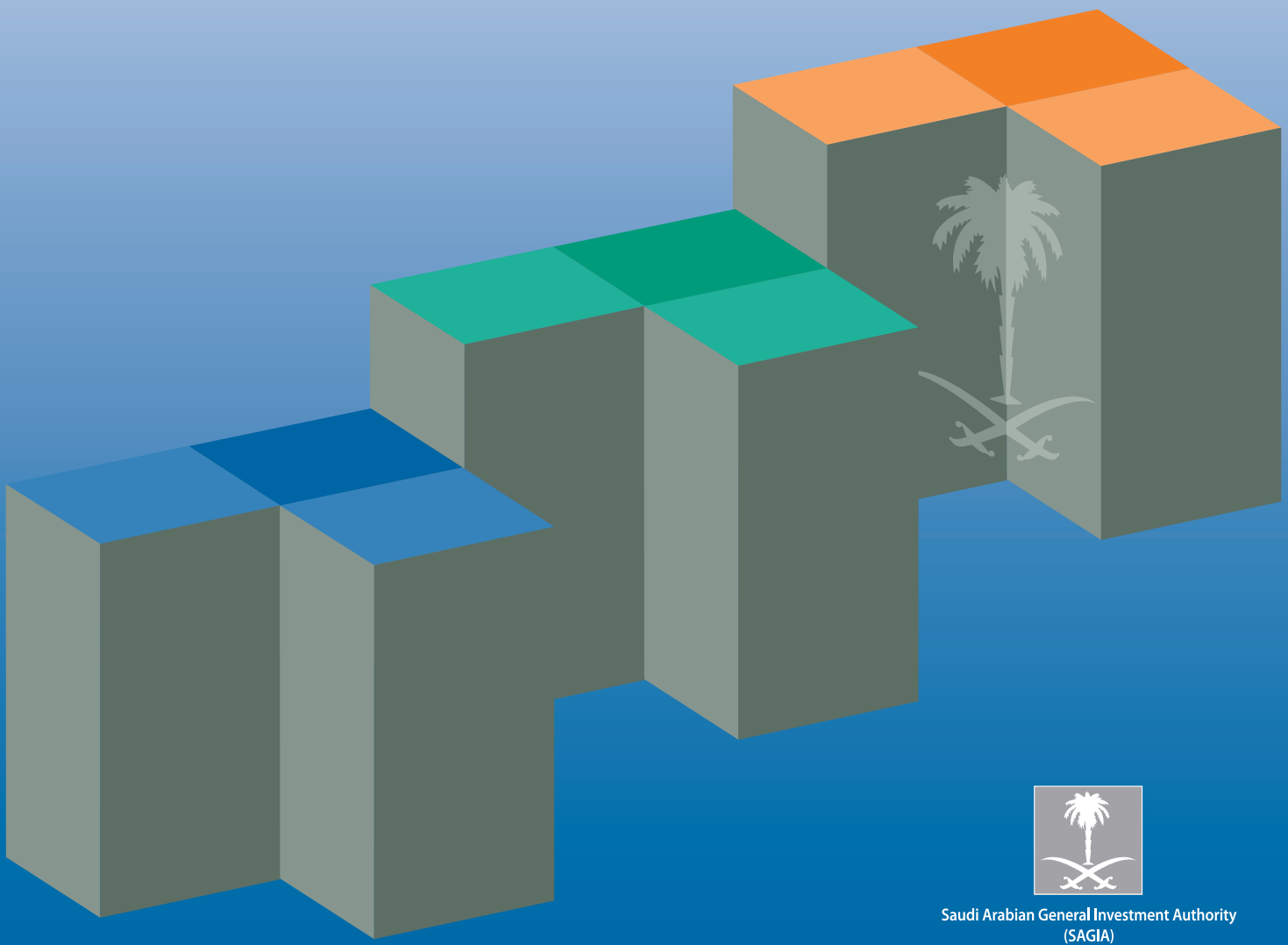
THE NATIONAL
COMPETITIVENESS CENTER

The Competitiveness Review

January 2008

The Education Sector in Saudi Arabia



Saudi Arabian General Investment Authority
(SAGIA)

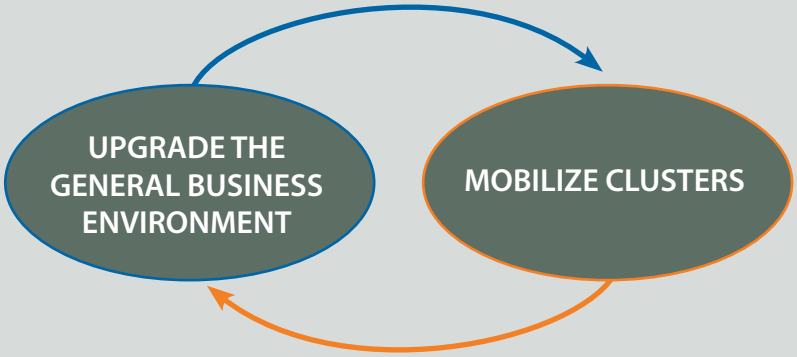
The NCC

NCC mission: *To support the Kingdom of Saudi Arabia's competitiveness agenda through objective, data-driven advice on regulatory reform and sector improvement opportunities that will contribute to increasing, sustainable prosperity for the people of Saudi Arabia.*

The National Competitiveness Center (NCC) was established by SAGIA in 2006 as a body to monitor, assess, and support competitiveness enhancement in the Kingdom of Saudi Arabia.

The NCC fulfills this role in three ways:

It serves as a think tank for change by conducting and developing competitive assessments and monitoring the implementation and results of change programs. These programs focus on two main areas: improving the ease of doing business in the Kingdom, through spurring modernization of the general business environment; and improving the microeconomic fundamentals of competitiveness, through mobilizing development of world-class clusters. A recent example of the NCC's work is its role in eliminating the minimum capital requirement. The NCC prepared the business case that advocated for this change, which was passed by Royal Decree on July 17, 2007.



The NCC works as a facilitator of change by creating forums for discussion between the public and private sectors. It is currently supporting the creation of Cluster Advisory Councils that bring together private and public stakeholders in key clusters to identify and collaborate on competitiveness improvement initiatives.

Finally, it acts as a communicator for change, sharing the results of the Kingdom's ongoing competitiveness efforts though such channels as the Competitiveness Review.

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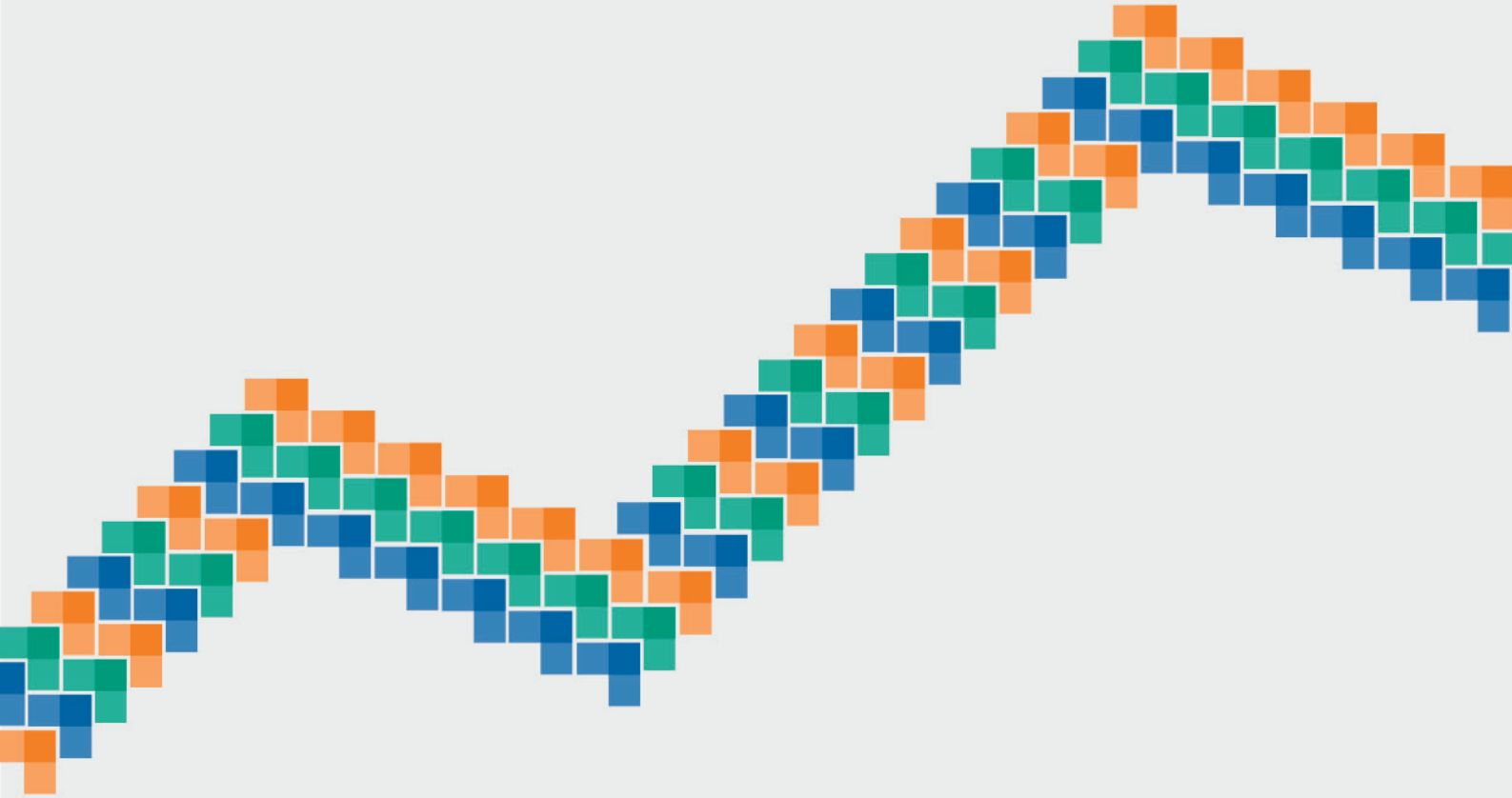

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Introduction by Kim E. Pringle Al-Sahhaf

Dear Reader:

I am honored to introduce the Education Competitiveness Review, produced by the National Competitiveness Centre (NCC). Following the lead of the NCC's other publications and the NCC's ongoing competitiveness-enhancing efforts in support of SAGIA's 10x10 initiative, the Education Competitiveness Review delivers a comprehensive appraisal of Saudi Arabia's education sector.

A thriving and competitive education system is critical to a country's economic success and to the well-being of its people. The outcome of the Kingdom's aspiration to be among the world's most competitive nations will ultimately be determined by the quality of human capital it produces. Enhancing Saudi Arabia's competitiveness in the education sector is a crucial step toward developing individuals, innovation, and employment opportunities.

Ultimately, the output of education will be measured against its ability to match labor market demand. But the challenge in Saudi Arabia goes beyond that. Education drives our economic diversification away from oil, providing the human capital to attract foreign direct investment, build an innovation-based economy, and redefine Saudi Arabia's position in the world.

This Competitiveness Review highlights opportunities in the education sector, and makes recommendations based on the current situation, informed and inspired by experience within the Kingdom as well as the actions and initiatives of other competitive nations. To capitalize on the Kingdom's potential, SAGIA, the NCC, and the Government of Saudi Arabia must collaborate as active partners in the modernization process.

Kim E. Pringle Al-Sahhaf
Head of Education
Saudi Arabian General Investment Authority
SAGIA

Foreword by Dr. James Ogilvy

Dear Reader:

To describe education as an important contributor to competitiveness is a masterpiece of understatement. The relationship between education and economic growth is well established. But while education alone does not guarantee economic productivity, it does provide the essential raw materials – smart and successful people – for other industries to thrive. Think of education as a core enabling cluster. Improving the quality and availability of education contributes to quality of life in two ways: by improving individuals' earning potential and enriching their quality of life.

Every nation faces the challenge of developing an education system that produces good people. The 20th century saw the dawn of widespread education, and for the first time the majority of the world's population learned to read and write. Now the stakes are much higher. Teaching literacy is no longer enough; we must teach individuals to think, to imagine, to invent, and to dream. Channeling innate curiosity into bettering the human condition is an admirable goal, but at the next level we must foster an entire nation's ability to compete on a global scale.

When measuring the success of education, we should concern ourselves less with knowledge acquired than with the capabilities ingrained. The world is awash in information, and we have entered an age of unprecedented access to data and content. Imparting the ability to distinguish between the useful and the useless, while fostering the academic skills that enable intelligent aggregation and synthesis of myriad data, should be the true objective of our education systems. Though we cannot predict the future, we can educate our children to adapt to it. Building this mental flexibility into future generations is driving a paradigm shift in how we think about providing education, with an increasing emphasis on development of critical thinking skills. The importance we place on education has fueled its evolution from a somewhat passive process – pouring skills and knowledge into the supposedly empty containers of students' minds – to a more active and interactive one. Students are not empty, and it is important to engage their interests and their passions.

Dr. James Ogilvy
Co-Founder, Global Business Network
Monitor Group

Preface

Under the leadership of King Abdullah, Custodian of the Two Holy Mosques, Saudi Arabia has championed economic reform and diversification, and supported the development of a competitive private sector. The NCC's Competitiveness Review publications are intended to provide the Economic Leadership of the Kingdom of Saudi Arabia with an objective assessment of the country's state of competitiveness through regular publications.

This issue sets the context for competitiveness of the education sector in the Kingdom. The review begins by highlighting the importance of a good education system and explains the logic underlying the NCC's analysis. It explores the system's current status, highlights recent actions, and makes a series of recommendations for development. It also discusses education's crucial role as an enabler of people and economic activity.

The NCC fully supports SAGIA's 10x10 initiative and is committed to supporting national efforts to achieve this goal. For this reason, throughout this report and in future issues, the NCC compares Saudi Arabia with the Top 10 most competitive countries in the world, paying particular attention to how education in the Kingdom measures up against the bar set by Top 10 Countries. Overall, the Competitiveness Review is a key support to the 10x10 initiative, providing analysis and suggesting initiatives for improvement, raising challenging questions and promoting the competitiveness agenda within and beyond the Kingdom.

In future issues, the review will evaluate the competitiveness of other major economic clusters, and cover specific subjects related to competitiveness, such as entrepreneurship and innovation.

The NCC hopes that you find the Competitiveness Review informative, thought provoking, and above all useful. As the NCC aims to be as interactive as possible in its discussion and exploration of competitiveness in the Kingdom, your thoughts, input, and perspective are always welcomed and valued.
Please visit **www.saudincc.org.sa**.

Executive summary

The education system forms the backbone of every successful economy. Education systems provide citizens with core knowledge and the capability for innovation, which in turn fuel economic growth and productivity.

Successful education systems build a country's competitive strength by:

- Teaching essential skills – reading, writing, and math.
- Delivering specialized knowledge – e.g., training in computer engineering and other professional disciplines.
- Developing critical thinking skills – the ability to evaluate divergent information and draw conclusions via complex analyses.

A strong and modern education system is essential to equipping citizens with the skills and knowledge required to be productive in society. There is no single "correct" approach to educating an individual or a society, but a system's effectiveness can be measured by analyzing its outputs. A good, well-rounded education fosters students' innate curiosity and creativity in a manner that builds upon their unique abilities while addressing their individual limitations. Education systems with such an approach nurture valuable capabilities in a nation's youth and improve overall prosperity and quality of life.

Saudi Arabia has made tremendous strides in the field of education since the discovery of oil here in 1932. In the past 30 years, the people have increased their literacy rate from 33% to 83%[1] – a feat that took the developed world hundreds of years to accomplish. Today the Kingdom is highly committed to building a strong education system. It spends more per pupil than many developed countries, and of the countries surveyed by the World Economic Forum Saudi Arabia ranks eighth in relative education spending as a percentage of GDP.[2]

Though the leadership's commitment to education is strong and education expenditures high, Saudi Arabia's return on its investment is comparatively low. Relative to Saudi Arabia, such developing countries as India, China, Jordan, and others spend far less per pupil but generate significantly more engineers, scientists, and knowledge-based economy workers to enhance country competitiveness.

Improving the return on education investment while increasing the number of highly skilled workers is imperative if the Kingdom is to migrate successfully from an oil-driven economy to one driven by innovation. Education is integral to SAGIA's 10x10 initiative, and the NCC intends to support the Ministry of Education, the Ministry of Higher Education, and the General Organization for Technical Education and Vocational Training in their objective of achieving world-beating standards of primary, secondary, tertiary and vocational education.

[1] World Bank Education Statistics
[2] Reference WEF 2007–2008

Substantial developments are taking place across the spectrum of education in Saudi Arabia. In this report, the Kingdom's considerable achievements in education and the NCC's recommendations for continuing improvements are explored in depth.

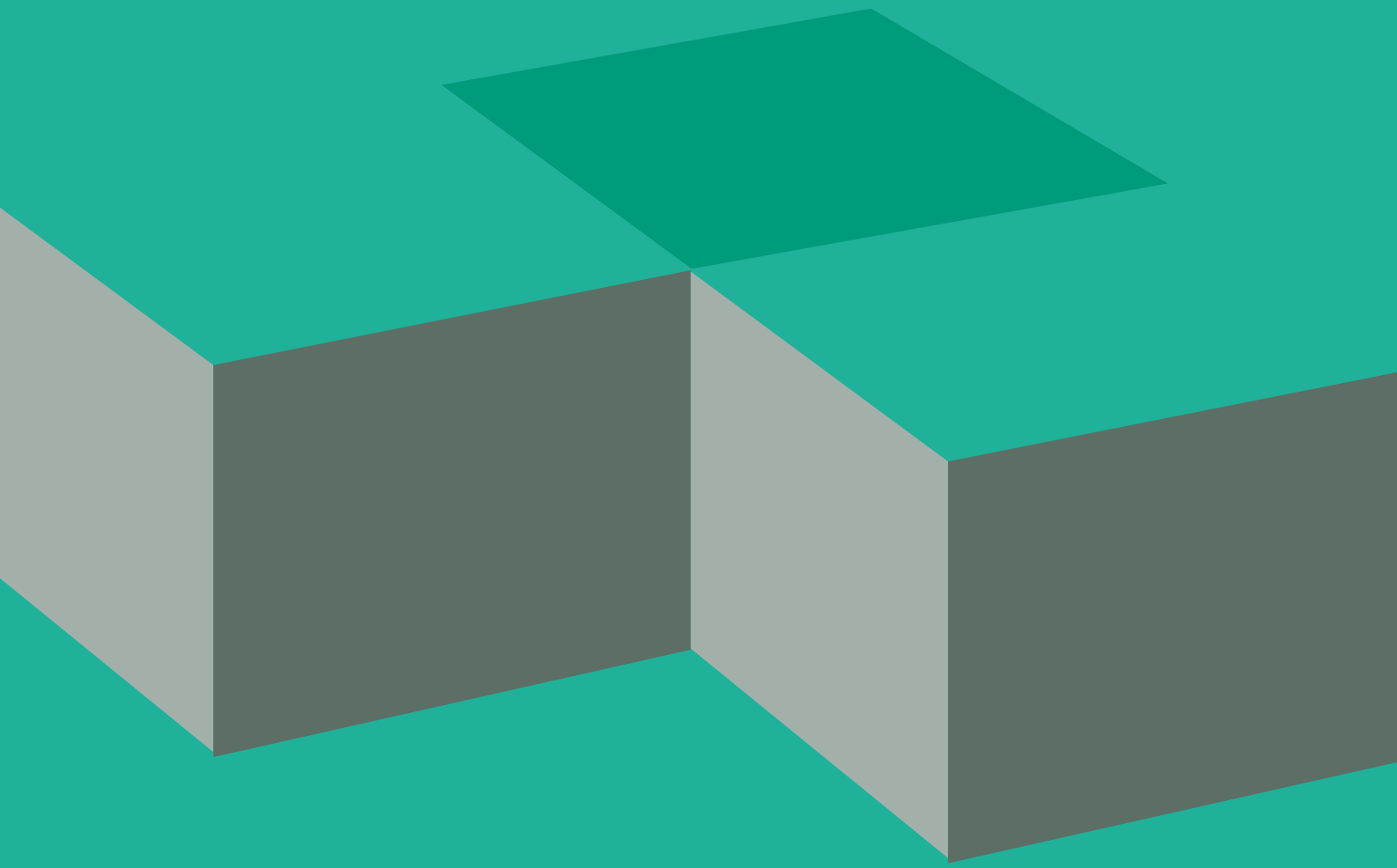
Through analysis and interviews with key education stakeholders, the NCC has identified the issues that will have the most profound impact on future access to, quality of, and demand for education in Saudi Arabia:

- Suitability of the public school curriculum
- Implementation of standardized testing
- Teaching quality, including teacher accreditation, merit-based pay, and professional development opportunities
- Administration of schools
- Competitive landscape for private education
- Demand for technical subjects
- Quality of tertiary instruction
- Public awareness of the benefits of education
- Low levels of enrollment

The opportunities for improving education in Saudi Arabia, outlined in detail in the following report, are challenging but actionable. Initiatives directed at each of the above issues will help to establish the Kingdom as a world leader in education.

