

Unlocking the doors to opportunity

By Rudina Xhaferri and Khalid Iqbal

“Give me a lever long enough and a fulcrum on which to place it and I shall move the world.”

—Archimedes (280-211 BC).

WITH more than 68 million children under the age of 15, Pakistan needs to consider seriously the challenges and opportunities to alleviate poverty and create paths for improving the life of its citizens. The single most important factor that impacts the future of the country and its young population is access to quality education. Education is the lever, and its quality and access to it are the main attributes to be applied for Pakistan to achieve great financial and social development. Sustainable development is possible only by creating the opportunity to develop human resources that can advance the economy and social structure to a higher level.

Education as a tool of progress

In the 21st century, a nation will seriously jeopardise its survival if it does not provide adequate and wide access to quality education to the masses. Having elite professionals and leaders without a supporting skilled workforce that makes up the bulk of the economy is insufficient to succeed in the modern world.

Even in developed countries, when financial hard times such as the recent recession hit, the opportunity to turn one's personal and national economy around is through advancement of education. The downside of economic recession is easily translated to educational opportunities for those that find themselves unable to find employment.

Receiving higher and professional education improves the chances of getting future employment and a better financial situation

by broadening the kinds of jobs one is capable of doing.

According to the World Bank website, less than eight per cent of the work force receives formal training in Pakistan, and less than five per cent of the eligible age cohort (17-23) is enrolled in higher education. These figures alone are very alarming for the outlook of the country's future.

Pakistan holds the key to one of the best investments it can make for its development: preparing an educated human capital stock out of 80 million youth and an increasingly young population. Having professionals and people that can respond to the economic, scientific and technological needs of their times means that the country and its citizens can confidently navigate through a financial crisis while securing development.

However, to achieve this goal, the investment in education access and quality must not be delayed. Every single day that a child is deprived of educational opportunities becomes a bigger societal cost for his/her future well-being and that of the nation.

Achieving excellence

Unfortunately, generations of talented students have gone undiscovered and underutilized due to a lack of opportunities to further education.

Therefore it is critical to provide educational opportunities to all young Pakistanis to receive a quality education. A step in this direction is the Government College Lahore University's Abdus Salam School of Mathematical Sciences (ASSMS) founded in 2003 that aims to prepare quality mathematicians to serve in institutions of higher education and research and promote mathematics in schools/colleges.

The ASSMS has so far provided world-class training to 139 fulltime PhD students, of which 47 have finished their PhD degrees and

are serving at different universities in Pakistan. A great example of tackling the problems of quality education and access, the ASSMS not only trains talented students under the supervision of hand-selected, world-class mathematicians and physicists recruited from all over the world, but also provides workshops and intensive courses to improve the quality of researchers throughout Pakistan, including very remote areas of the country.

In addition to professional training, ASSMS is concurrently working on identifying talented young students in mathematics and giving them the opportunity to receive advanced training and excel by establishing training camps for young students. The school provides free boarding and lodging for the talented students that it trains. ASSMS has started the National Mathematics Olympiad (NMO) where students are selected and trained under the supervision of well-known international professors.

Every year, 15 to 20 training camps are organised for high school students to prepare them for the International Mathematical Olympiad. The young Pakistanis have won bronze medals at the Olympiads organised in Vietnam (2007) and Germany (2009) just two years after their first *début* in the International Mathematics Olympiad. Moreover, ASSMS initiated an annual world competition called Kangaroos of Mathematics. Last year about 40,000 students participated. Winning students and teachers received medals and cash prizes in recognition of their efforts in developing mathematics.

Lift up education

Giving educational opportunities to more students translates into better prepared professionals and a workforce that can advance the economic and social development of the nation. It can lift up the status of a developing country to a developed competitive nation capable of sustaining its population.

On the social side, better-educated citizens are more responsible citizens who know and respect the law and ask for changes through a legal and civil path. It is through education that citizens become more empowered and thus do not have to seek alternative ways to

the law to achieve their goals or fulfill their needs.

Financing access to education for talented but needy students and improving its quality to a world-class standard requires a strong commitment both by the government as well as everyone in the community. When every person becomes responsible, proactively takes part in this process. The pressure on the government to invest more funds in education increases and channels such as mandatory free education up to the high school level, scholarships for the needy and more training for faculty all emerge together.

Educational opportunities for vocational training and entrepreneurship must become available to the millions of youths who will replace the current workforce. On one hand, only adequate, quality training will prepare them for the challenges of fast changing Industries, technological progress, and keeping up with new market developments in the world. On the other hand, professional higher education must become both more accessible through scholarships, and of a better quality, to prepare quality professionals.

Schools like ASSMS that are committed to improving and increasing the number of mathematicians must be encouraged. ASSMS is currently going through budget cuts like much of the rest of educational institutions. This is not the time to cut the education budget, but to increase it and make a serious financial investment to better its quality, and have it provide the opportunity to Pakistanis of all ages to excel in mathematics. All educational programmes must become affordable at a nominal tuition fee to accommodate the influx of the large number of students that need education. ■

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