

the challenges facing the GCC with the introduction of paper-less classrooms

introduction

Education is considered to be the ultimate catalyst to the progression of both individuals and economies. As part of total government spending, spending on education across the Middle East and North Africa (MENA) region has increased from 12.7% in 1985 to 19.3% in 2008. This is especially true across the GCC for markets such as the UAE, KSA and Qatar, where investments in the education sector are very prominent and governments see an urgent need to reform education systems. The percentage increase in the UAE is substantial, moving from 10.4% in 1985 to 27.2% in 2008; while it increased from 10.1% to 19.3% in KSA during the same period (World Bank, 2012). Across these markets, an investment in education is viewed to have long-term benefits.

Particularly with the boom of the digital age in recent years, e-learning has emerged as a means of boosting the education sector.

Factors in favour of the movement towards e-learning include more time for digesting the information and responding, enhanced communication among learners, both as regards quality and as regards to urgency, knowledge being acquired and transferred among the learners themselves. Moreover, the ability to conduct open discussions, where each learner gets more of an equal standing than in classroom participation, access to information with no restrictions, higher motivation and commitment levels. Also, the use of technology is seen to stimulate instant learning, improve self-learning and enable students to acquire other skill sets. When course contents and activities are provided online, students can complete assignments at their own productive pace, resulting in a more stress-free learning process.

So, given that both means and motive are provided, what makes the transition from the traditional methods of learning to a more electronic or digital-based method, so difficult?

to explore its full potential, the education system must travel through new and un-explored terrain

“Today’s students are no longer the people the education system was designed to teach” (Marc Prensky, 2001)

To ensure the success of the education sector, it must be able to not only understand the generation it is serving, but also conform to their needs. Knowledge has always been a necessity to societies’ development process, especially in today’s fast changing environment. Education is the main source of knowledge creation. Thus, education systems must always find new ways to deliver the skills and expertise necessary for individuals to excel in competitive and changing environments. However, altering the education system is not enough. To better equip learners with the tools necessary to keep progressing, education systems will need to become more effective in the way they transmit the skills and competencies to all.

transmitting knowledge, skills and competencies through e-learning

Technology can facilitate thoroughness in learning by making possible the creation of highly controlled and monitored peer, tutor, and instructor interaction. Three requirements to the effective transmission of knowledge skills and competencies through e-learning include technical requirements, administrative and environmental requirements and training requirements. Technical requirements include the basic functionalities that are essential in simply transmitting the information to students such as proper internet access and necessary software for specific courses. Administrative and environmental requirements revolve mainly around proper collaboration between different school departments. The final requirement, training, can be seen as the most challenging and least addressed requirement. Much of the infrastructure and the investments made across the GCC focus on the technical side of transmitting information to students rather than the manner in which this information is transmitted. Investing in training allows both the faculty and students to seize the maximum benefits provided by e-learning.

the movement advocating the use of technology in GCC classrooms

The region has witnessed an increasing use of technology in the education sector in the recent past. The move to employ technology in the learning process is fuelled by a variety of components. This move is primarily attributed to the major reforms taking place across the GCC in the education sector. The GCC private education market is

extremely fragmented and not yet a highly penetrated market for technology enabled learning, therefore, much more could be done. Moreover, technology enabled learning is well suited to addressing key educational issues, such as gaps in human capital; a central issue across many GCC countries. Thus, employing technology in the learning process provides substantial opportunities to the existing operators to consolidate and develop economies of scale.

Further, technology has been capable of bringing the familiar from traditional learning into e-learning. Presentations, group discussions, arguments and many other forms of conveying information and accumulating knowledge can still be carried out through e-learning. In e-learning however, contents of the course's curriculum might be organised according to subjects. Due to the lack of limitations in e-learning frameworks that are present in traditional learning, such as a specific time and place where learning occurs, many GCC countries believe that e-learning can carry out the activities previously carried out by traditional learning even more effectively.

Thus, to many governments across the GCC, e-learning goes hand in hand with a learner-centred teaching philosophy. Moreover, e-learning frameworks are perceived to provide increased favourable learner outcomes as opposed to traditional learning methods and thus are likely to improve the quality and teaching methods of education in the future.