It is paramount to build on the momentum generated by the government's successful modernization efforts and embrace the current appetite for enhancing national competitiveness. The success of Saudi Arabia and its citizens depend on immediate, decisive, and ongoing action.

Summary of Education Recommendations



Summary of education recommendations

The recommendations throughout the following report are based on the National Competitiveness Center's preliminary assessment of the Saudi Arabian education system. They are intended to stimulate debate and dialogue on the efforts required to enhance the state of education in Saudi Arabia and to elevate the country's overall competitiveness.

Improve curriculum suitability

NCC recommendations:

- Use select schools in cities across Saudi Arabia (including the Economic Cities) as sites for pilot studies to identify the curricular mix of subjects and teaching techniques best suited to education in Saudi Arabia.
- Introduce a vocational option in secondary education, alongside the scientific and literary streams.
- Conduct a study of regional labor needs and develop region-specific subject mixes for the vocational option, matched to the demands of the local economy, and investigate ways to attract students to these subjects.
- Increase provision of computers and Internet access in the classroom, and increase availability of eLearning support tools to reinforce classroom lessons.

Introduce standardized testing

NCC recommendations:

- Benchmark performance of Saudi Arabian students against international standards by participating in standardized tests from the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS), and the OECD Programme for International Student Assessment (PISA).
- Develop a performance road map over the next decade, with specific targets in TIMSS, PIRLS, and PISA, with a view to achieving Top 10 scores.
- Develop and implement a series of standardized tests for K–12 education, to track student progress and identify the best- and worst-performing schools. Offer underperforming schools additional funding and support to meet standards.

Improve teaching quality

NCC recommendations:

- Introduce an accredited teaching program, to ensure the highest standards in teaching quality, and mandate it as a requirement for employment as a teacher in the Kingdom.
- Develop an incentive system for teachers, e.g., enhance salaries for those willing to teach certain core subjects and work in understaffed regions or underperforming schools.
- Increase availability of teaching career development opportunities, providing an array of training materials, courses, and in-school training programs.
- Increase opportunities for top academics to visit and lecture in Saudi Arabia. These highly qualified professionals from other countries will facilitate knowledge transfer into the Saudi Arabian system through discussion with colleagues and postgraduates and by lecturing undergraduates.

Improve administration of schools

NCC recommendations:

- Offer a tertiary degree in school management and administration, sponsor existing teachers and principals to attend, and commensurately remunerate degree program graduates.
- Explore outsourcing management of consistently underperforming schools to private sector providers experienced in school improvement.

Enhance competitive landscape for private education

NCC recommendations:

- Permit the participation of reputable foreign private education providers, simultaneously increasing competition and capacity in the sector.
- Update the rules and requirements governing private schools, in particular those pertaining to co-education and curricular flexibility, and apply them consistently throughout the private education sector.

Promote demand for technical subjects

NCC recommendations:

- Initiate a targeted campaign aimed at promoting technical studies in all secondary schools, with a panel of experts to visit schools and deliver presentations on their careers.
- Expand the range of disciplines available to women, particularly in professions where there is a significant deficiency in the labor force.

Upgrade quality of tertiary instruction

NCC recommendations:

- Increase affiliations with highly regarded international universities abroad (e.g., MIT, Oxford), to provide Saudi Arabian students with access to a world-class technical education.
- Develop strong links with industry to initiate a rotating fellowship program for professors and job placements for students.

Improve awareness of benefits of education

NCC recommendation:

- Launch a media campaign extolling the value of education, aligned with the 10x10 initiative. Involve successful role models educated in the Saudi Arabian public education system, e.g., actors, writers, entrepreneurs, and professional athletes.

Develop a structured and innovative education strategy

NCC recommendation:

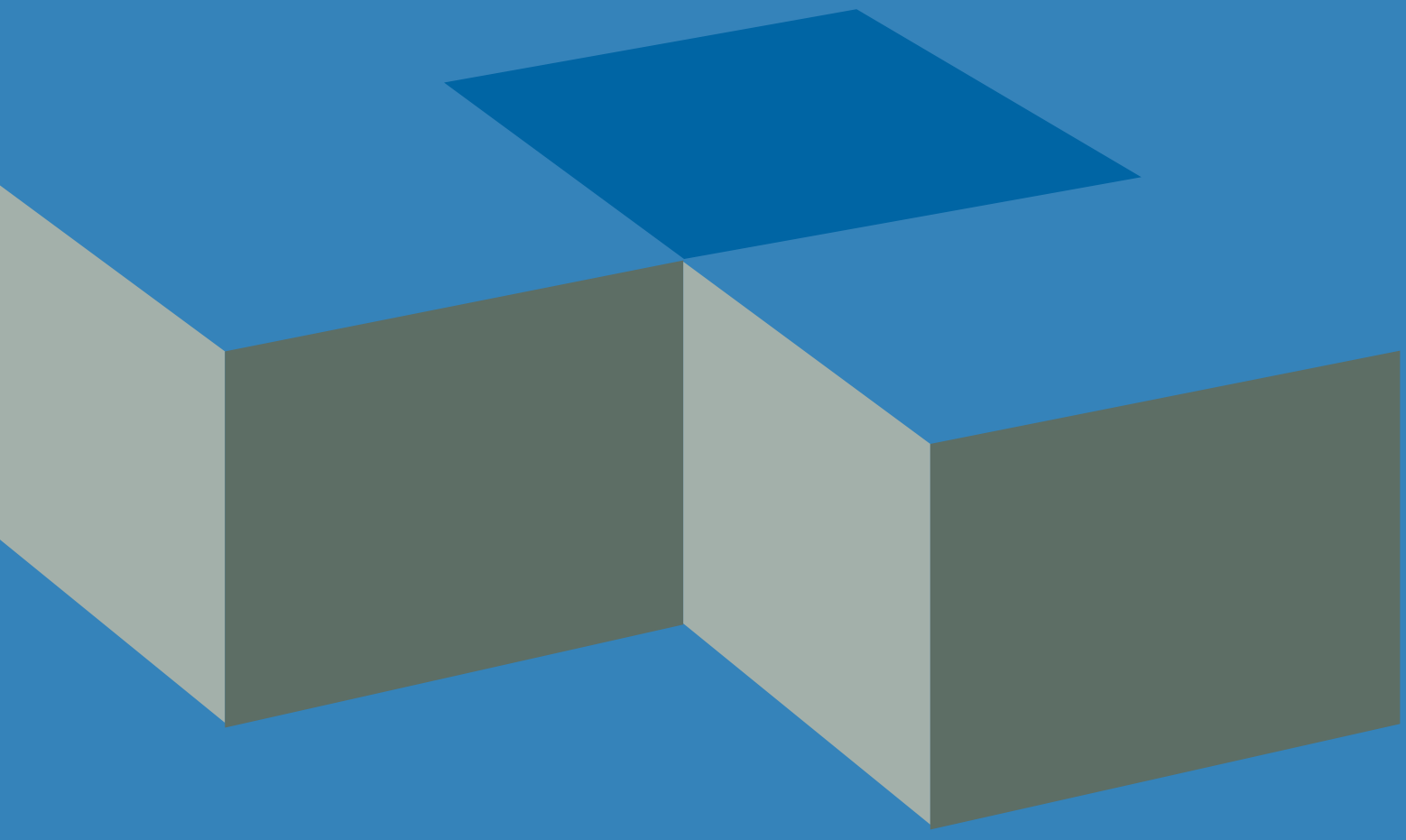
- Increase levels of coordination and cooperation between key public and private education stakeholders in Saudi Arabia, and use this approach to build robust and workable strategies for delivering an appropriate education system for the future.

Understand low levels of enrollment

NCC recommendation:

- Conduct a detailed study to identify key barriers to participation in education at each level on a regional basis, and devise strategies to lower these barriers, based on a sound understanding of the causes underlying low enrollment.

Setting the Context



Setting the context

What makes a good education system?

Contemporary education systems provide students with indispensable basic skills, such as reading, writing, and math, and support students' progression through increasingly advanced stages of schooling.[3] A good education is an essential tool for preparing them to face the challenges they will encounter throughout their lives. Lack of access to quality education sentences many people to the lowest rungs of society, and frequently traps them in a cycle of poverty. Good education systems provide basic skills to all, and provide further opportunities to complement and augment the basics with critical thinking and creativity skills.

Every stage of education adds value through improving skills. Primary and secondary education – often referred to as K–12 – build basic skills and prepare students for higher education, vocational training, or direct entry into a profession. Tertiary and vocational training add further, more specialized skills integral to the foundation of an innovation-based economy.

Why is education important?

"As the global economy has become more complex, it has become evident that to compete and maintain a presence in global markets it is essential to boost the human capital endowments of the labor force, whose members must have access to new knowledge, be constantly trained in new processes and in the operation of the latest technologies."

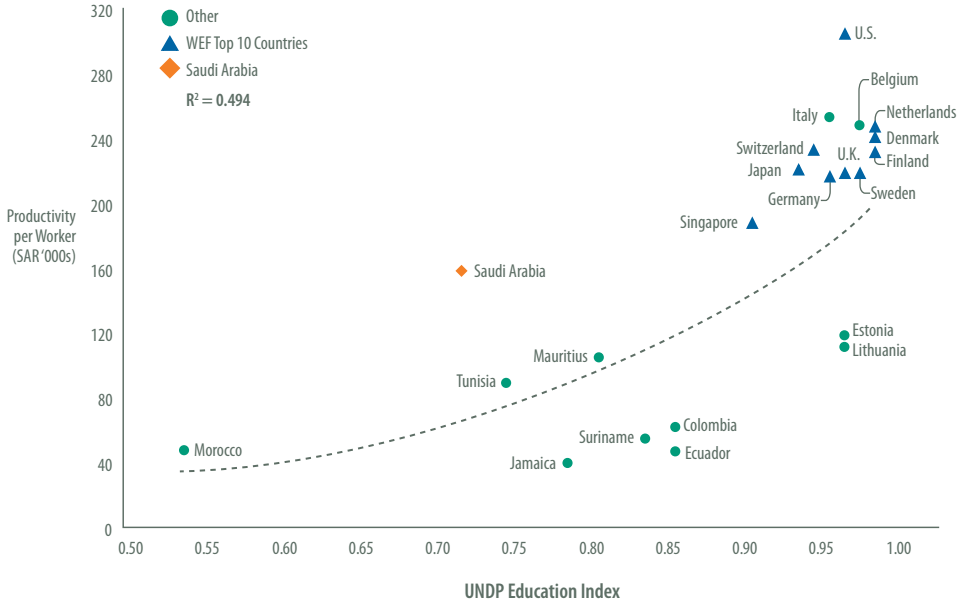
– World Economic Forum

Strong historical evidence demonstrates that economic growth is accompanied by increased participation and investment in education. Economists have determined a strong positive correlation between education spend per student and GDP per capita. Debates on causality may persist, but numerous economists concur that investments in education deliver a significant economic payoff. In the simplest terms, a highly educated workforce is more productive than a less well-educated one.

High levels of productivity are accompanied by higher wages and attractive returns on investment, all of which enhance prosperity. A direct, positive correlation exists between a country's performance in the United Nations Development Program (UNDP) education index and net productivity per worker (Figure 1). A similar positive correlation is observed between a nation's performance in the World Economic Forum (WEF) Global Competitiveness Index (GCI) and quality of education (Figure 2). The clear message: education is the primary driver of competitiveness.

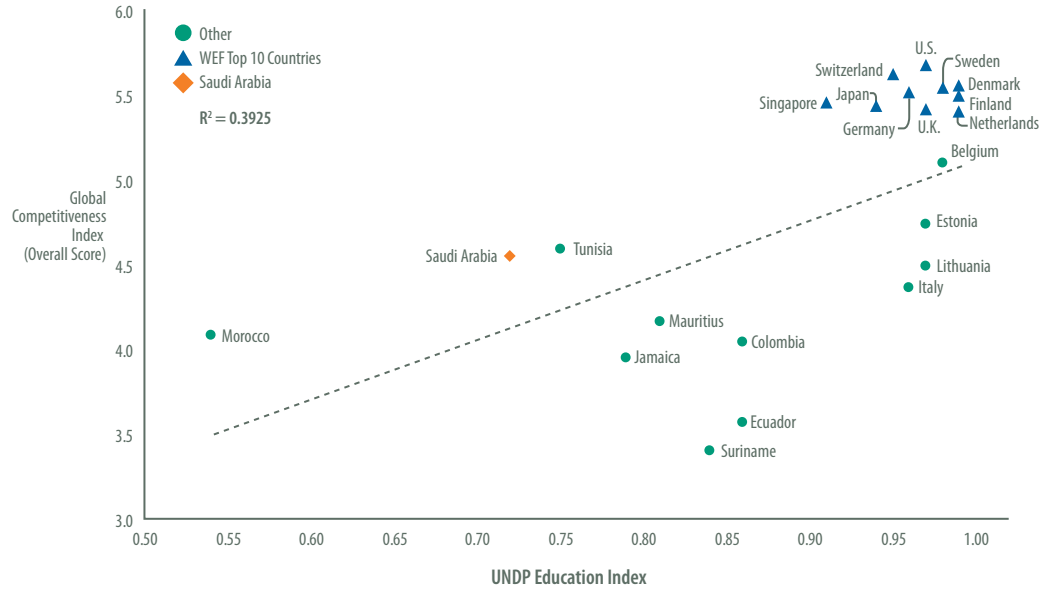
[3]Pre-primary is followed by primary, secondary, then tertiary stages of education

Figure 1: Correlation of Productivity per Worker with the UNDP Education Index



Source: *UN Human Development Report*, UNDP; CIA World Factbook

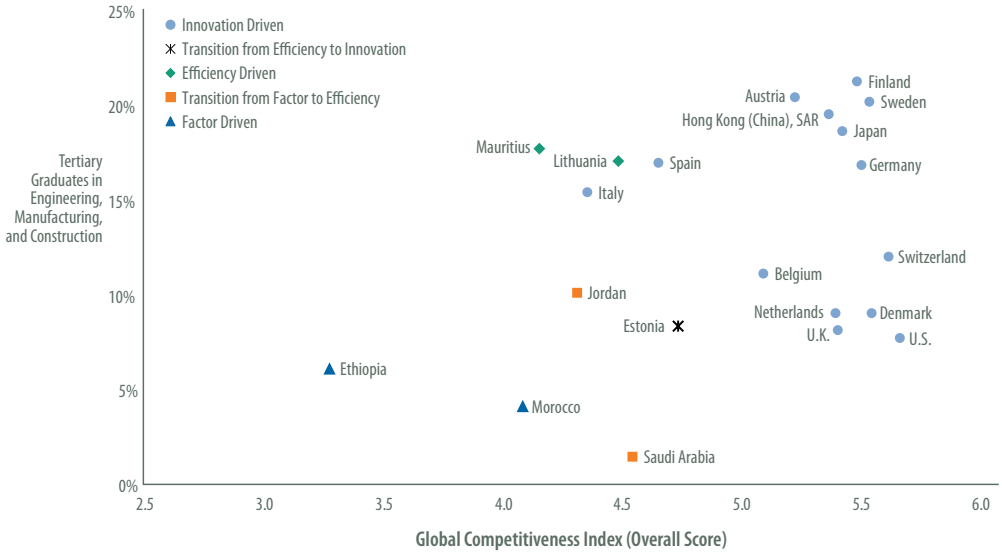
Figure 2: Correlation of the WEF Global Competitiveness Index with the UNDP Education Index



Source: *UN Human Development Report,* UNDP; *Global Competitiveness Report 2007–2008,* World Economic Forum

Advancing an economy toward the highest levels of productivity depends on increasing the complexity and value of goods and services produced by employees. A feature of the most competitive nations is the large proportion of students studying technical disciplines, such as engineering, science, or mathematics (Figure 3). A high degree of specialization in the workforce contributes to the value added by an employee to a product or service while fostering innovation and growing further net productivity per worker.

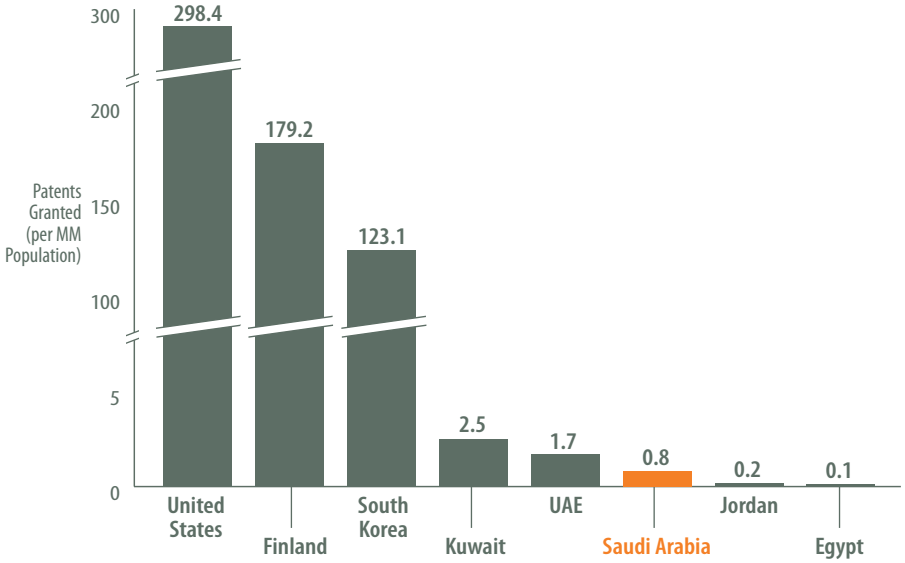
Figure 3: WEF Global Competitiveness Index vs. Percentage of Tertiary Graduates in Engineering, Manufacturing, and Construction



Source: *UN Human Development Report,* UNDP; *Global Competitiveness Report 2007–2008,* World Economic Forum

When evaluating the most advanced economies, the relationship between education and productivity becomes even more apparent. Higher education drives the knowledge society and prepares graduates to participate in it. The core driver of such knowledge-fueled economies is research, which generates innovative ideas for new products, services, and processes. Scientific publications and patents are useful indicators of research and technological development activities. The low number of patents registered in the United States by Saudi Arabia between 1980 and 2000 corroborates the Kingdom's weakness in research activity (Figure 4).

