Al-Dakheel 2007, Al-Sheikhly 2012, Denman and Hilal 2011, Jaidev 2011). These studies have identified the major acculturation issues as: admission and selection to their university of choice, and in particular, concerns about whether their previous academic record will be accepted; identifying and accessing social support networks, particularly involving other Saudi or Muslim students; the nature of their living conditions; diet; access to health services; respect by host students and staff for their religious needs and beliefs; and English language proficiency, both written and oral. The studies suggest that most Saudi students studying outside their own country experience significant difficulties in adapting their existing cultural values and behaviours in response to contact with the different environment and culture of their host country in Canada or the USA. Interestingly, the extent to which acculturation issues pose major concerns for Saudi students appears to be linked to gender, educational level and background, and place of residency in KSA.

Conclusion

North America (Canada and the USA) has been the major destination for Saudi students wishing to study abroad for many decades. Indeed, over 60% of Saudi students currently studying at universities outside the Kingdom are studying in North America.

Studies have revealed a significant range of personal benefits to Saudi students from their engagement with academic and community life in North America, including: improved scientific and technological competency; enhanced oral and written communication skills, particularly in the English language; the establishment of powerful professional networks; increased understanding of other cultures and ways of thinking; increased tolerance of others views and beliefs; and the enhancement of a number of important social and work habits and attitudes, such as discipline, punctuality, teamwork, perseverance, and commitment to work and product quality. Intuitively and anecdotally, the involvement of Saudi students with North American universities and communities has also brought about a number of important benefits for the Kingdom of Saudi Arabia, including: a significant improvement in the capacity and creativity of its workforce through interaction and exposure to some of the world’s best practice and best practitioners; collaboration in leading-edge projects and initiatives; and the capacity to demystify and clarify the Arab culture and society to an important trading and development partner nation. Unfortunately, there have not been any methodologically rigorous investigations into the impact of Saudi students studying at North American universities on the Saudi nation itself. There is, therefore, a pressing need to undertake research aimed at understanding the impact of international study by Saudi students on KSA in areas such as social and economic development, education, business management, urban planning and health.

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