E-learning is instrumental in facilitating and enhancing the teaching/learning process. It can engage the learner and accommodate different learning styles. In addition, it helps students learn at their own pace and have more control over their learning.

growth drivers in the education sector across the GCC

The education sector in the GCC is looking at a period of remarkable growth. Rising population, higher income levels and an increasing awareness of quality education has resulted in a positive outlook for this sector. The total number of students in the GCC education sector is expected to grow at a CAGR of 2.7% between 2011 and 2016, and reach 11.6 million in 2016. An increasing population base, coupled with an expanding expatriate population is expected to drive demand for education across the region. Moreover, GDP per capita of the region is expected to grow at a CAGR of 2.6% between 2011 and 2016. This increase in income levels of individuals will have a significant effect on the middle class population's tendency to spend on education of their children, thus driving demand for private sector education (Alpen, 2012).

e-learning initiatives in the GCC

Government reforms across the GCC, focused on the enhancement of quality and reach of education is booming the education sector. Many of these governmental initiatives are focused on e-learning. According to the Madar Research Group, the e-learning industry in Saudi Arabia reached \$125 million (USD) in 2008 and would continue to grow thereafter at a compound annual rate of 33% over the next five years (MENAFN). Moreover, according to the Madar Research Group, the total spending on e-learning in the UAE grew 26% in 2008 reaching \$72.6 million (USD) by the end of 2010 and is estimated to continue to grow at the same rate over the next 5 years.

Some of the major e-learning projects in the region include: The Mohammed Bin Rashid Smart Learning Initiative program to integrate information technology in classrooms, worth \$272 million (USD). This initiative aims to reach 13,000 students at Zayed University, the Emirates University and Higher Colleges of technology. An e-learning initiative launched by KSA includes the National centre for e-learning and distance learning. King Hamad School of the future project is an e-learning initiative launched by Bahrain. ictQatar, the internet regulatory and development arm of the Qatari government which rolls out an array of electronic resources in local elementary and high schools, the Qatar Science and Technology Park (QSTP) for commercial development of innovative technologies originating in Qatar, K-net, knowledge network, another pilot project designed by the Supreme Education Council to boost and support student achievement through ICT. The project has been implemented in 12 independent schools to provide a portal for sharing education applications and student data. In the UAE, projects include the BETT Middle East exhibition in Abu Dhabi, focused on the application of ICT in education across the region. Kuwait has applied its tradition of participatory and consultative government (shura) to developing its e-learning initiatives. Teachers' involvement in fostering the e-learning environment in schools was encouraged. Letters were sent to every school in Kuwait urging teachers to make contributions to the e-learning project through submitting educational software, electronic materials and lessons, or even ideas to enrich the development of an e-learning system.

The education sector in the GCC is poised for robust growth in the future on the back of increasing population, rising private sector participation, and increased willingness of parents to ensure high-quality education for their children. Earnest intention of the governments to improve the coverage and quality of education in their respective countries through various reform measures also bodes well for the sector.

the challenges that come with these initiatives

The education system has a tendency to yield a new set of challenges for every problem solved. Even if investments in education generated maximum returns in terms of economic growth, greater equality, and reduced poverty, the GCC would still need to reshape its education systems to face up to a number of new challenges. The new challenges require a shift in what is taught in schools and how it is taught to enable students to acquire the necessary fundamental and transversal skills to upgrade their skills over time. The challenge here is to find ways to mobilise resources without compromising equity and quality of education and the answer to succeeding chapters lies in how policy makers use these resources.

Although significant reforms and initiatives have been undertaken by many Governments across the GCC, the GCC private education market is highly fragmented and the question remains as to why the GCC has been slow to adopt e-learning until quite recently, even though interest in e-learning has grown dramatically in countries like KSA, Qatar and the UAE. One obvious reason is that there has been a reluctance to embrace such a powerful entity as the Internet, which has caused rapid and profound cultural, economic, and social change in other parts of the world. In the GCC, the effects of e-learning have yet to take shape, provided that these countries overcome the issues in traditional learning first and then understand the barriers facing the implementation of technology employed learning. For example, according to the Parthenon group survey (2012), exam performance by students (k-12) is below global average. This is an issue in e-learning that needs to be understood and resolved before looking at the barriers to e-learning adoption and development.

barriers to e-learning adoption and development in the GCC

Telecommunications Market Monopolies:

Telecommunications markets, generally controlled by individual Gulf governments, have only very recently been opened to competition. The lack of competitive telecommunications markets in the region results in substantial internet usage fees, which limits access to on-line learning resources. This is an important consideration in very populous countries like Saudi Arabia, and also a concern in less wealthy countries such as Oman and Yemen. Saudi students exposed to e-learning have cited high internet usage fees as an important factor when choosing to take an on-line course (Alzamil, 2011).

Lack of Arabic content: On-line education in the Arabic-speaking world has been hampered by the lack of Arabic language learning objects and materials. English is the primary language of e-learning systems, National educational standards, assessment, and

quality control of on-line materials have lagged in the Gulf region, specifically with respect to ensuring that course materials are sensitive and relative to the Arab world context (Alsunbul 2010). Search engines, machine translation and generally handling the Arabic language on the internet is still a field with open questions.