Figure 4: U.S. Patents Granted per Million Population, 2006

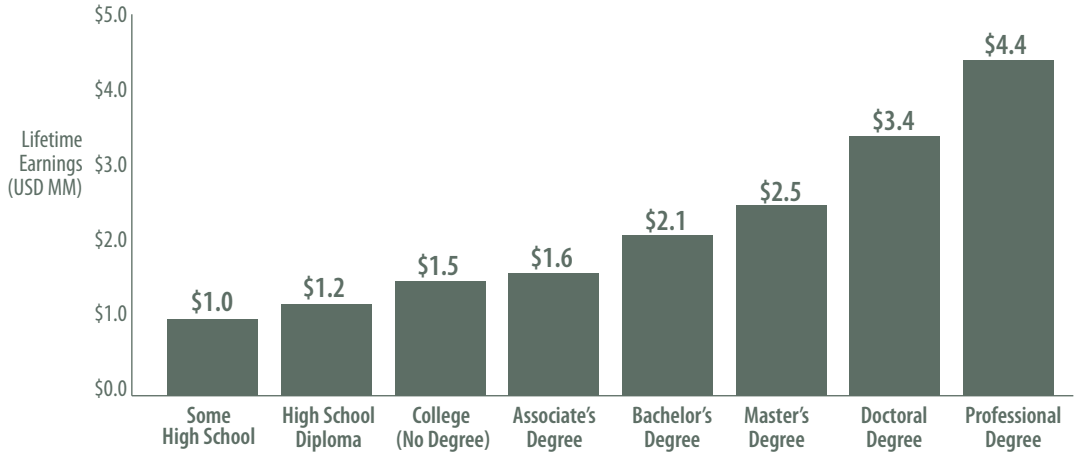


GCI Rank 2007	1st	6th	11th	30th	37th	35th	49th	77th

Source: *Global Competitiveness Report 2007–2008*, World Economic Forum

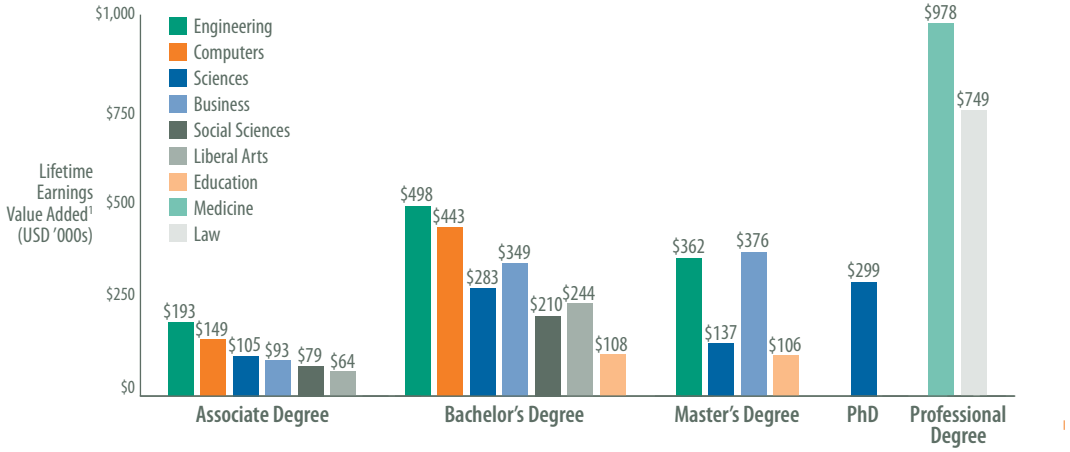
Education not only contributes to productivity at a national level, but it positively impacts individuals' income and living standards, and enables other clusters, providing the high-caliber human resources required for these sectors to prosper. Higher levels of education increase individuals' total level of income; in the United States, holders of advanced professional degrees will earn at least four times more than those with only a basic high school education (Figure 5). Specific career choices further impact this trend, with medical doctors, lawyers, and engineers earning a significant premium and leading the earnings tables (Figure 6). An effective, progressive, and relevant education sector contributes to a country's competitiveness, developing a highly educated and skilled population, and promotes innovation and entrepreneurship.

Figure 5: Total Lifetime Earnings by Educational Background



Source: *The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings,* U.S. Census Bureau, 2006

Figure 6: Lifetime Value Added to High School Diploma Earnings – by Educational Program



Source: *The Big Payoff: Educational Attainment and Synthetic Estimates of Work-Life Earnings,* U.S. Census Bureau, 2006

[1]Data represents increased income earned by degree holders, over a typical work lifespan of approximately 40 years in multiple career areas, vs. that of high school graduates

Education's impact on competitiveness is recognized by its inclusion in the indicators used by the World Economic Forum and the Institute for Management Development to develop their global competitiveness rankings. In summary, education is regarded as a vital enabling cluster. The contributions of a well-developed education system to a nation's productivity growth and competitive position are obvious. Education drives competitiveness by supplying the quality people needed for the economic growth of other clusters while acting as a competitive cluster in its own right.

Overview of the education sector in the Kingdom

The Kingdom of Saudi Arabia was founded in 1932 by King Abdulaziz bin Abdelrahman Al-Saud. That same year, prospectors discovered oil in the eastern part of the Kingdom, and the wealth it brought spurred remarkable social and economic development over a short time. By the early 1950s, a primary-level curriculum was already in place. By 1957, many schools were in operation, and Saudi Arabia's first institute of higher education, King Saud University, was opened in Riyadh. In 1964, the first public school for girls was opened. Today hundreds of schools for girls and young women across the Kingdom are full, with equal numbers of girls and boys now attending primary and secondary school, and female enrollment exceeding male enrollment at the tertiary level in Saudi Arabian universities. In 1975, with the founding of the Ministry of Higher Education, Saudi Arabia embarked on a long-term plan to improve the provision of higher education countrywide.

Public sector education

Today the vast majority of Saudi Arabian students – greater than 90% – are educated in the public system. There are various kinds of educational institutions in the Kingdom. Most fall under the supervision of three main authorities. The Ministry of Education (MoE) is in charge of general education, teacher training, special education, and adult education and literacy. The Ministry of Higher Education (MoHE) supervises university education, and the General Organization for Technical Education and Vocational Training (GOTEVOT) is responsible for developing technical and vocational programs to meet national labor requirements.

Public education – from kindergarten through the tertiary level – is open and free to every Saudi Arabian citizen. Public pre-primary kindergarten education is not commonly available, so most students begin their education at the primary level. Students attend primary school from ages six through twelve, when they move to an intermediate school, until age fifteen. Secondary school lasts a further three years, up to age eighteen. A bachelor's degree usually takes four years, and a master's degree an additional two.

The public education system is extensive and growing; it currently comprises more than twenty universities, at least 24,000 schools, and numerous training institutions. At the tertiary level, the Kingdom's scholarship programs send students overseas to the United States, Canada, France, the United Kingdom, Australia, Japan, Malaysia, and other countries, with thousands attending higher-education programs abroad every year.

Private sector education

Education in Saudi Arabia is dominated by the public sector, with a small private sector catering to the wealthier echelons of Saudi Arabian and expatriate society. Some 840 private schools in the Kingdom currently educate approximately 160,000 students, and in 2005 the MoHE supervised 12 private colleges and universities teaching some 4,000 students.

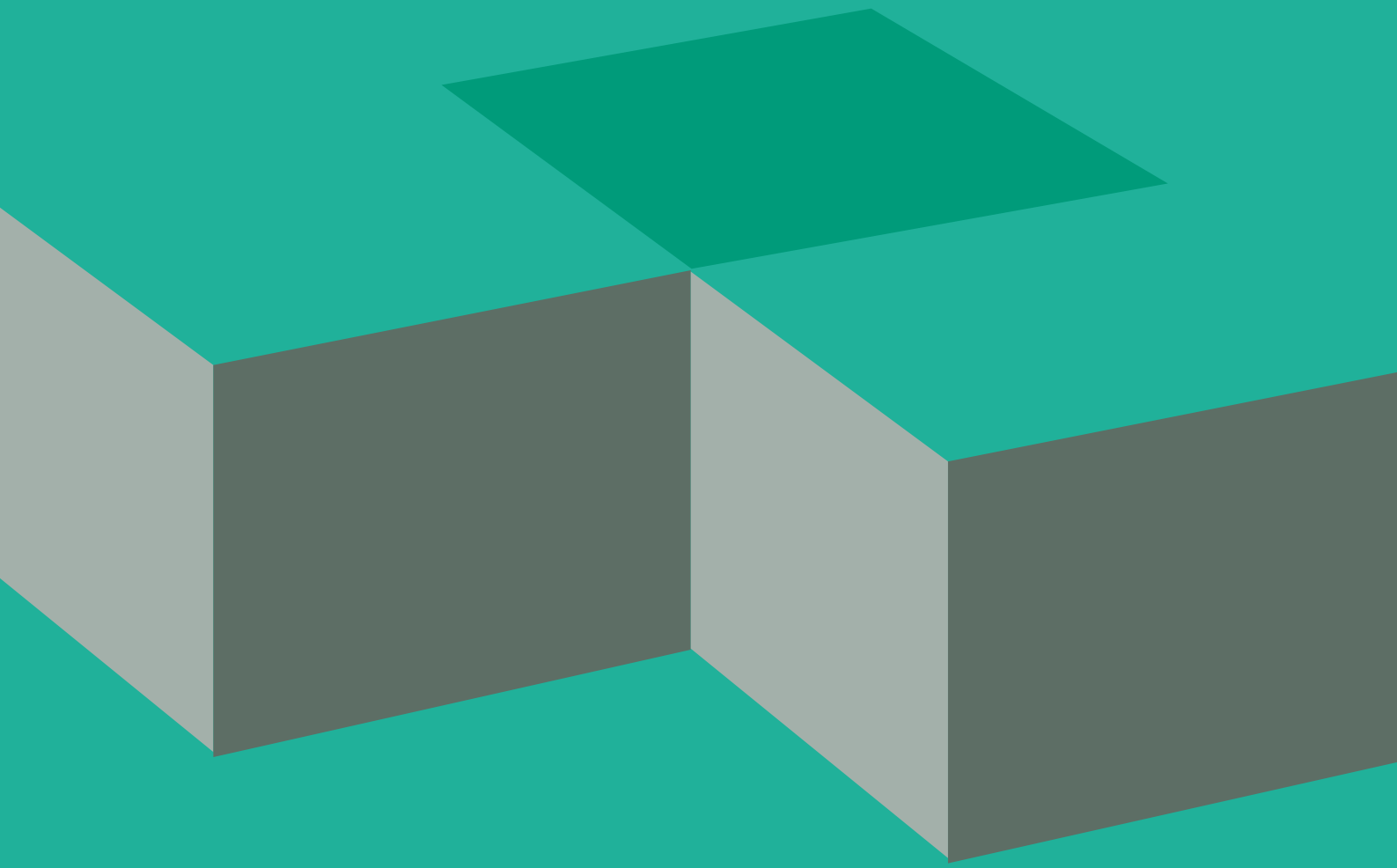
Private education is encouraged and receives financial and administrative support from the Saudi Arabian government. Private education is expected to improve pedagogy, teaching quality, and education's role in the community, as well as preserving Saudi Arabian culture. Supervision of private schools is conducted by the corresponding body that administers the public sector equivalent. The MoE regulates private primary, intermediate, and secondary schools, while private universities and vocational schools fall under the jurisdictions of the MoHE and GOTEVOT, respectively.

A series of financial incentives encourages private companies' participation in the education of Saudi Arabian citizens. The government provides private schools with free textbooks, direct financial aid, qualified school directors, and coverage of student's health care costs. In addition, scholarship programs are made available to foreign students to study in Saudi Arabia, covering such expenses as tuition, room and board, and transportation, as well as further stipends for spouses and children.

To ensure consistency of standards between the public and private sectors, private schools are subject to weighty regulation. Private schools catering to Saudi Arabian citizens must match the MoE curriculum, although Saudi Arabians may request permission from the MoE to attend international private schools that teach American- or European-based curricula. Recent policy changes suggest that private Saudi Arabian schools can now offer specialized curricula that differ from those prescribed in public schools.

Rules and regulations for private education in Saudi Arabia indicate that licenses may only be issued to Saudi Arabian citizens, and that schools must comply with Islamic requirements. Schools that cater to non–Saudi Arabian citizens are exempt from certain religious requirements.

Analyzing Saudi Arabian Educational Competitiveness



Analyzing Saudi Arabian educational competitiveness

Snapshot of Saudi Arabian education and comparison with international benchmarks

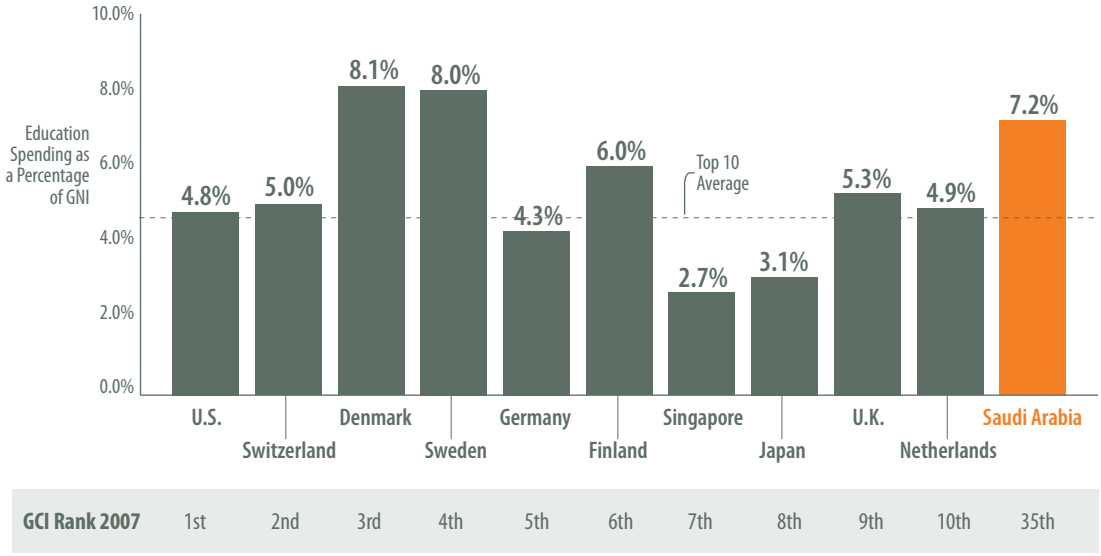
A comparison of the Saudi Arabian education system with the benchmarks set by the world's most competitive nations identifies numerous opportunities for improvement (Figure 7).

Figure 7: Saudi Arabia's Performance in WEF Education Metrics

Source: *Global Competitiveness Report 2007–2008*, World Economic Forum

Saudi Arabia's expenditure on education is evidence of the deep value the Kingdom places on learning and knowledge. Of the 131 countries evaluated by the WEF, Saudi Arabia has the eighth-highest expenditure on education, expressed as a percentage of gross national income (Figure 8). Sadly, this is the country's sole Top 10 score in the education metrics. Of particular concern is its poor performance in the quality and enrollment indicators, which suggests that despite the government's financial commitment to education it has yet to achieve value for money in education provision.

Figure 8: WEF Top 10 and Saudi Arabian Education Spending as a Percentage of GNI



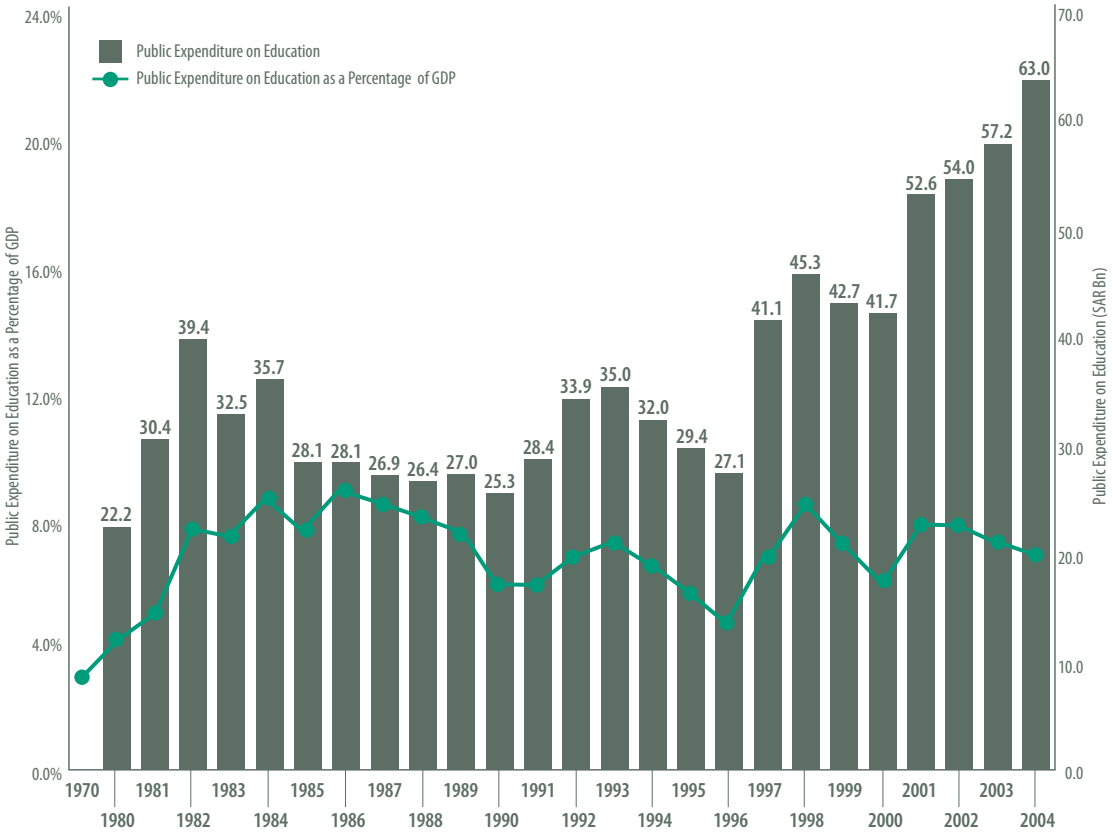
Source: *Global Competitiveness Report 2007–2008*, World Economic Forum

Building an education system de novo is a challenging and costly process. As Saudi Arabia moves forward, it is paramount that its past commitment to education continues, but that the focus shifts from investments in infrastructure to programs for improving quality and participation. In the spirit of the 10x10 program, the NCC advocates measuring performance in those metrics, then taking action to improve it.

Significant education expenditure over time

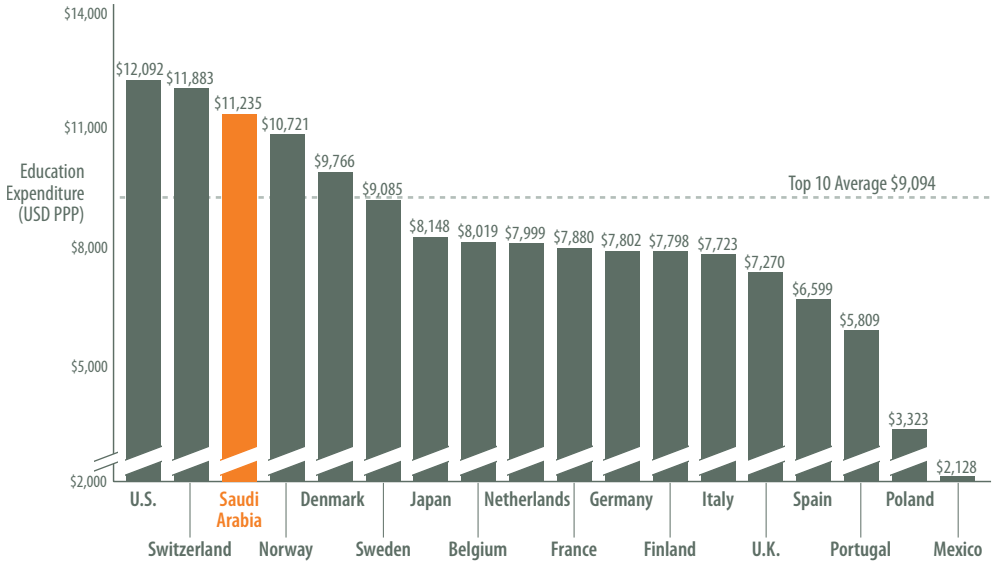
In recent years, the Saudi Arabian government has committed considerable financial resources to education provision, with spending consistently between 4% and 9% of GDP each year since 1980 (Figure 9). Spending per student is comparable to that of many OECD countries (Figure 10).

Figure 9: Public Expenditure on Education, 1970, 1980–2004



Source: UNESCO Statistics; World Bank Education Statistics; Saudi Arabian Monetary Agency

Figure 10: Public Expenditure per Student on Education, Select Countries and Saudi Arabia, 2004



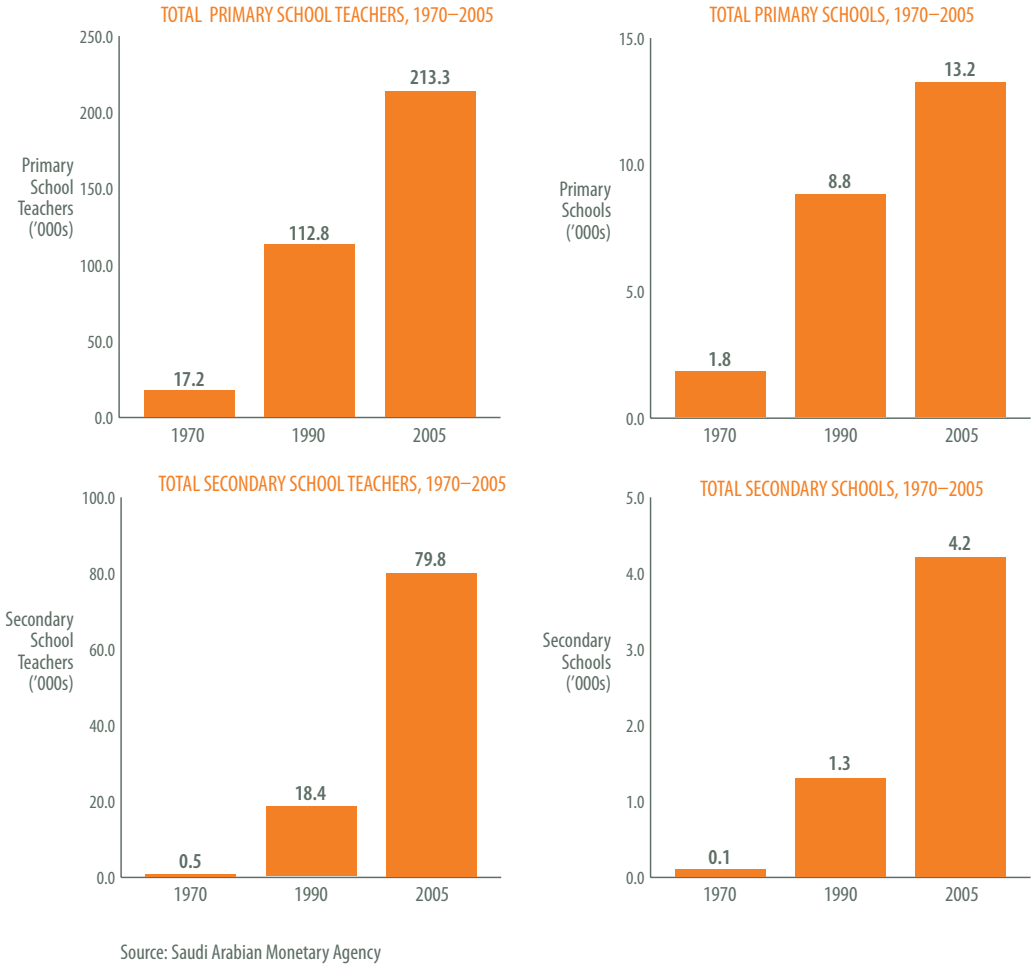
Source: *Education at a Glance 2007*, OECD; EconStats; Saudi Arabian Monetary Agency; NCC Analysis

Expanded capacity of the public system

The Saudi Arabian government has rapidly built an accessible education system, adopting a strategy of continuous investment in infrastructure and human resources, as well as efforts toward policy improvement and modernization of curricula.

Major advances in availability of education have resulted from this strategic direction. Numbers of teachers and schools have soared in the 35 years since 1970 (Figure 11).

Figure 11: Expanding Capacity of the Saudi Arabian Education System, 1970–2005



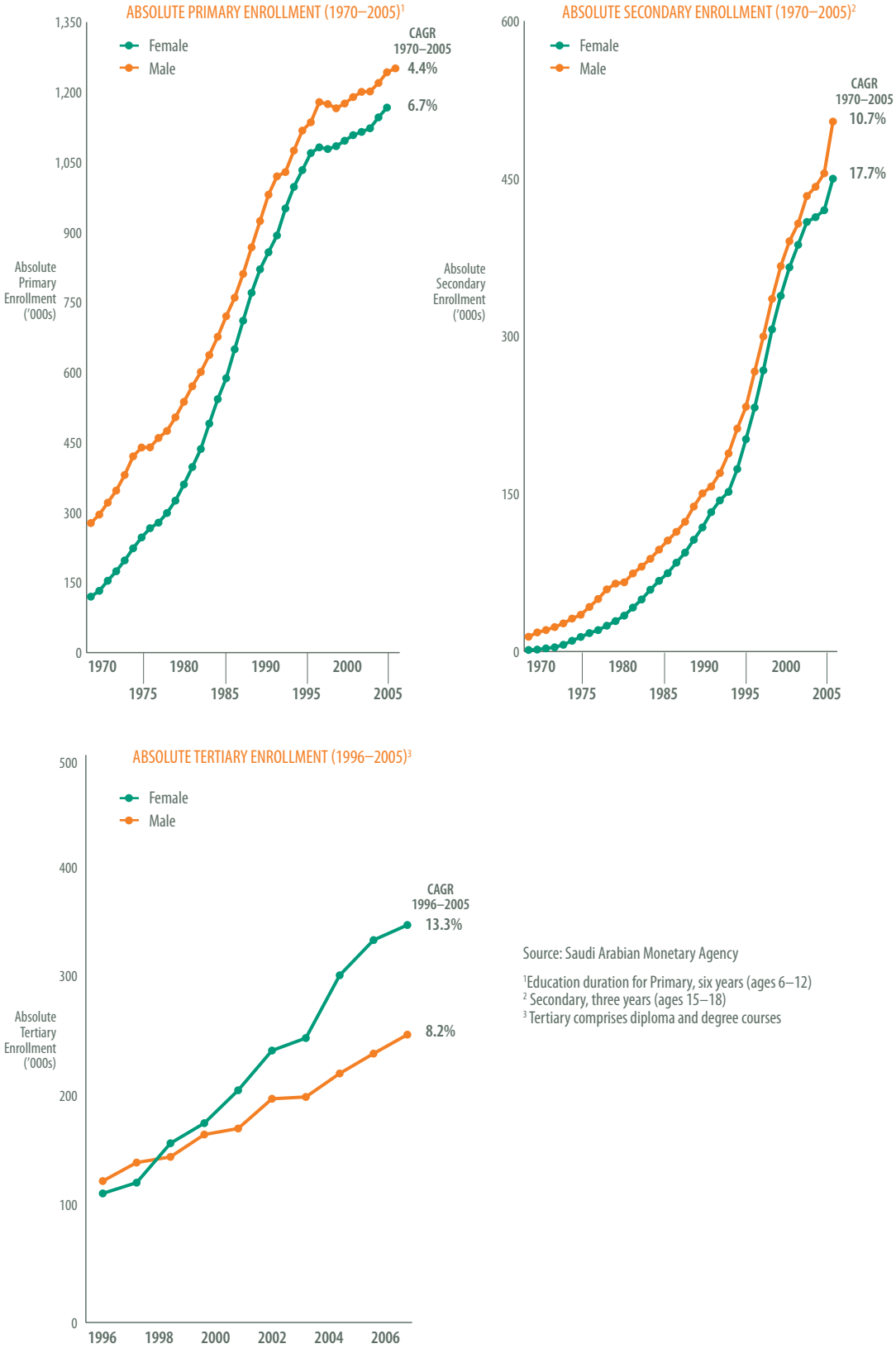
Source: Saudi Arabian Monetary Agency

Along with enlargement of primary and secondary education, tertiary education has experienced similarly rapid growth, with total tertiary teaching staff more than doubling in less than 10 years, from 13,301 in 1996 to 26,837 in 2005, resulting in greater participation in tertiary education.

Increased enrollment levels and literacy rates

Improved availability of education has seen enrollment rise steadily across all levels of education (Figure 12), giving many Saudi Arabians the opportunity of a basic education.

Figure 12: Absolute Enrollment at the Primary, Secondary, and Tertiary Levels



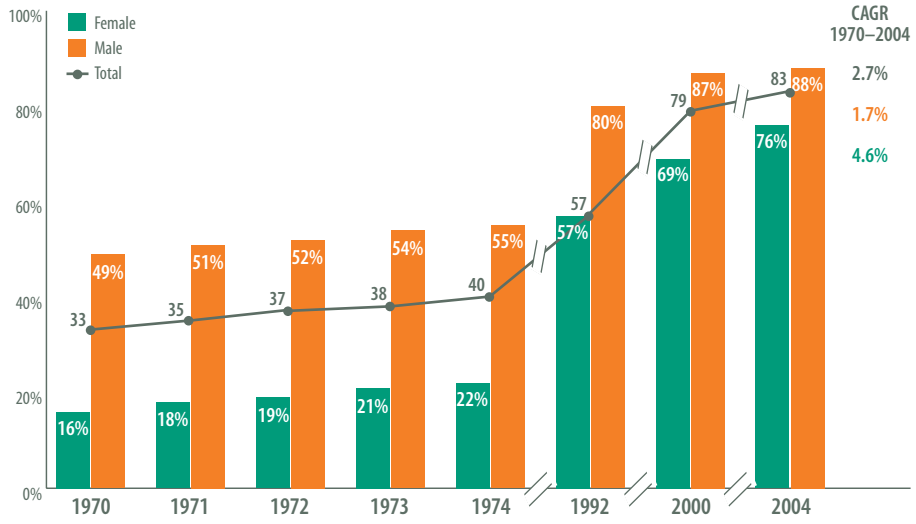
Source: Saudi Arabian Monetary Agency

[1]Education duration for Primary, six years (ages 6–12)
[2] Secondary, three years (ages 15–18)
[3] Tertiary comprises diploma and degree courses

Despite the Kingdom's commitment to providing universal education, some students still fall outside the system. Compared to that of the most competitive nations in the world, enrollment in the Kingdom is low. Of the 131 countries rated by the WEF,[4] Saudi Arabia ranks 112th, 61st, and 66th, respectively, in primary, secondary, and tertiary enrollment.

Despite relatively low enrollment, there has been a dramatic impact on literacy among the Saudi Arabian population, with 88% of males and 76% of females over the age of 15 deemed literate as of 2004 (Figure 13). Improved education has also increased levels of employment; in particular, 80% of those who hold tertiary qualification are gainfully employed, compared to 62% and 65% of those with primary or secondary education alone.[5]

Figure 13: Adult Literacy Levels, 1970–2004



Source: World Bank Education Statistics

[1] Literacy rate represents percentage of the population (total, male, female) ages 15 and older who can, with understanding, read and write a short, simple statement about their everyday lives

Low return on investment in education

The government has invested significantly in education provision. Nevertheless, while spending per student is on a par with that of more developed countries, education system performance lags behind. WEF education ranking metrics identify areas where Saudi Arabia's education system falls short:

- Enrollment across primary, secondary, and tertiary levels is much lower than that observed in the most competitive countries.
- Adult illiteracy remains high, with 20.6% of the population classed as illiterate, compared to an average of 2.2% across WEF Top 10 Countries (Figure 13).
- Math and science education need substantial improvement; TIMSS performance[6] is particularly poor (Figure 14, Figure 15).

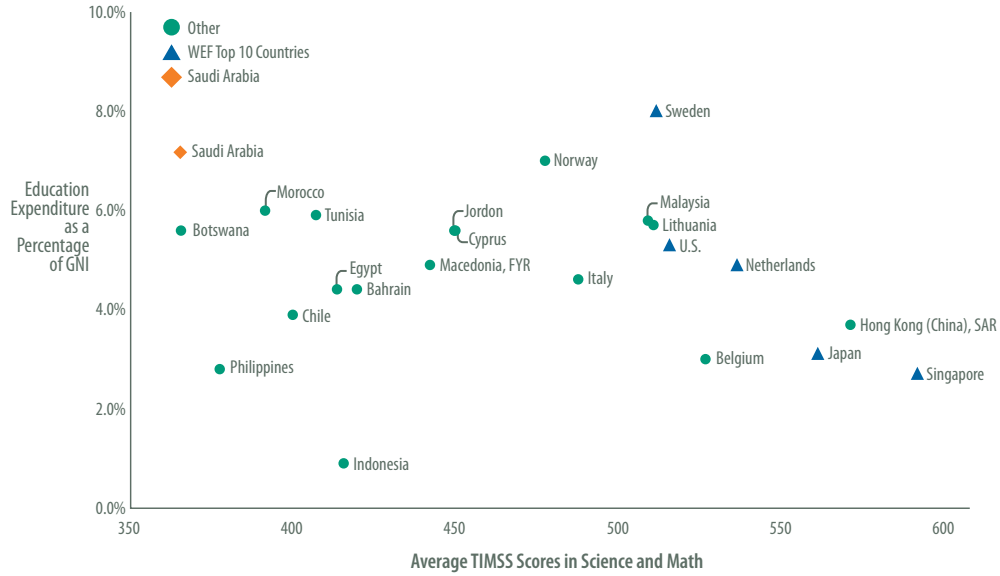
[4] *Global Competitiveness Report*, 2007–2008, World Economic Forum

[5] World Development Indicator Statistics, the World Bank Group

[6] Trends in International Mathematics and Science Study

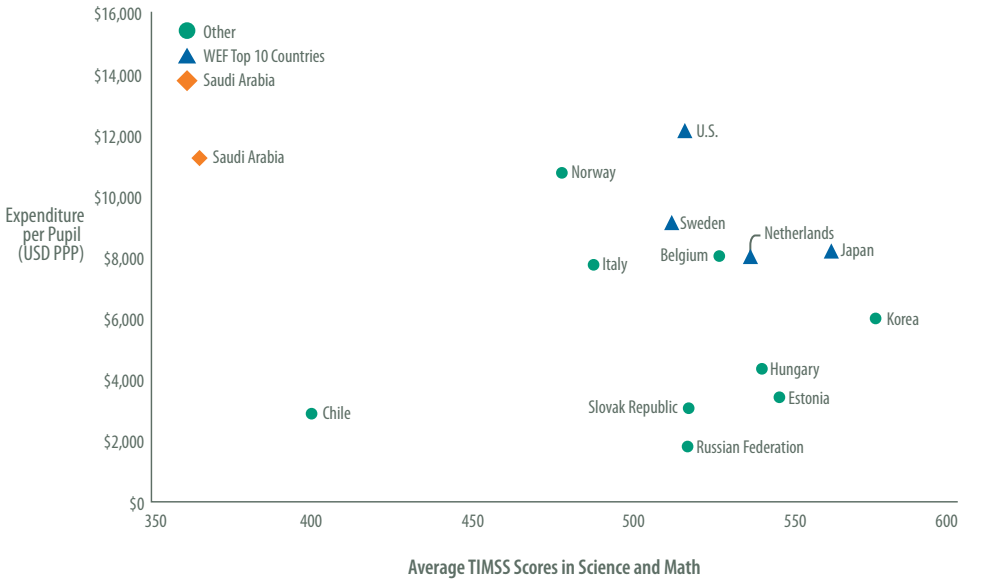
- The labor force lacks prevalence of new graduates with financial, economic, information technology, and engineering skills.
- Limited opportunities exist for collaboration with research institutions to drive innovation in scientific disciplines.

Figure 14: Correlation of Average TIMSS Scores with Education Expenditure as a Percentage of GNI



Source: *TIMSS Report*, International Association for the Evaluation of Educational Achievement; *Global Competitiveness Report 2007–2008,* World Economic Forum

Figure 15: Scatter Plot of Average TIMSS Scores against Education Expenditure (in Equivalent USD Converted using PPPs for GDP)



Source: *TIMSS Report,* International Association for the Evaluation of Educational Achievement; *Global Competitiveness Report 2007–2008,* World Economic Forum; Saudi Arabian Monetary Agency; *Education at a Glance 2007, OECD;* EconStats; NCC Analysis

Education improvement in the Middle East

The challenges outlined above are not unique to Saudi Arabia and are faced by many education systems around the world. In recent years, many Gulf countries have invested heavily in changing the structure of their education systems.

QATAR

Qatar has made significant efforts to increase availability of its education programs through international partnerships and foreign investment. In a bid to promote quality, many schools have been accredited by the New England Association of Schools and Colleges and Europe's Council of International Schools. Qatar has successfully established a reputation as an education center for the region, drawing students from Gulf countries and farther abroad.

JORDAN

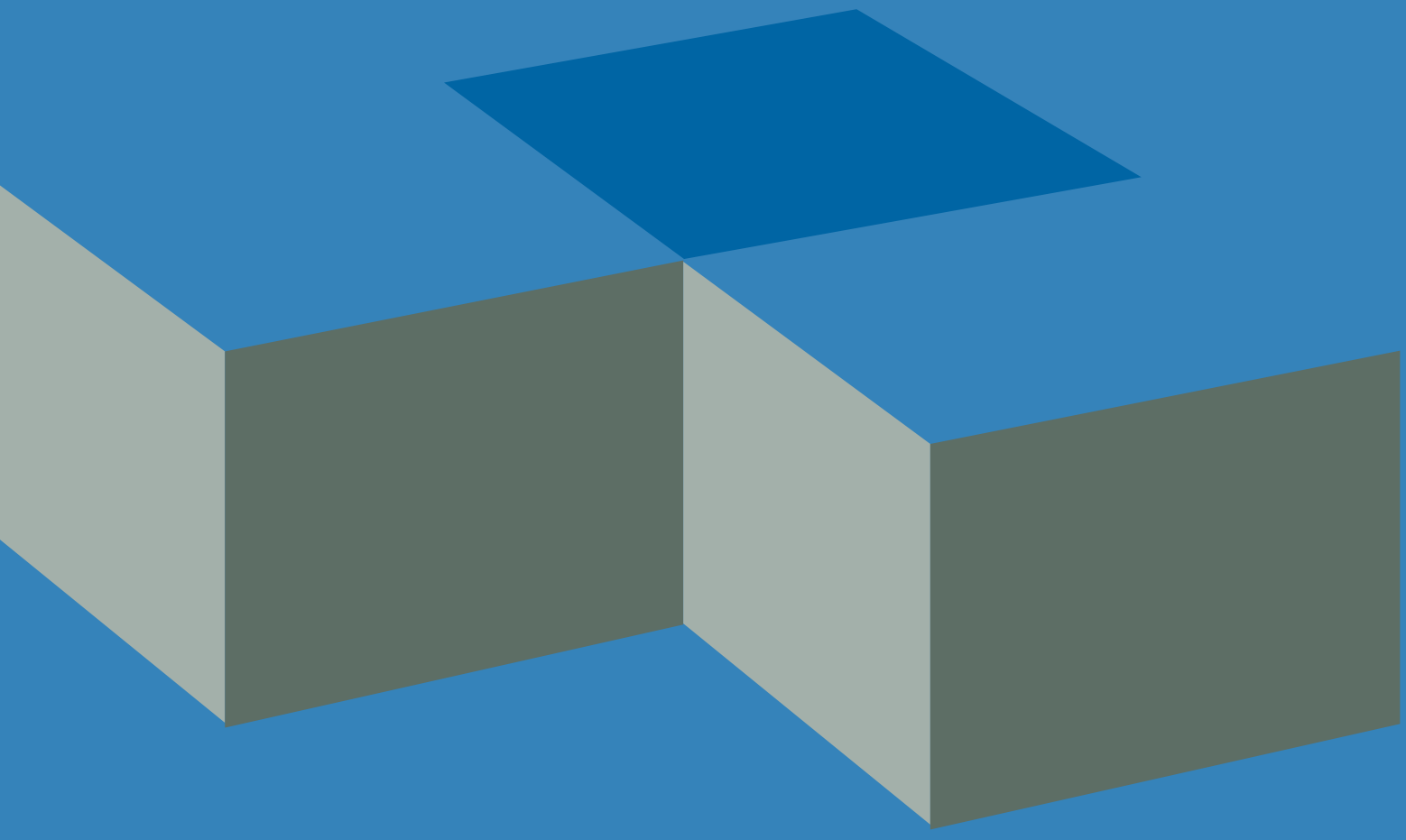
Jordan has taken steps to improve its education system and attract international education investors. In 2007, it opened the first co-educational private boarding school in the region, the King's Academy. Modeled on boarding schools in the U.S., the academy will teach a liberal arts and sciences curriculum, based on the American Advanced Placement program. The hope is that the King's Academy will help to improve the educational system and open doors for further foreign investment. Simultaneously, it is hoped that the school will attract students from the Middle East who would otherwise go to Europe or the U.S. for the same level and quality of education.

KUWAIT

Kuwait's education program has adopted a strong focus on the English language; all Kuwaiti students study English, beginning in the second grade. The government subsidizes private education, making it a popular choice; despite comparatively high fees, schools that teach American and British curricula are booming in Kuwait. Before 1991, there were only 15 non-Arabic foreign schools in the country. By 1998, there were 104 private foreign schools, with more than 120,000 students, and 42 of the schools taught non-Arabic curricula.

The Saudi Arabian government is similarly prepared to address the major challenges facing its education sector.