Maintaining Quality Standards in e-learning and Cyber-Safety:

Lack of e-learning quality standards, however, is also an international concern, not unique to the GCC region. These concerns were raised in 2002 in a UNESCO report: "Higher education authorities seem to be absent from regulating providers of higher learning that are outside the mainstream of the education system, such as corporate institutions and providers of education opportunities through non-traditional delivery means, i.e. open learning, e-learning, virtual universities, etcetera" (UNESCO 2002).

Misuse of the internet (concern from parents' side and teachers):

GCC parents are concerned about misuses of the internet, such as children accessing inappropriate content, fraud, hacking, etc.; and, e-learning, specifically classroom chats and e-mail, can introduce additional threats to children such as cyber-stalking and bullying in unsupervised electronic environments. Parents are also concerned about health hazards associated with the internet such as eye-strain, for example.

GCC educators have cited risk to children and inappropriate content, both sexual and religious (Saudi Arabia, for example, actively blocks websites preaching other religions), as two of the major roadblocks to more widespread use of the Internet in the GCC, and therefore a barrier to on-line learning initiatives.

Shortage of skilled teachers: Shortage of skilled teachers remains the biggest challenge for the education sector across the GCC, which is expected to pose a serious threat particularly for private school operators to maintain the quality of education provided by them.

High attrition rate among teachers: The region is also facing the problem of high attrition rate among teachers as the experienced ones easily get a chance to switch schools due to a demand-supply gap prevalent in the market. Some of the school operators in the GCC estimate the average contract of teachers last just two or three years. The high attrition of teachers in the region leads to an increase in recruitment costs for the operators and disrupts the operations of schools by diverting their attention from the core issues of education.

The situation in the GCC is complex. However, a few key issues emerge (for k-12). These issues include pedagogy, curriculum standards and assessments, teacher quality, and parental improvement.

According to a survey done by the Parthenon Group 2012, teachers spend more time teaching than

counterparts in high-performing education systems. Across the GCC teachers spend almost 50% of their time teaching (4.2 hours/day), while in places like South Korea and Japan, the numbers are 38% and 35%, (2.8 and 2.5 hours/day) respectively. Curriculum standards and assessment are not well-aligned to requirements of the work force or tertiary education. Looking at three specific markets: Qatar, KSA and the UAE, the three biggest challenges teachers face are education, career and technology related. The technology related issue is prevalent mostly in KSA where computer literacy is a problem for almost 20 percent of teachers.

Many of the teachers of older generations are far-removed from the digital world and thus will require significant training. Teacher quality is very much a training issue. Teachers, many of whom are expats with variable qualifications, don't receive professional development to improve their performance. When asked about the training they receive per year, more than 60% of teachers responded as never, around 38% responded with 1-2 times/year and 1% as 3-5 times/year. Parental involvement often ends at the school gate. In one study, 70% of teachers reported that few or no parents support their teaching effort. Parents do not know how to get involved in their children's education and have few ways of doing so.

The awareness of quality education has resulted in a positive outlook for this sector. While a number of challenges like shortage of skilled teachers, lack of training and parental involvement and running costs exist for investors, the education sector continues to be an attractive investment option. Meeting the challenges is fundamental to the ability of the education systems in the region to meet the aspirations of the population for a better life.

and the solution is?

Technology enabled learning can reshape and address issues such as parental engagement, improved resource used and make improvements to teaching and human capital management. However, applying technology alone will not drive educational improvement. Focusing on simply bringing in technology to the education sector will not solve these problems. First and foremost, the issues in traditional learning need to be resolved. Technology is only a tool that can assist in improving the education system; it is not a sole platform for success. There are other factors that need to be included to increase the impact and effectiveness of e-learning.

Factors that need to be implemented alongside with investments in technology include, supportive policy and regulatory frameworks, bold leadership and clear visions, supporting systems and functions, understanding the student generation and their needs, aligning strategies with goals, implementation (evaluate the initiatives),

scale (expand effective models), project management (implementation must be well planned and executed under a project manager), creating and organising content, involvement and training of all stakeholders.

scope for growth in the future:

Through the technologically-driven platforms that we use on a daily basis, we are constantly reminded about this generation's constant strive to combine creativity and knowledge with technology to come up with outcomes that improve the way the human race develops.

Technology affords us a number of new things, it reduces friction and enables us to communicate and progress as a society. The infrastructure to learn outside of the four walls of the classroom is being provided across many of the GCC countries. Thus, providing learning methods outside of school is no longer a luxury but a necessity. However, e-learning will not alone remove the fragmentation in schools across the GCC. Both digital-based learning and traditional learning are needed to work together and complement one another in order for the education sector to progress. Having said that, the problems in traditional learning need to be resolved before attempting to endorse in e-learning.

In overcoming the challenges for education (in general) to progress in the GCC, policy makers would need to keep in mind the ultimate aim of education and that is to develop responsible citizens and leaders of tomorrow.



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