Addressing Major Challenges Facing the Cluster



Addressing major challenges facing the education sector

The Saudi Arabian government is well aware of the challenges facing education and has taken steps to increase the sector's performance. The new SAR 12-billion King Abdullah Project for the Development of Public Education seeks to overhaul the education system. The Ministry of Education is developing a new education strategy divided into four distinct components:

- Development of curriculum and learning materials
  - Focused on developing K–12 curricula to bring outcomes up to international standards.
- Enhancement of learning environment
  - Focused on implementing technology-driven eLearning tools throughout the Kingdom to foster an effective learning and teaching environment.
- Teacher training and professional development
  - Focused on continuous training and building capacities for Ministry of Education staff.
- Promotion of extracurricular activities
  - Focused on developing extracurricular activities that allow students to build additional competencies, discover hobbies, identify talents, and improve artistic and linguistic abilities.

The King Abdullah Project for the Development of Public Education and the foundation of the King Abdullah University of Science and Technology are indicative of sweeping educational changes across Saudi Arabia. These projects aim to tackle a host of issues, and in particular the two most significant challenges facing the Kingdom's education system:

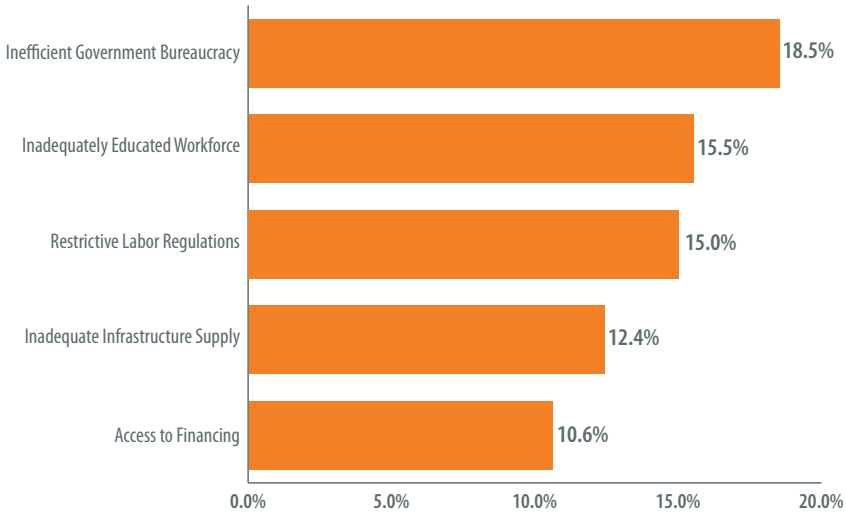
- The considerable skills gap between the capabilities of today's graduates and the Saudi Arabian economy's skilled labor needs.
- Low enrollment levels across the Kingdom, particularly in regions outside the major cities.

The following sections describe these two issues in detail, as well as the NCC's recommendations for education modernization, which complement the aims of the King Abdullah Project for the Development of Public Education.

The considerable skills gap

When asked to select the most problematic factors for doing business in their country, an overwhelming 15.5% of business leaders in Saudi Arabia identified an inadequately educated workforce as a substantial problem (Figure 16). Consequently, Saudi Arabia depends heavily on imported labor, both skilled and unskilled, for much of its economic activity (Figure 17). Reducing this reliance is critical to building an increasingly competitive nation. The education system does not presently produce sufficient numbers of employable people to meet the demands of the economy. In particular, the highest-paying jobs are offered to expatriate workers. Some 80% of engineers, medical doctors, and scientists are foreigners (Figure 18).

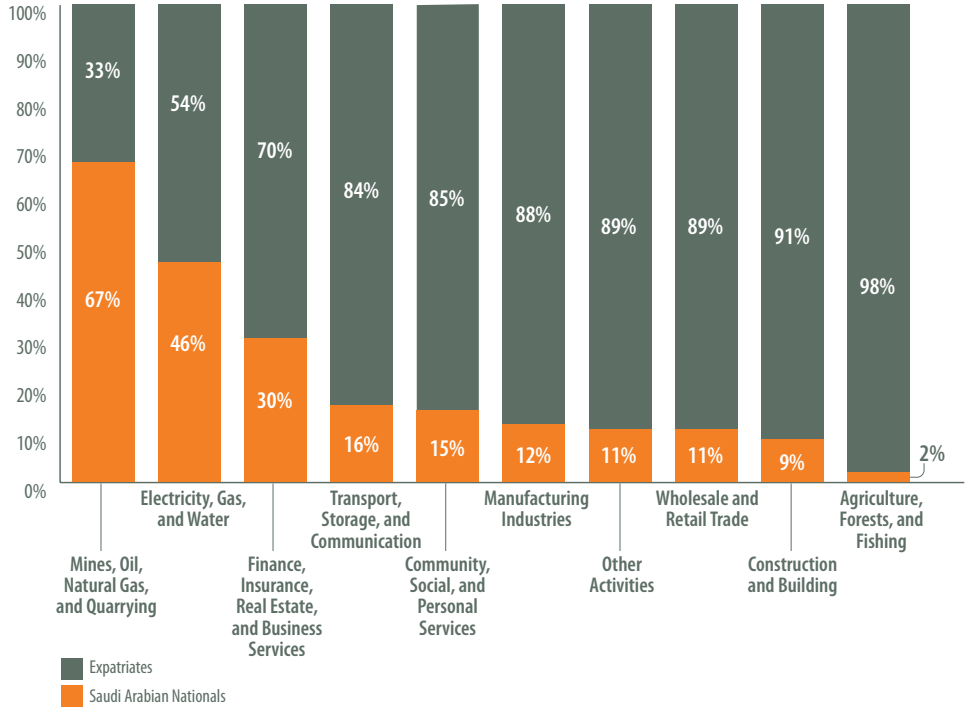
Figure 16: Saudi Arabia's Most Problematic Factors for Doing Business



Source: *Global Competitiveness Report 2007–2008,* World Economic Forum

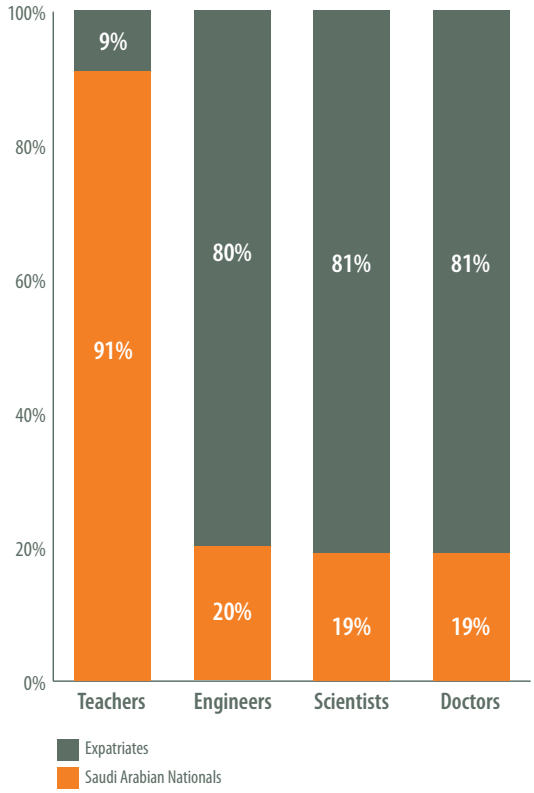
[1]From a list of 14 factors, respondents were asked to select the five most problematic for doing business in their country, and to rank them between one (most problematic) and five

Figure 17: Saudi Arabian Participation by Sector of Economic Activity



Source: Saudi Arabian Monetary Agency; Central Department of Statistics, Saudi Arabia

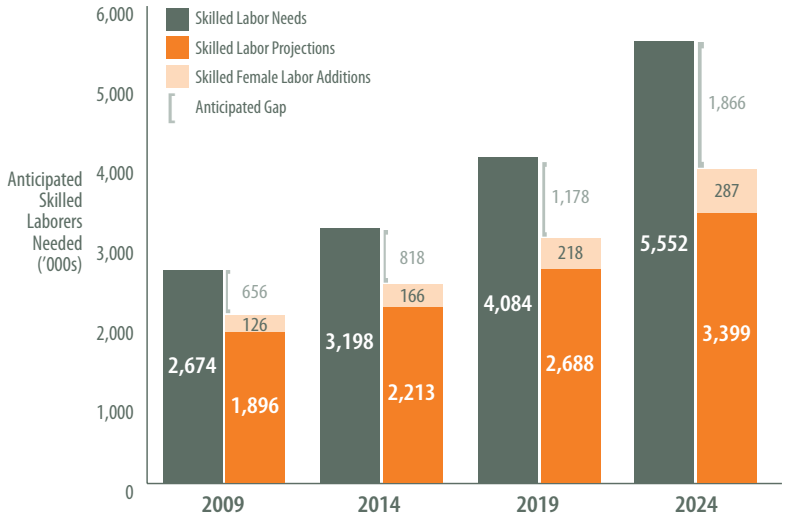
Figure 18: Saudi Arabian Participation by Profession



Source: Saudi Arabian Monetary Agency; Central Department of Statistics, Saudi Arabia

Expatriate labor currently dominates the workforce across the majority of economic sectors, with the mining, oil, and gas sectors employing most Saudi Arabians. As the Kingdom diversifies away from petroleum and gas toward an innovation-based economy, analyses indicate that the shortage of Saudi Arabian skilled labor is expected to worsen over the next 20 years. Even taking into account a possible marked increase in women's participation in the workforce, Saudi Arabia will likely face a significant shortfall in skilled labor (Figure 19).

Figure 19: Saudi Arabia's Projected Skilled Labor Needs vs. Projected Skilled Labor, Including Women[1]



Source: *Saudi Arabia's Long-Term Strategy 2025*, 8th Development Plan; ILO Workforce Statistics; World Bank; UNESCO

[1]Female workforce growth rate at increase from 5% to 15% over 20 years; female skilled labor taken at same percentage (21%) as male skilled labor; gap not including percentage of women entering through university graduation; gap based on benchmark levels of skilled labor; skilled workforce includes managers, legislators, and professionals, technicians and associate professionals, as defined by ILO

The NCC has identified several other barriers to Saudi Arabian employment. Exacerbating the limited number of suitably qualified candidates produced by the education system, Saudi Arabians exhibit a low preference for relatively unskilled work, stemming from the legacy of substantial oil wealth and the ready supply of less-costly South Asian labor. The well-developed social welfare system also acts as a disincentive to employment.

The education system is a crucial component in redressing the balance of the skills gap. The NCC believes there are areas in which coordinated action by the country's leadership and ministries of education will significantly improve the situation. Recommendations to reduce and eventually eliminate the skills gap in Saudi Arabia are made across the following eight areas:

- **Improving curriculum suitability**
- **Introducing standardized testing**
- **Improving teaching quality**
- **Improving administration of schools**
- **Enhancing the competitive landscape for private education**
- **Promoting demand for technical subjects**
- **Upgrading quality of tertiary instruction**
- **Improving awareness of benefits of education**
- **Developing a structured and innovative education strategy**
- **Understanding low levels of enrollment**

Improving curriculum suitability

Implementing the most fitting K–12 curriculum for Saudi Arabia – with a strong focus on such subjects as mathematics, science, and English – will produce a new generation with the skills required to compete in the global economy.

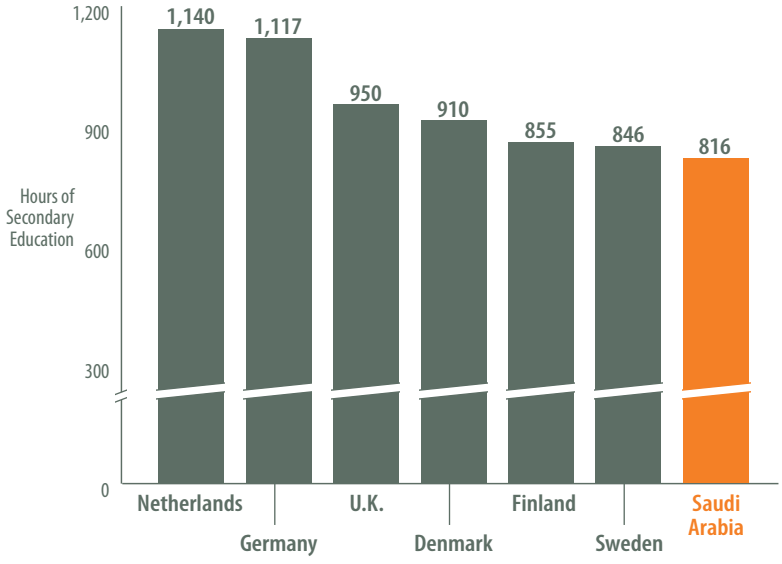
NCC recommendations:

- Use select schools in cities across Saudi Arabia (including the Economic Cities) as sites for pilot studies to identify the curricular mix of subjects and teaching techniques best suited to education in Saudi Arabia.
- Introduce a vocational option in secondary education alongside the scientific and literary streams.
- Conduct a study of regional labor needs and develop region-specific subject mixes for the vocational option, matched to the demands of the local economy, and investigate ways to attract students to these subjects.
- Increase provision of computers and Internet access in the classroom, and increase the availability of eLearning support tools to reinforce classroom lessons.

"Because we spent most of our time on rote memorization, even after university I had very few marketable job skills."
– Recent Saudi Arabian university graduate

A secondary school student in Saudi Arabia spends 15% less time in the classroom each year (approximately 150 fewer hours) compared to a student in an average Top 10 Country (Figure 20).[7] The proportion of the school year dedicated to math and science is similar across countries, but Saudi Arabian students are at an immediate disadvantage because they spend less time in school than their European counterparts.

Figure 20: Hours per Year Spent in Secondary School for Select Countries

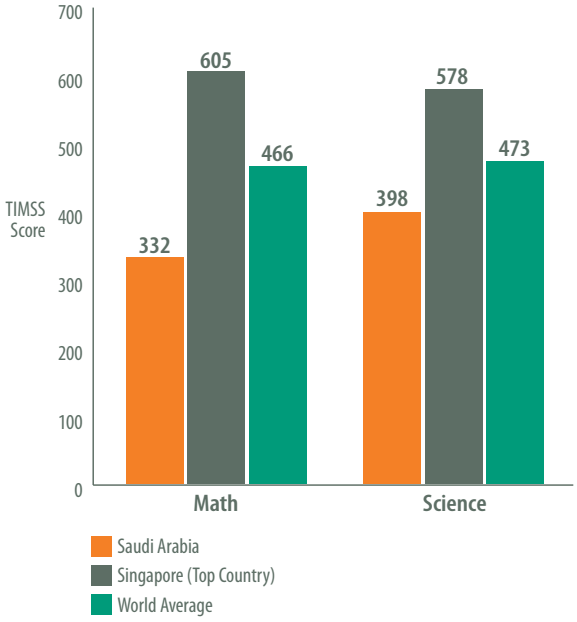


Source: Eurydice; World Education Services

[7] Average of Denmark, Sweden, Germany, Finland, U.K., Netherlands

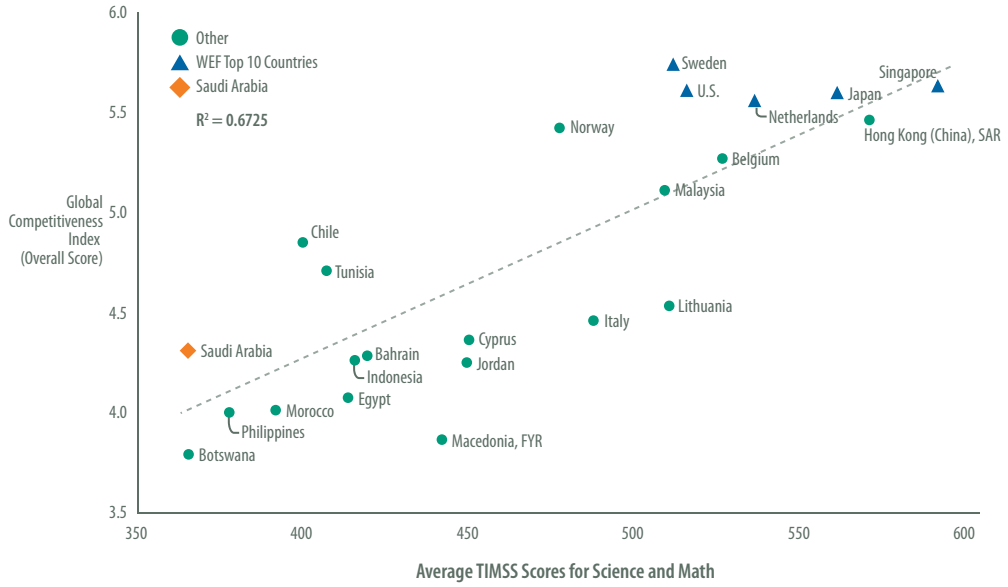
The time dedicated to education alone is insufficient to explain the performance of Saudi Arabian students in the 2003 Trends in International Mathematics and Science Study (TIMSS). Performance by Saudi Arabian students is significantly lower than that of students in Top 10 Countries (Figure 21), but Saudi Arabia also falls behind less-developed countries, such as the Philippines, Morocco, and Indonesia (Figure 22). Increasing time spent in school while improving the use of learning time will bring new opportunities for children to master the basics and receive a better math and science education.

Figure 21: TIMSS Scores in Math and Science – Saudi Arabia, Singapore, and World Average



Source: *TIMSS Report*, International Association for the Evaluation of Educational Achievement; *Global Competitiveness Report 2007–2008*, World Economic Forum

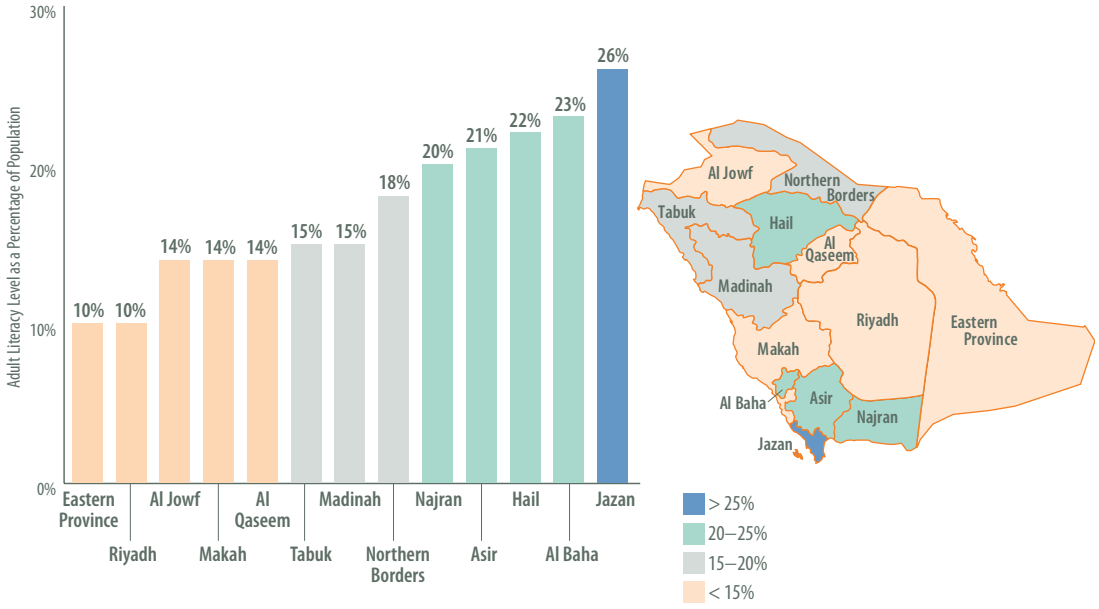
Figure 22: Correlation of the Global Competitiveness Index vs. Average TIMSS Scores for Math and Science



Source: *TIMSS Report*, International Association for the Evaluation of Educational Achievement; *Global Competitiveness Report 2007–2008*, World Economic Forum

Though Saudi Arabia's TIMSS results are poor, the ministries of education have begun to respond with efforts to modernize the education system. For example, in 2004 the need to alter the Kingdom's curriculum was recognized by a Royal study group, and subsequently textbooks were extensively revised. In 2006, student councils were established in public schools to educate young Saudi Arabians on civic responsibility, and the MoE announced the replacement of midterm exams with a process of continuous performance review during the last two years of high school rather than just in the final year. The MoE has experimented with introducing English language classes during the sixth grade instead of the seventh grade, in an effort to improve foreign language skills at the intermediary and secondary levels. More recently, in 2007 the MoE announced a pilot program in select schools to teach English in the fourth grade. When considering what subjects to teach, it is important to understand regional nuances in Saudi Arabia. In certain areas, it might be beneficial to concentrate on basic literacy skills, as in Jazan, where the illiteracy rate is as high as 26% (Figure 23).

Figure 23: Regional Illiteracy Rate as a Percentage of Population, 2004



Source: Regional Census 2004

Though some efforts have been made to modernize testing methods and curricula, few have focused on upgrading teaching techniques. Except for a few pilot programs in Riyadh and Jeddah for training teachers in innovative methods, the basic methodology – rote memorization – has remained largely unchanged.

"The new textbooks, particularly those for science and math, are surprisingly high quality. I've been very impressed."

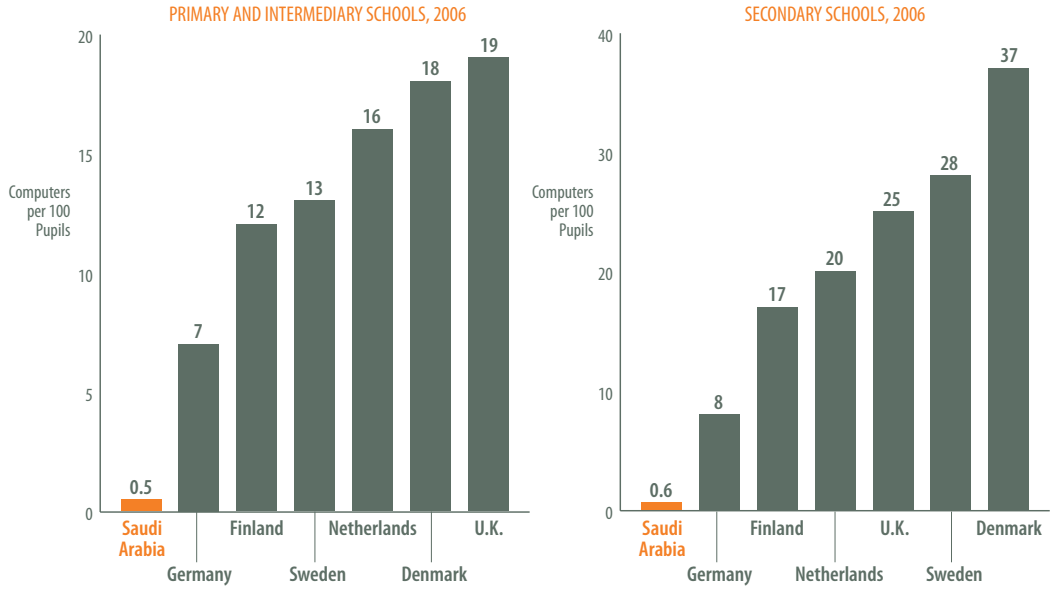
– Private school principal

The NCC strongly advocates for a shift in thinking about what constitutes education, moving away from a system based entirely on rote memorization toward programs that value the critical thinking skills needed to apply knowledge in the real world. Education systems produce more capable, more intelligent graduates when children and young adults learn to think about information rather than to regurgitate it.

One way to accelerate this process via technology-based learning solutions. Across the globe, information and communications technologies (ICTs) have enhanced the education sector, by improving transmission of knowledge and facilitating development of critical thinking skills. At the most basic level, access to the Internet and email has allowed students and teachers to work better within the confines of the existing learning environment. Novel, education-specific ICTs are delivering more effective learning environments, based on innovative teaching approaches and techniques.

Teachers are using ICTs to design curricula, lectures, and assignments with increasing collaboration and input from peers. A large majority (90%) of teachers in Europe use ICTs to prepare their lessons.[8] Students using ICTs are able to draw on increasing stores of knowledge via the Internet, and interact with other students and teachers in less-formal, non-classroom settings. According to a recent survey of European teachers, 86% believe students with access to ICT products and services in and out of the classroom display increased motivation, teamwork, and independent thinking compared with students lacking such access. In fact, student and teacher ICT usage is strongly correlated to improved test performance by students. Recent studies have shown ICT use between ages 7 and 16 can result in significant relative gains in English, science, and design and technology. In Saudi Arabia, however, there is less than one computer per 100 pupils at all levels (primary, intermediary, and secondary). Top 10 Countries have substantially more computers available to the student population, with between 16 and 75 times as many computers per 100 pupils (Figure 24).

Figure 24: Computers per 100 Pupils, 2006



Source: Saudi Ministry of Education; *ICTs in Schools*, European Commission; Information Society and Media

[8] Europa, www.europa.eu

A further evolution of the use of technology in the classroom is eLearning – technology-based learning tools. Examples include computer-based learning, interactive and collaborative assignments, and distance learning. Particularly with distance learning, education is no longer confined to rigid timetables. Students can enroll and participate in courses offered by institutions, sometimes thousands of miles away. In Sweden, the number of students participating in distance education via the Internet tripled from 21,000 in 1993 to 64,000 in 2003.[9] In the U.S., nearly 20% of all higher-education students took at least one online course in 2006.[10]

In a world where students are continuously bombarded with arguments and information, often with limited information on the material's credibility, there is a fundamental need for the development of skills that will enable students to negotiate the inevitable disagreements between sources. Recently, the Indian government's National Council of Educational Research and Training began a process of developing a new curriculum and textbooks for both public and private education systems. Like Saudi Arabia's current system, the old Indian curriculum was highly focused on memorization, with no opportunity for discussion. The new Indian curriculum – in place when students started the school year in September 2007 – encourages students to brainstorm and debate across a range of subjects, including philosophy, science, history, and literature. While the results remain to be seen, these actions indicate how India understands the importance of nurturing creative, critical thinkers, which will also ensure that the country's future is in well-educated, capable hands.

Refocusing the curriculum, increasing vocational opportunities, and enhancing ICT provision will give future generations of Saudi Arabian students the chance to develop the skills needed to compete, innovate, and engage in an increasingly competitive global economy.

Introducing standardized testing

The use of standardized testing throughout the education system will ensure that standards are achieved, and that problem areas and poorly performing schools are identified so corrective action can be taken.

NCC recommendations:

- Benchmark performance of Saudi Arabian students against international standards by participating in standardized tests from the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS), and the OECD Programme for International Student Assessment (PISA).
- Develop a performance road map over the next decade, with specific targets in TIMSS, PIRLS, and PISA, with a view to achieving Top 10 scores.
- Develop and implement a series of standardized tests for K–12 education to track student progress and identify the best- and worst-performing schools. Offer underperforming schools additional funding and support to meet standards.

[9] eLearning Country Brief: Sweden
[10] The Sloan Consortium

A common feature of some of the best education systems in the world is the use of standardized, regular assessments. The benefits of measuring an education system's outcomes are immediately obvious. What is not measured cannot be properly managed or improved upon. Standardized testing provides a reliable and credible way to measure student, teacher, and school performance. Standardized testing also provides administrators and policy makers with a tool to track the success of policy changes, curricular upgrades, and alterations to pedagogy. Admittedly, standardized testing can be improperly administered. Administrators may use standardized tests to justify unfair measures against particular schools, or teachers may concentrate lessons on tested material only. However, the potential benefits far outweigh the risks. While mitigating such risks, Saudi Arabia should seek to effectively implement standardized testing and widespread application of performance measurement metrics in schools across the Kingdom.

There are several standardized tests to assess and compare school children's performance worldwide, with a view to improving educational methods and outcomes. The best known are the Organisation for Economic Co-operation and Development (OCED); the Programme for International Student Assessment (PISA); the International Association for the Evaluation of Educational Achievement's Trends in International Mathematics and Science Study (TIMSS); and the Progress in International Reading Literacy Study (PIRLS). In the PISA tests, Finland's high scores were attributed to the country's high standard of teachers, and to its math and science development program from 1996 to 2002. Conversely, German students' unexpectedly poor PISA performance provoked a national demand for sweeping changes to the education system. In 2003, Poland, Belgium, the Czech Republic, and Germany all improved their results over their 2000 performance. In Poland in 2000, students scored near the bottom of the list worldwide; subsequent changes to the school system resulted in above-average PISA reading scores for 2003 and 2007.

Testing can support great improvements in standards and play an important role in developing education systems. When Massachusetts, USA, upgraded its outdated education system in 1993 (Box 1), the success of its restructuring effort was measured by a series of mandated testing checkpoints. If schools failed to meet the required standards, they were provided with additional support from the Massachusetts Ministry of Education.

Participation in PIRLS, PISA, and TIMSS and using those test results to track the performance of the Saudi Arabian education system is paramount. In the same way that Poland achieved above-average scores in less than three years, Saudi Arabia must develop an aggressive but achievable road map for elevating students' performance to Top 10 levels.

Box 1

GLOBAL EDUCATION REFORM IN MASSACHUSETTS, USA

In 1993, the State of Massachusetts passed the Education Reform Act, which led to dramatic changes in public education over a seven-year period, affecting 900,000 public school students in 1,800 schools. The Massachusetts Board of Education organized the Commission on the Common Core of Learning to develop a statewide set of broad educational goals for all students. Based on these objectives, curriculum frameworks for various subjects were developed that helped frame a comprehensive system for assessing the performance of each student and school.

Curriculum development

Before 1993, the only statewide subject requirements were history and physical education. The Education Reform Act called for statewide curriculum frameworks and learning standards to be introduced for all students in science, math, world languages, arts, and health by December 1995, and in English and language arts by January 1997.

Statewide student testing

A new statewide test, the Massachusetts Comprehensive Assessment System (MCAS), was introduced for students in grades 4, 8 and 10, to identify individuals and schools in need of additional support.

Graduation standards

To receive a diploma, all students were required to pass the state's tenth grade test, in addition to meeting local examination requirements.

Enhance teacher quality and professionalism

Since 1998, all teachers have been required to pass two tests to become certified to teach in Massachusetts public schools. These tests focus on evaluating subject knowledge and on communication and literacy skills. All educators are also required to continue their education, via professional development courses to strengthen their knowledge and teaching skills.

Time and learning

The Education Reform Act also emphasizes increasing the time devoted to learning in schools. District plans require that students be taught for at least 900 hours in elementary schools and 990 hours in secondary schools.

As a direct consequence of this initiative, the annual dropout rate in Massachusetts decreased by 16%, from 3.7% of all high school students in 1993 to 3.1% in 2002. Public school kindergarten enrollment has increased, as has the number of students completing secondary college, with the highest participation rate in the SAT Reasoning Test of any U.S. state, at 80% compared to the national average of 41%.

Moving forward, it is imperative that Saudi Arabia look to the outcomes of the education system as the ultimate indicator of its success. The NCC advocates for objective and regular assessments of students in every school across the Kingdom, to determine individual student performance, school performance, and regional educational attainment levels. Such testing will enable the ministries of education to identify strong-performing schools and best practices to share. Testing will also enable administrators to identify specific areas, such as math or science, requiring improvement, as well as schools and regions needing additional assistance.

Improving teaching quality

Teachers matter. All other factors being equal, teachers have a weighty effect on the performance achieved by their students. Improving the quality of teachers is important for any education system.

Teachers have a profound influence on their students. It is a considerable challenge to have a captive audience of children for five days each week, and to be responsible for many elements of their emotional, social, and academic development. The importance of preparing new teachers to cope with the challenges of a teaching career, and of equipping them with the skills needed to facilitate learning and inspire their students, cannot be underestimated. Teachers are the guardians of the country's economic and cultural future.

No one disputes the importance of effective teachers. But as in many countries, despite the high esteem in which it holds teaching as a career choice, Saudi Arabia does not assertively recruit teachers. Nor does it offer them opportunities to further their professional development.

Introducing mandatory teacher accreditation

NCC recommendation:

- Introduce an accredited teaching program to ensure the highest standards in teaching quality, and mandate it as a requirement for employment as a teacher in the Kingdom.

"The Saudi candidates that we interview for teaching positions are frequently intelligent and eager, but lack the essential skills needed to educate."

– Private school principal

Investing in the training of new teachers creates an enhanced sense of professionalism around teaching as a career choice, attracting high-quality graduates to the profession. In the United Kingdom, the Postgraduate Certificate of Education (PGCE) is a popular second degree for those wishing to teach. Since its introduction, the numbers of students applying to become teachers has soared, particularly in the core subjects of math and science. The PGCE is built around placements in actual schools, supplemented with taught courses. The level of responsibility for teaching increases steadily, and by the end of the PGCE students take on the full teaching role.

Similarly, since 1998 in Massachusetts teachers have been required to pass two tests to be certified (Box 2). In South Korea, teacher certification is a requirement for employment in the public system, and selection is based on highly competitive examinations and interviews.

Though students can specialize in the subject of teaching in colleges and universities in Saudi Arabia, no mandatory accreditation is required for prospective teachers. Such accreditation will ensure high teaching standards in the education system. Arming teachers with a solid foundation gained in the classroom, as both students and teachers, will enable them to be more effective, capable professionals. Producing well-trained, qualified teachers in Saudi Arabia will give every teacher and student the best chance for success.

Introducing merit-based pay

NCC recommendation:

- Develop an incentive system for teachers, e.g., enhance salaries for those willing to teach certain core subjects and work in understaffed regions or underperforming schools.

Particular subjects, schools, and regions often lack high-quality teachers. To close the gaps in underserved areas, monetary compensation can increase teachers' willingness to take on less-appealing positions, such as teaching in schools that are underperforming or situated in less-desirable locations. At present, the MoE spends almost 90% of its budget on salaries.[11] Serious consideration of how compensation is administered is essential.

In the United States, many states offer considerable financial incentives to teachers certified by the National Board for Professional Teaching Standards (NBPTS) (Box 2). In the state of North Carolina, NBPTS-certified teachers receive a 12% increase in salary, which has rapidly driven the number of teachers gaining certification to over 11,000, the highest for any U.S. state. A recent study indicates that the students of NBPTS-certified teachers scored between seven and fifteen percentage points higher on year-end tests.[12]

[11] Darmasara Management Consultancy

[12] Goldhaber, Dan and Anthony, Emily (2004) – *National Board Certification Successfully Identifies Effective Teachers*

Box 2

THE NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS

The National Board for Professional Teaching Standards (NBPTS) is an independent organization in the United States. Its purpose is to advance the quality of teaching and learning throughout the American school system. To achieve this goal, the NBPTS has developed a series of professional standards for accomplished teaching, creating a voluntary teacher certification system.

Teachers' accreditation depends on their performance in five areas:

- Knowledge about the subjects they teach and how to teach them
- Commitment to students and learning
- Ability to manage and monitor student learning
- Ability to think systematically about their professional practice and learn from experience
- Value they add as members of a learning community

The NBPTS has proved beneficial to all stakeholders, and accreditation has been recognized as a valued asset by U.S. school boards because it:

- Elevates teaching as a profession
- Recognizes and rewards accomplished teaching
- Offers the chance for professional growth
- Empowers teachers to participate in education reform
- Promotes teaching as a lifelong career

One of the most important benefits for teachers is that they are recognized and rewarded for their accomplishments. As well, a huge incentive for accreditation has been that teachers, who earn relatively low wages, can receive stipends worth up to 12% of their salaries.

Independent research has determined that NBTPS accreditation has significantly improved teacher performance and student achievement. The number of accredited teachers has grown to more than 55,000, while the NBPTS continues to build upon its groundbreaking work by developing new means of encouraging widespread adoption of accomplished teaching.

Offering career development opportunities to teachers

NCC recommendations:

- Increase availability of teaching career development opportunities, providing an array of training materials, courses, and in-school training programs.
- Increase opportunities for top academics to visit and lecture in Saudi Arabia. These highly qualified professionals from other countries will facilitate knowledge transfer into the Saudi Arabian system through discussion with colleagues and postgraduates and by lecturing undergraduates.

Continuous training offers teachers the opportunity to develop their pedagogy and teaching skill though instruction and practice in low-risk settings. It also gives them an opportunity for reflection, to determine what has or has not worked, and a forum to discuss new ideas. Simultaneously, providing new challenges to teachers increases retention rates within the profession and leads to the promotion of better, more talented teachers.

At present, the MoE spends a very small proportion of its budget on training, each year investing just SAR 70 in training each male teacher and SAR 10 in each female teacher.[13] By contrast, in South Korea regular training is provided throughout teachers' careers, the objectives being to instill a strong sense of purpose, to enhance their knowledge, to build on their skills, and to improve the quality of teaching throughout the country. The availability of continuing teacher education, coupled with frequent evaluations, keeps teachers engaged and striving for success.

At the tertiary level, academics benefit from collaborations and discussion with other academics. Providing increased opportunities for the horizontal transfer of knowledge and ideas between Saudi Arabian and foreign academics will enhance the academic environment in the Kingdom's institutes of higher education, consequently improving the quality of academic research and tertiary-level teaching.

Improving administration of schools

Well-run schools perform better. Training individuals to become excellent principals will improve the quality of schools and of the education system as a whole.

NCC recommendations:

- Offer a tertiary degree in school management and administration, sponsor existing teachers and principals to attend, and commensurately remunerate degree program graduates.
- Explore outsourcing management of consistently underperforming schools to private sector providers experienced in school improvement.

A well-run school has a significant impact on student achievement. A great principal or superintendent's vision can motivate teachers and students by setting high expectations and recruiting and supporting high-caliber teachers. In Saudi Arabia, the vast majority of principals are older teachers, who have received no specialized training in how to run a school, manage people or budgets, or communicate effectively. This leaves the quality of school management to chance. Training these teachers to become excellent principals is an important step toward achieving higher returns on Saudi Arabia's investment in education.

[13] Darmasara Management Consultancy

In seriously underperforming schools, using an experienced company with a proven track record in turning around a school can provide a much more immediate solution. In April 2000, the British government turned over control of failing state schools in the borough of Islington to an educational consultancy firm. In 1999, only 23% of pupils in the borough achieved five good GCSE grades (British qualifications, taken by secondary school students at ages 14 to 16), while the national average was 44%. After only one year, the Office for Standards in Education (Ofsted) stated that the private firm had turned the tide in Islington's education service. By 2004, the percentage of pupils achieving five good GCSE grades had risen to 45%.

Enhancing competitive landscape for private education

Improving the regulatory environment of private schools will increase competition, increase quality and deliver value for money.

NCC recommendations:

- Permit the participation of reputable foreign private education providers, simultaneously increasing competition and capacity in the sector.
- Update the rules and requirements governing private schools, in particular those pertaining to co-education and curricular flexibility, and apply them consistently throughout the private education sector.

Private sector involvement in education has been shown to drive quality up and prices down. In India, a private education can cost as little as SAR 15 per month, serving even the poorest segments of society. This low price is the result of intense competition, yet schools continue to be profitable.

Increasing involvement of reputable players in the education sector will drive quality and value in the education sector, as well as increasing the capacity of the public education system. However, these private investors need to feel comfortable with the rules and requirements they must meet, and with how these rules will be enforced.

Promoting demand for technical subjects

A low preference for technical disciplines means that Saudi Arabian young people are less productive in today's global context.

NCC recommendations:

- Initiate a targeted campaign aimed at promoting technical studies in all secondary schools, with a panel of experts to visit schools and give presentations on their careers.
- Expand the range of disciplines available to women, particularly in professions where there is a significant deficiency in the labor force.

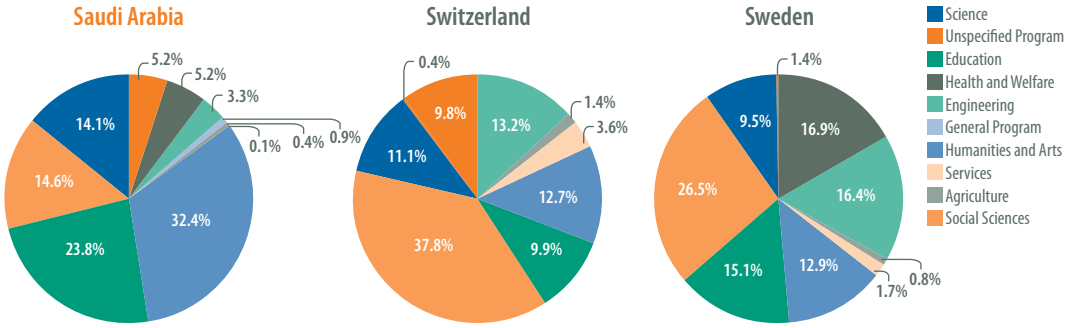
"In the current international setting, with mounting economic globalization and accelerated technological advances, enhancing the competitive advantage of the Kingdom requires, more than ever before, improvement of the quality of manpower and raising its productive efficiency and innovative capabilities. Only thus will advanced scientific and technological innovations be acquired and assimilated and the ability of the Saudi economy to integrate into the global economy enhanced. Furthermore, the capacity to acquire knowledge, produce it and employ it in the production of goods has become the critical factor in gauging the progress and prosperity of nations."

– Saudi Arabia's 8th Development Plan

The shortage of skilled graduates is compounded by low levels of tertiary enrollment and a limited preference for certain disciplines. Participation in tertiary education lags significantly behind that of Top 10 Countries, with only 28% of those eligible in Saudi Arabia attending university versus an average of 67% among the most competitive countries.

The Saudi Arabian students who do enroll in tertiary programs tend to specialize in humanities rather than in the more economically valuable subjects, such as engineering and science (Figure 25). It is probable that this preference is a relic of the forced specialization that occurs during secondary education, when students choose between literary and scientific streams of education.

Figure 25: Tertiary Enrollment Levels by Subject for Saudi Arabia, Switzerland, and Sweden, 2005

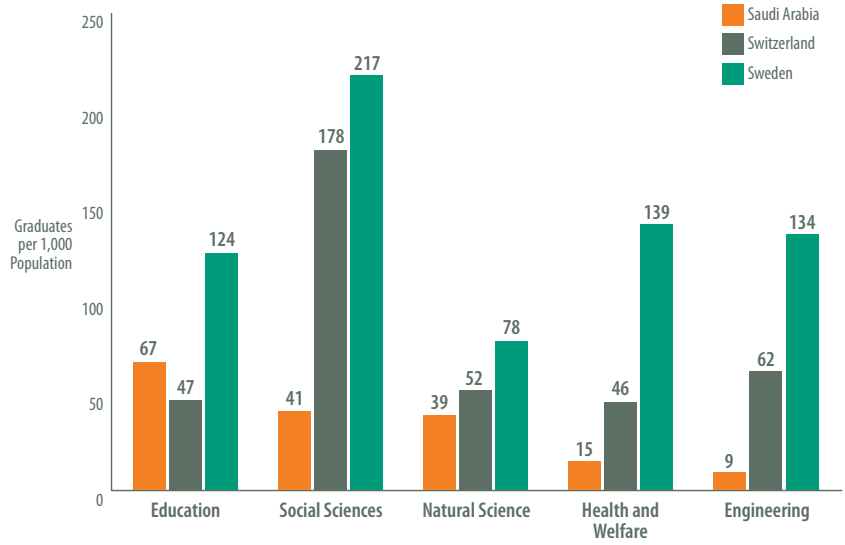


Source: UNESCO Institute for Statistics

If the output of Saudi Arabia's tertiary education system is contrasted with those of Sweden and Switzerland, the challenge becomes self-evident. Saudi Arabia produces significantly fewer graduates in engineering and scientific disciplines (Figure 26). For every 1,000 students, Saudi Arabia produces nine engineers, compared to Sweden and Switzerland, which produce 134 and 62, respectively. Similarly, Saudi Arabia produces 39 science graduates per 1,000 tertiary students, compared to Sweden and Switzerland, which produce 78 and 52, respectively.

Increasing students' preference for technical and scientific disciplines is crucial to filling the skills gap in high-level areas.

Figure 26: Graduates per Thousand People in Technical Disciplines in Saudi Arabia, Switzerland, and Sweden, 2005



Source: UNESCO Institute for Statistics

Upgrading quality of tertiary instruction

Improving the quality of tertiary education will produce more productive members of society.

NCC recommendations:

- Increase affiliations with highly regarded universities abroad (e.g., MIT, Oxford), to provide Saudi Arabian students with access to a world-class technical education.
- Develop strong links with industry to initiate a rotating fellowship program for professors and job placements for students.

The quantity shortage of Saudi Arabian scientists and engineers is certainly a pressing concern, but perhaps more important is the quality shortage of those individuals produced by the education system. Tertiary education in Saudi Arabia has the potential to improve both research capability and teaching quality. According to the Webometrics ranking of world universities,[14] Saudi Arabia's best universities fall outside of the top 100 and even outside the top 500 universities globally (Table 1, Figure 27). Saudi Arabian universities also do not feature in other respected rankings.[15] The majority of top-rated universities are found in the United States and the United Kingdom.

[14] Webometrics Ranking of World Universities by the Cybermetrics Lab

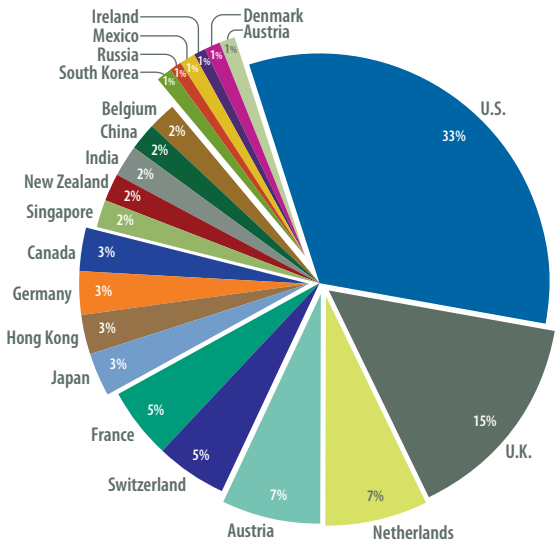
[15] Academic Ranking of World Universities by the Shanghai Jiao Tong University; Times Higher Education – QS World University Rankings

Table 1: Webometrics Ranking of Saudi Arabian Universities, 2006

TOP-RANKED UNIVERSITIES IN SAUDI ARABIA	GCC RANK	WORLD RANK
King Fahd University of Petroleum and Minerals	1	1,128
King Abdul Aziz University	23	3,108
King Saud University	26	3,259
King Faisal University	36	3,906
Umm Al-Qura University	44	4,225
Arab Open University Saudi Arabia	57	5,229
Islamic University of Al Madinah	59	5,244
Imam Muhammad Bin Saud University	69	5,709
College of Nursing and Allied Health Sciences	70	5,858
King Khalid University	81	6,170

Source: Webometrics Ranking of World Universities

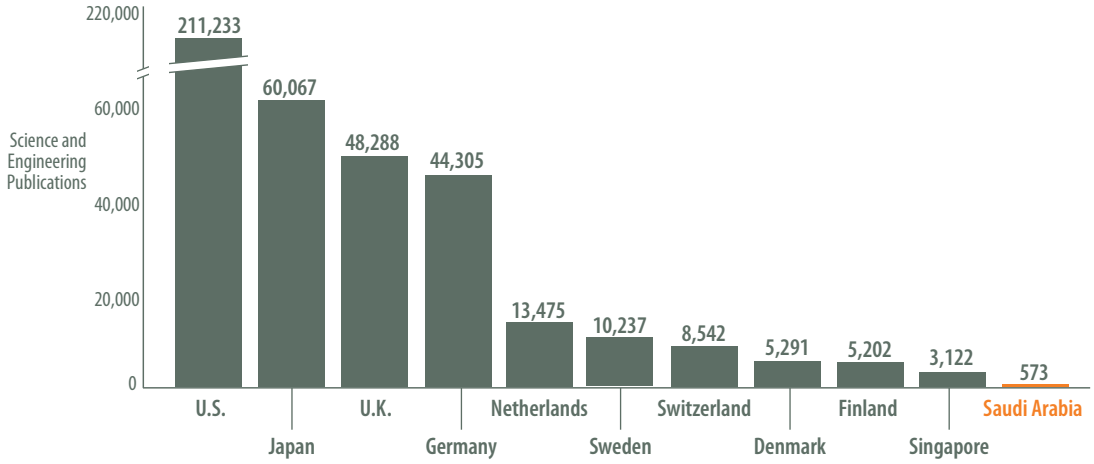
Figure 27: Top 100 Universities by Country, 2006



Source: *World Rankings 2007*, The Times Higher Education Supplement

Granted, these rankings do not give a complete picture of the quality of Saudi Arabia's tertiary education system. A more objective measure of quality is the number of science and engineering research articles produced by universities in Saudi Arabia. When benchmarked against countries with similar GDPs, the Kingdom performs poorly (Figure 28), producing only 2.3% of the number of publications produced by Canada, for example.

Figure 28: Science and Engineering Publications,[1] WEF Top 10 Countries and Saudi Arabia, 2003



Source: *Among the Best,* July 2005, *Nature;* in-cities.com, *The Year 2006: Top 20 Country Rankings in All Fields,* December 2006; *Science and Engineering Indicators 2006,* Vol. 2, National Science Board

[1]Science and engineering articles on clinical medicine, biomedical research, biology, chemistry, physics, earth/space sciences, engineering/technology, math, psychology, social sciences, health sciences, and professional

While the provision of scholarships to study outside of Saudi Arabia should result in more high-quality graduates, the majority of scholarship recipients choose to study in other Arab countries with relatively low-quality education systems. By increasing the associations between Saudi Arabian universities and world-leading universities, the system will offer an improved level of education to students in the Kingdom while increasing the opportunities for international collaborative research. In light of the globalization of the world economy, Saudi Arabia should aim to send its young people to a wide range of countries, such as Japan, South Korea, and China. With the balance of Saudi Arabia's trade shifting eastward, it has become increasingly important to strengthen the Kingdom's ties with countries outside of the United States, the GCC, and Europe.

"Our new graduate recruits take upwards of two years to become effective, simply because they have no relevant industrial experience."

– Private sector manager

Developing economically relevant competencies in students is a challenge faced the world over. Cooperation between industry and academia serves to build these competencies in students while simultaneously providing a vehicle for collaboration and innovation.

Improving awareness of the benefits of education

Saudi Arabia is a young country that does not yet possess a strong education tradition. This tradition, which took centuries to build in the West, can be built within a generation in Saudi Arabia.

NCC recommendation:

- Launch a media campaign extolling the value of education, aligned with the 10x10 initiative. Involve successful role models educated in the Saudi Arabian public education system, e.g., actors, writers, entrepreneurs, and professional athletes.

Making people aware of the benefits education can bring is the first step in creating demand for it. As people begin to see the relationship between effort and reward, academically and in the workplace, they will encourage and help their children with schooling.

South Korea has developed a cultural obsession with education. Following four decades of occupation by the Japanese (1910–1945), during which South Koreans were prevented from obtaining specific technical educations, millions of ordinary citizens saw the possibility of improving their lives through education. In 1945, the government committed to uniform basic education and positioned education as crucial in leading the reconstruction efforts. A progressive education policy reinforced traditional beliefs in the transformational value of schooling and contributed to growth of educational aspirations among South Korean families of all backgrounds. In 1945, the majority of the adult population had no formal schooling, and no more than 5% had a secondary or higher-education degree. Today South Korea is one of the most literate and well-educated nations in the world.

Making Saudi Arabians more aware of the success education has brought to those in their own country might accelerate the demand for high-quality education. Ali I. Al-Naimi is a great Saudi Arabian role model. Educated in Saudi Arabia, he joined Saudi Aramco and progressed upward through the firm. He pursued a degree at Lehigh University, later completing a master's in geology at Stanford University, under Aramco's education program. His dedication to Aramco and to furthering his education led to his becoming the first Saudi Arabian president of the company in 1983. In 1995, as a result of his distinguished service, Al-Naimi was appointed to the prestigious position of Minister of Petroleum and Mineral Resources. The NCC advocates that such role models participate in public awareness campaigns throughout the Kingdom, to launch Saudi Arabia's own cultural obsession with education. In the following quote, Al-Naimi makes clear the value he places on developing human capital:

"Aramco works at it day in and day out, investing huge sums in the latest technologies, searching the world for the best talent, and then continuously training its workforce to meet the challenges of the new millennium."

– Ali I. Al-Naimi, Minister of Petroleum and Mineral Resources

Developing a structured and innovative education strategy

NCC recommendation:

- Increase levels of coordination and cooperation between key public and private education stakeholders in Saudi Arabia, and use this approach to build robust and workable strategies for delivery of an appropriate education system for the future.

The education system in Saudi Arabia is currently administered by three major and several ancillary government bodies. Increasing cooperation and coordination among these organizations will better serve the nation in achieving its goals of universal and competitive education.

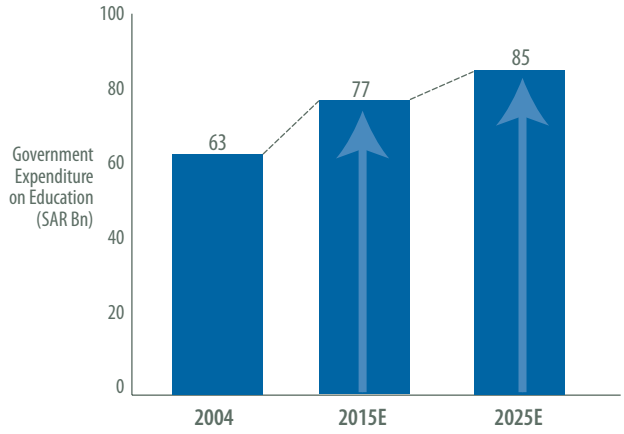
In addition to improving the cooperative nature of education management, the NCC believes that a continuous and engaging dialogue with other key stakeholders representing the labor market will better match the outputs of the education system with the demands of the economy. Close contacts with the Ministry of Labor, the Ministry of Commerce and Industry, and representatives of the labor force will create a more flexible and adaptable education system, geared toward and responsive to the needs of society, industry, and the global economy.

Low enrollment levels

Access to a modern and well-funded health care system has helped create a population explosion in Saudi Arabia. In the near future, this burgeoning young population will place a great strain on the education system, compounding the skills gap discussed earlier, as well as exacerbating the issue of low enrollment, especially in tertiary education.

The costs associated with educating so many individuals will increase the financial burden on the ministries of education. The NCC estimates that the education cost at current levels of enrollment will rise from SAR 63 billion (US$16.9 billion) in 2004 to SAR 77.2 billion (US$20.7 billion) in 2015, and further to SAR 85 billion (US$22.8 billion) by 2025 (Figure 29).[16] Providing the necessary capacity in the education system to accommodate the influx of new pupils will require considerable investment in upgrading the existing infrastructure.

Figure 29: Projected Future Cost of Education in Saudi Arabia[1]



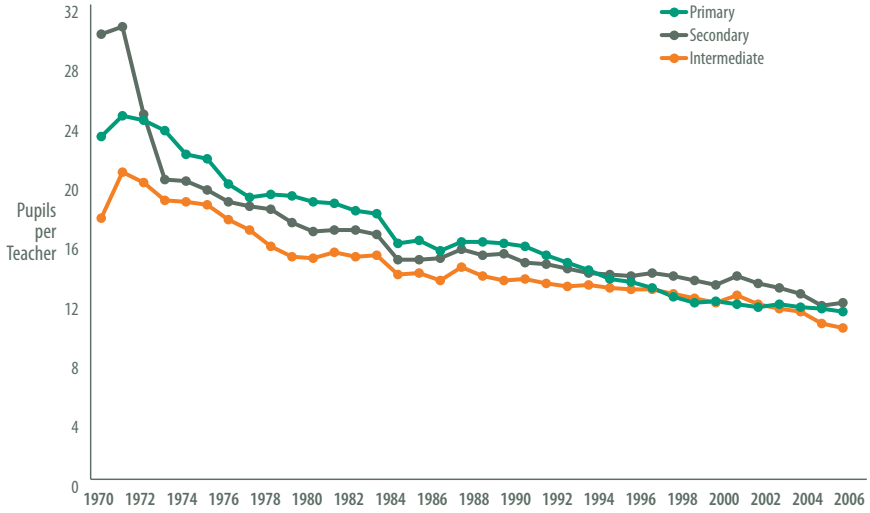
Source: U.S. Census Bureau; EconStats; *Education at a Glance 2007*, OECD

[1]Assumes constant 2004 prices and constant spending per pupil

In the face of the soaring school-age population, building and subsequently maintaining a world-class education system presents a formidable challenge. The Kingdom's ratio of 15 students per teacher is one of the lowest in the world, but given the soaring population even this is likely to increase, which may contribute to an additional drop in quality (Figure 30). This decline may have already begun, further increasing the urgency of implementing the recommendations discussed herein.

[16]Assumes spend per pupil does not decrease from current levels

Figure 30: Saudi Arabia's Student-Teacher Ratio, 1970–2005[1]

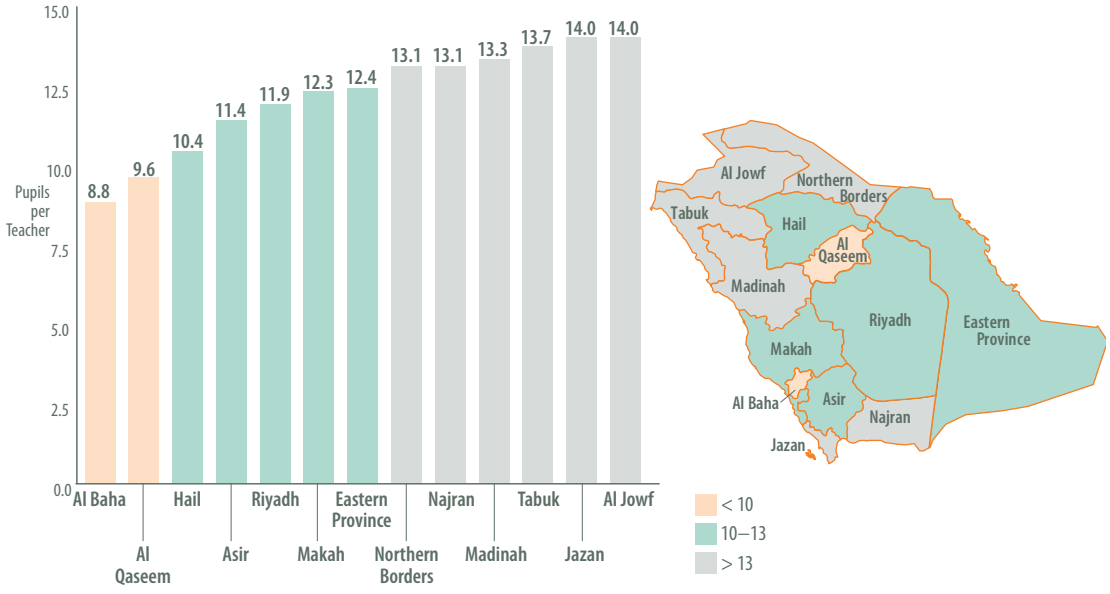


Source: Saudi Arabian Monetary Agency

[1]Student-teacher ratio calculated using number of students and teachers in general education at all levels

Building an adequate education infrastructure is paramount in dealing with the rising Saudi Arabian population. Having sufficient capacity and numbers of qualified educators is vital. There is considerable variation in the student-teacher ratio at a regional level (Figure 31). Therefore, investment must be linked to a solid understanding of regional needs and demand.

Figure 31: Regional Student-Teacher Ratio in Secondary Education, 2004



Source: Ministry of Education

This pressing investment need is further complicated by current enrollment levels in Saudi Arabia. Boosting enrollment while providing for a rapidly increasing population requires a redoubling of the Kingdom's efforts.

Understanding low levels of enrollment

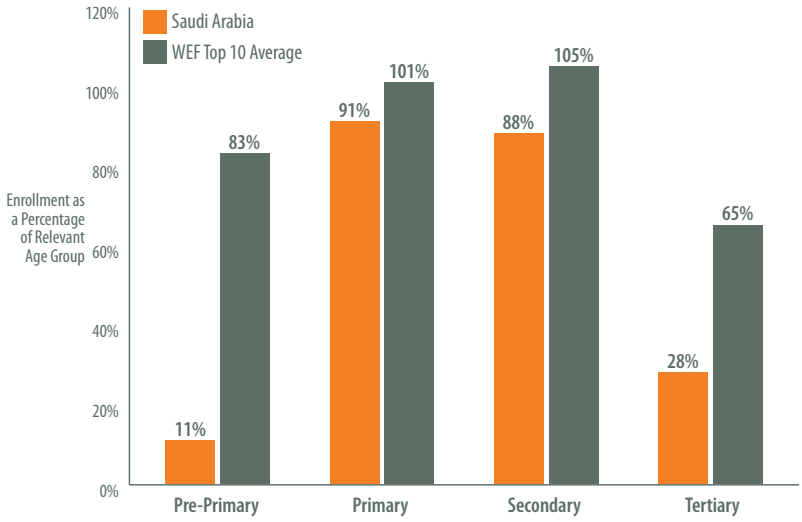
Identifying the nature of the barriers to enrollment and the extent of the problem will allow targeting of resources toward encouraging greater participation in education.

NCC recommendation:

- Conduct a detailed study to identify the key barriers to participation in education at each level on a regional basis, and devise strategies to lower these barriers, based on a sound understanding of the causes underlying low enrollment.

Despite the Kingdom's commitment to universal education, there are still students who fall outside the system. Primary, secondary, and tertiary enrollment levels are important metrics in evaluating a nation's competitiveness.[17] Compared to Top 10 Countries, enrollment in the Kingdom remains low (Figure 32). Of the 131 countries rated by the WEF, Saudi Arabia ranks 112th, 61st, and 66th in primary, secondary, and tertiary enrollment, respectively.

Figure 32: Saudi Arabia's Gross Enrollment Rate against a Top 10 Benchmark



Source: World Bank; UNESCO; *Global Competitiveness Report 2007–2008*, World Economic Forum

Note: Top 10 Pre-Primary and Primary figures exclude Singapore

[1]Gross Enrollment Rate expresses students enrolled as a percentage of official school age population (data as of November 28, 2007)

The NCC suspects that certain cultural factors, as well as the limited availability of pre-primary places, have a negative effect on levels of primary enrollment. The particularly cohesive nature of the Saudi Arabian family unit, combined with a low level of female participation in the workplace – between 7% and 12% – mean the demand for preschool places is low. However, anecdotal evidence suggests that the greatest demand for preschool is among highly educated Saudi Arabian mothers, who recognize that kindergarten offers children the opportunity to learn to communicate, play, and interact appropriately with others. Closing the enrollment gap between Saudi Arabia and the world's most competitive nations is a critical step toward achieving its goal of becoming a Top 10 economy by 2010.

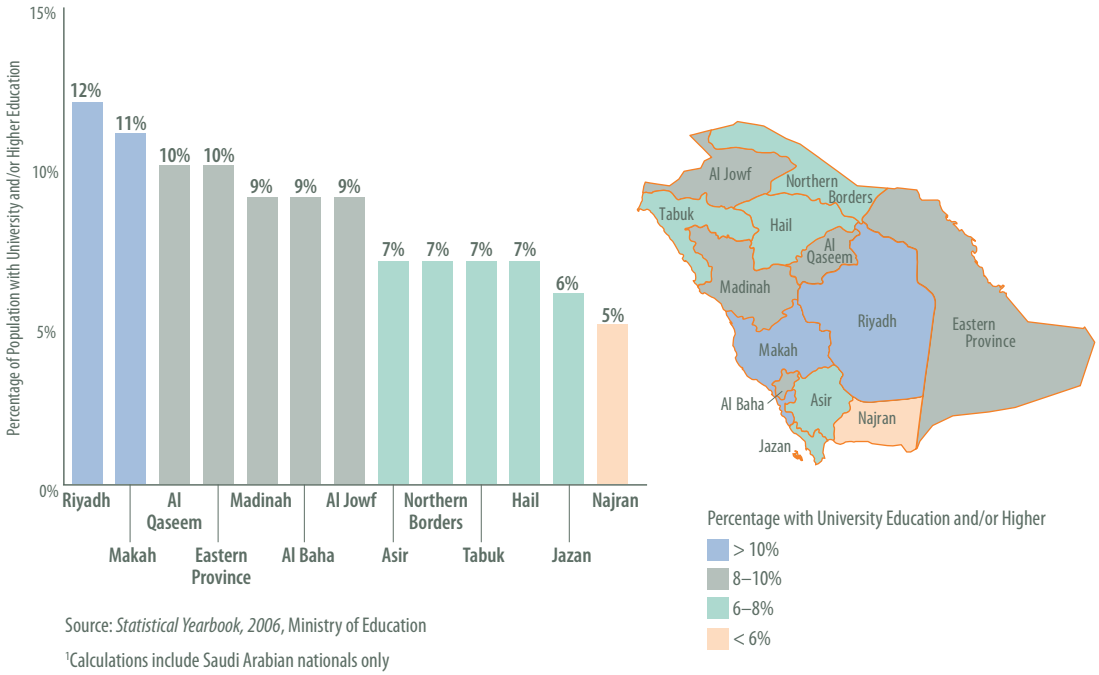
[17] *WEF Global Competitiveness Report*, 2007–2008

"In Riyadh and other urban areas enrollment levels are definitely 100%; enrollment is much lower in rural areas, where education is less valued or available."

– High-ranking government official

Capacity of the tertiary system is clearly the biggest obstacle to enrollment in higher education. While regional attainment data suggests that accessibility to higher education is greatest in urban areas (Figure 33), levels of higher education attainment in Saudi Arabia lag behind world standards. For example, in the United States, Canada and Finland, respectively, 39%, 46%, and 35% of people between the ages of 25 and 64 have some degree of higher education.[18]

Figure 33: Saudi Arabia's University and/or Higher Education Attainment by Region,[1] 2004



Source: *Statistical Yearbook, 2006*, Ministry of Education

[1]Calculations include Saudi Arabian nationals only

Understanding the extent of and closing the enrollment gap between Saudi Arabia and the most competitive nations in the world is a critical step toward becoming a Top 10 economy by 2010. In recent years, the ministries of education have embarked on a variety of programs to improve the situation, adopting a three-pronged strategy to boost enrollment through increasing the capacity of the system, improving access to schools, and reducing the costs of building attendance. Specific examples include:

- Spending SAR 15 billion on the construction of 4,000 schools for boys and girls by 2015.
- Establishing a series of new colleges in the fields of medicine, tourism, nanotechnology, computer science, and business administration.
- Providing generous scholarships to attend universities abroad, motivating Saudi Arabians to study outside of the Kingdom.
- Decreasing costs associated with studying, via stipends, subsidies, and bonuses to students entering certain fields of study, and providing free transportation for female students.

[18]*OECD Education at a Glance*, 2007

The experts interviewed by the NCC identified a range of probable barriers underpinning low enrollment. The exact mix of factors varies, depending on specific features of a region's geography, culture, and employment opportunities.

DATA DISCREPANCIES

Enrollment is calculated from figures issued by the MoE and population data from the national census. This method has a clear potential for inaccuracy; it is common for census data to be incorrect, due to incomplete, erroneous, or unreturned surveys; and census participation is frequently low in rural areas. Therefore, it is important that policy makers have access to accurate data to facilitate the decision making process.

HIGH OPPORTUNITY COST

The opportunity cost of enrolling in education is high. Families and/or individuals find it more valuable for students to work rather than attend school; on the other hand, the generous stipends awarded to tertiary students are highly valued by low-income families. However, competition for these stipends is significant, and generally favors the better-educated, wealthier sections of Saudi Arabian society.

LIMITED CAPACITY

The school system, particularly at the tertiary level, lacks sufficient capacity to meet the demand for education. In rural areas, access to school is poor, with children having to travel a considerable distance to their local schools. Attracting teachers to these more isolated regions is also a challenge, since there is a strong preference among newly qualified teachers to work in large urban centers. As a result, provision of teaching is low in rural areas, and quality suffers as well.

REGULATORY BARRIERS

Anecdotally, the NCC believes that enrollment is hindered by certain bureaucratic procedures, such as the requirement for birth and vaccination certificates, and that the forms required may be too complex for many parents to complete. In addition, the costs associated with sending a child to school (transport, uniforms, books, shoes, book bags, etc.) may present significant barriers to school attendance.

In 2008, the NCC recommends that the Kingdom address the problem of low enrollment by improving the measurement and reporting of enrollment data, and fully and accurately understanding barriers to enrollment. Once this process has taken place, the government will be in a better position to develop initiatives aimed at increasing levels of enrollment across the education system. Many countries have used financial incentives to make education more accessible to their population. Brazil, Djibouti, Venezuela, and Uganda have all successfully improved enrollment levels by paying parents to send their children to school, and a wide range of programs in Venezuela successfully increased enrollment levels in primary and secondary education (Box 3).

Box 3

INCREASING ENROLLMENT IN VENEZUELA

In 1998, Venezuela, in partnership with the International Monetary Fund (IMF), formulated a comprehensive reform package. Part of this program was aimed at increasing school attendance and enrollment rates. To achieve this goal, the government eliminated enrollment fees in public schools and introduced a series of subsidies aimed at tackling low enrollment.

Family Subsidy Program

This initiative aimed to improve the incomes of families with children. Families received a cash subsidy of 4,800 bolivars for up to three children enrolled in school, up to the sixth grade.

Student Uniform Program

Free uniforms, shoes, and book bags were provided to all preschool and primary public schoolchildren by the Student Uniform Program, with the intention of improving conditions in schools, and children's attendance and participation in the educational system.

Student Transportation Subsidy

The provision of reduced-cost tickets on bus and metro services for students, regardless of income level, was a significant benefit to upper-secondary and university students.

Strategic Food Shops

The government set up a program that provided a 40% subsidy for six strategic food items – flour, rice, oil, sardines, grains, and powdered milk – in special cooperative stores.

By lowering opportunity costs, these various subsidies motivated parents to send their children to school. Average enrollment increased from 59% in 1998 to over 67% by 2002, and attendance improved markedly.

A more draconian approach was taken by the United Kingdom, which intends to fine parents whose children persistently miss school. It may be more fitting for Saudi Arabia to encourage low-income families to send their children to school through a family education allowance, or even extend financial awards to young people of working age who attend school and successfully pass examinations. But to fully understand the utility of such an approach requires a better understanding of why current enrollment rates are low. At the tertiary level, California provides a good example of how improving affordability of education and introducing large-scale public awareness campaigns were critical in boosting enrollment (Box 4). While the challenges may be different in Saudi Arabia, similar solutions built around raising awareness and demand may form part of a strategy for boosting enrollment at all levels.

Box 4

BOOSTING TERTIARY ENROLLMENT: CALIFORNIA'S I CAN AFFORD COLLEGE CAMPAIGN

For many years in California, community colleges were regarded as an affordable option for higher education. However, in 2003 the California Community College system faced sharp enrollment fee increases of 64%. There was widespread concern that this increase would discourage lower-income Californians from enrolling in community college.

The state legislature and the governor set aside funds to roll out a statewide campaign that tackled these concerns by creating awareness about the availability of financial aid at California community colleges, and hiring additional staff to provide one-on-one financial aid advice.

Extensive research was conducted to determine which audiences needed to be targeted with campaign messages. These messages had to clearly communicate the overall initiative, and for the campaign to succeed they had to be simple yet motivational.

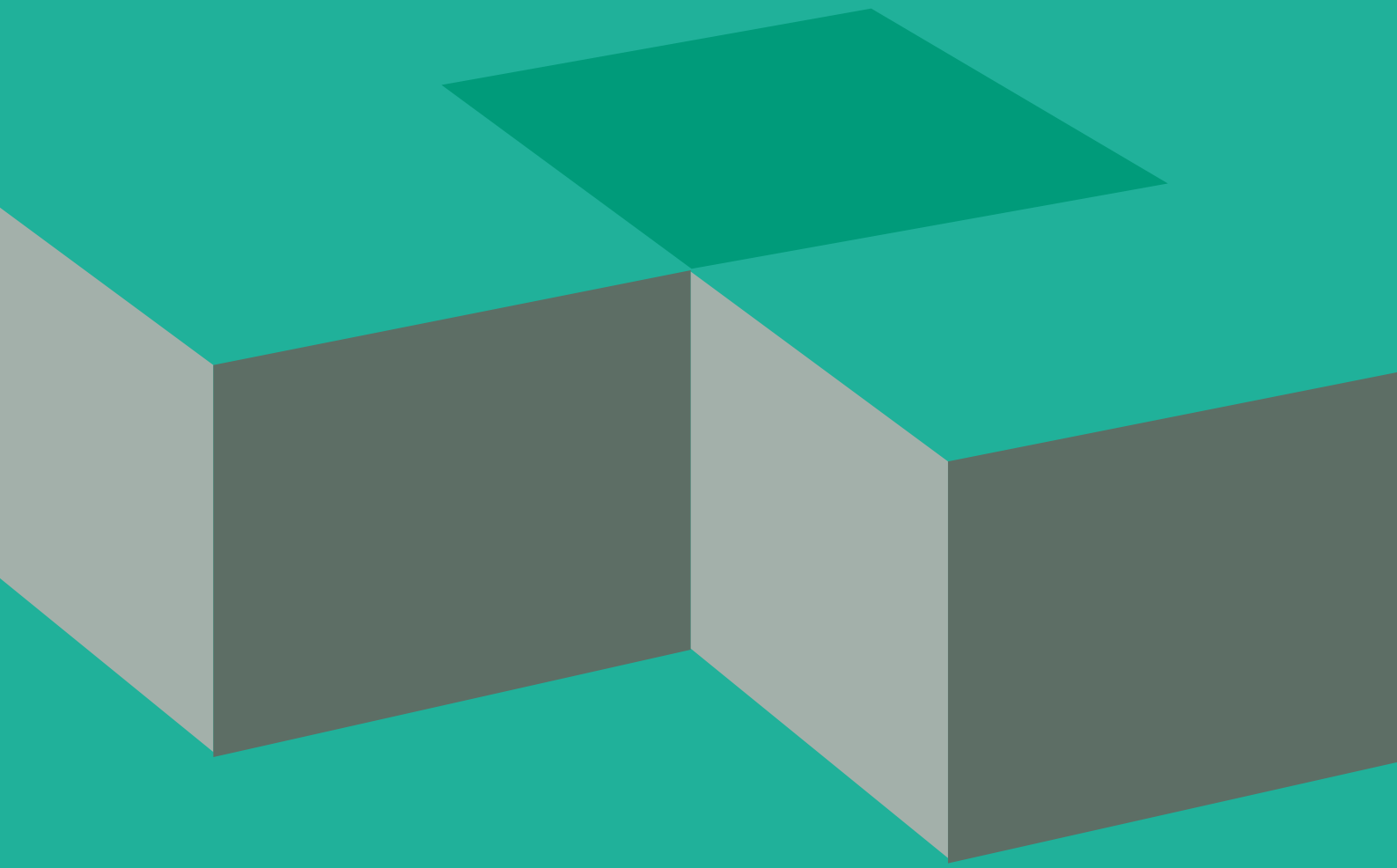
To effectively drive the I Can Afford College message into target communities, an integrated marketing strategy utilizing various communication tools was implemented. Paid advertising, earned media, and community outreach helped reach the target audiences multiple times, with the single message to resonate the call to action and for action to begin.

At the heart of the campaign was the website www.icanaffordcollege.com, which provided application forms and basic information about financial aid opportunities in California, and also served as a free conduit that directly connected students with local financial aid officers.

Strategic partnerships with schools, government agencies, and constituency organizations were established to further drive the message into targeted communities. These organizations helped to distribute campaign materials, newsletter articles, and other informational pieces to the target audience.

Through the various communication channels of paid advertising, earned media, and community outreach, this collective effort has inspired thousands of Californians to realize their goals of achieving higher education.

Conclusion



Conclusion

In the Islamic faith, education and the acquisition of knowledge are long-held values:

"If anyone travels on a road in search of knowledge, Allah will cause him to travel on one of the roads of Paradise. The angels will lower their wings in their great pleasure with one who seeks knowledge, the inhabitants of the heavens and the Earth and the fish in the deep waters will ask forgiveness for the learned man. The superiority of the learned man over the devout is like that of the moon, on the night when it is full, over the rest of the stars. The learned are the heirs of the Prophets, and the Prophets leave neither dinar nor dirham, leaving only knowledge, and he who takes it takes an abundant portion."

– Translation of Sunan Abu-Dawud, *Knowledge (Kitab Al-Ilm), Book 25, Number 3634*

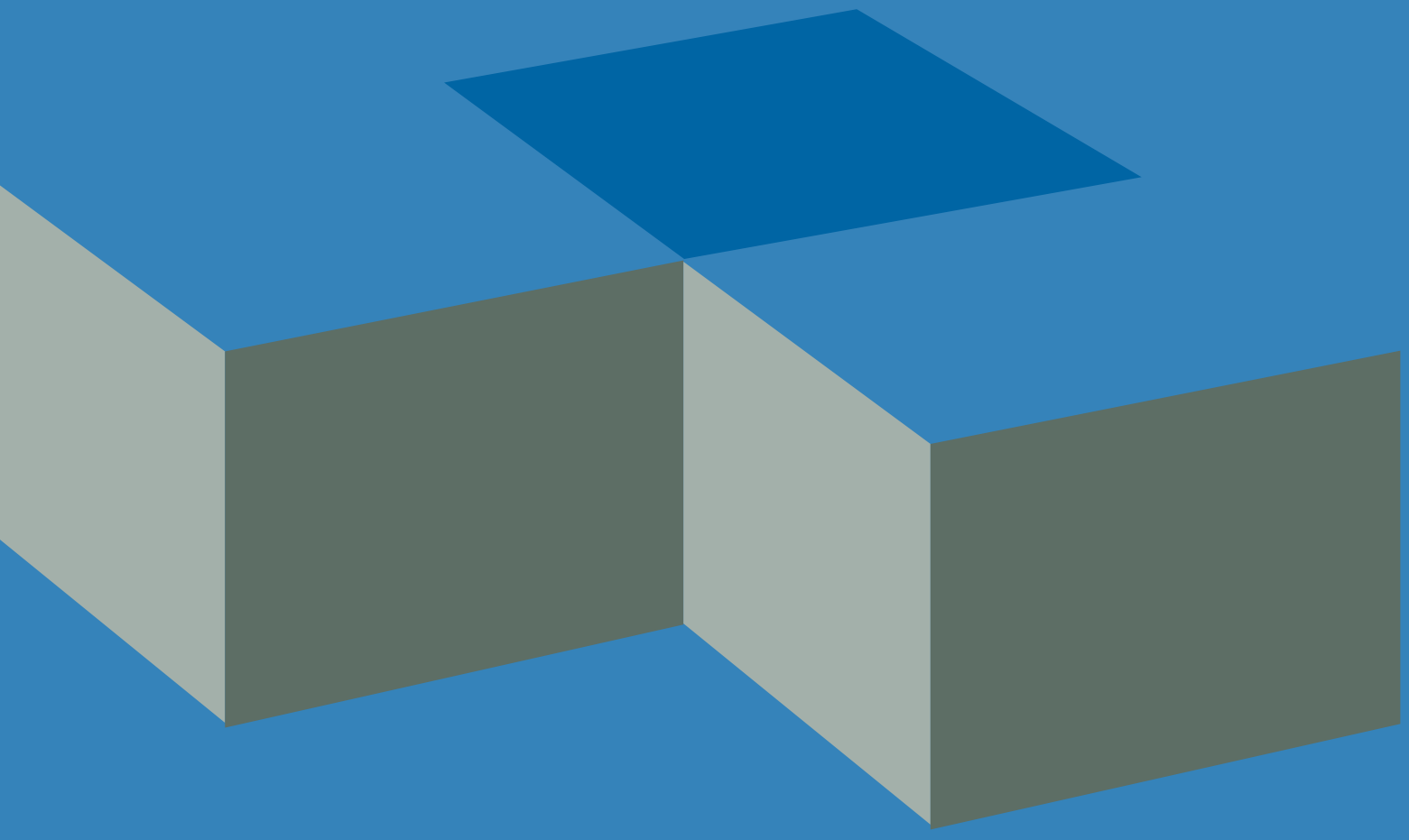
It is hardly surprising that education has been at the forefront of government policy since Saudi Arabia's foundation. Recent efforts demonstrate the Kingdom's commitment to developing a world-class education system. The establishment of the King Abdullah University of Science and Technology and the initiation of the King Abdullah Project for the Development of Public Education are clear indications of the aggressive vision for education held by key decision makers. These advancements have galvanized popular support for modernization, but going forward it is important to determine an appropriate course of action, and to evaluate such efforts in light of the challenges faced, such as improving curriculum suitability, upgrading assessment and teaching quality, developing a strong cultural desire for education, and expanding the competitive landscape for private education.

While these challenges are considerable, coordinated actions by the ministries of education, directed at the issues the NCC has identified, will rapidly deliver improvements across the whole spectrum of education, in turn enhancing Saudi Arabians' employability and reducing the country's dependence on expatriate labor.

The NCC will continue to track and monitor the quality of the education system through international rankings, and to make recommendations for further enhancements. As part of this process, the NCC will support the MoE, the MoHE, and the GOTEVOT in their efforts to enhance education in Saudi Arabia. The education advisory council is the NCC's vehicle for developing and advocating for a considered process of upgrading.

If the government continues on its current path of educational improvements and addresses the challenges across all levels of education, the positive effects of a considered education policy will be evident in a relatively short time, the result being a new generation of Saudi Arabians prepared to face the challenges of the global economy.

Appendix



Appendix

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