

# **GLOBAL KNOWLEDGE NETWORKING**

## **TOWARD A SMART CENTURY: GLOBAL PARTNERSHIPS FOR INNOVATIVE LEARNING AND LEADER DEVELOPMENT**

From Challenges to Opportunities to Solutions

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## **Introduction**

The landscape of global business is changing rapidly with an avalanche of technology changing the way individuals interact with one another around the world. Wave after wave of technological innovation is coming out daily and is being adopted at an unprecedented rate. Since the development of the microchip, technologies have revolutionized the world by making it a smaller place to live, work, and get an education. The rate at which technological interactions now take place could not have been conceived of fifty years ago.

People are no longer restricted by the boundaries of geography and locality as the global marketplace has become accessible to anyone, with opportunities and challenges never encountered before. This phenomenon assures me of the future of both education and business.

## **My background**

Being a Palestinian refugee, I had a humble upbringing and had to work hard to get the only scholarship available in order to study accounting at the American University of Beirut. I decided to start my own business at a young age and knew that education was my only option to make this dream a reality. I was highly motivated and set my sights on securing the scholarship, which I did, and later set up my own business, which has now grown into a thriving multi-million dollar one, the Talal Abu-Ghazaleh Organization (TAG-Org – <http://www.tagorg.com>) with 83 offices globally.

In my childhood, higher education used to be a luxury that was only available to the fortunate. I had to walk two hours to and from school every single day in order to complete my primary education. This gave me time to think and turned out to be a blessing in disguise. The ‘blessing of suffering’, as I like to call it, was crucial in shaping my future. The technological breakthroughs that we are now experiencing have culminated in the emergence online education which has eased the struggle for those seeking an education today.

When I first started my business, work was highly dependent on manual labor and very little was automated. Typewriters, adding machines, pencil sharpeners, filling out schedules, manual filing, and physical mail delivery were the tools of business in the 1970s, with most of the work dependent on human intervention. While humans are great thinkers, they cannot match the speed of technology in performing certain tasks. What can be done in an hour today using technologies such as e-mails, databases, and the Internet would have taken several hours, if not days, when I started my business.

## **The effect of technology on business**

Modern technology has made business more efficient and more productive. The office equipment of the past has been replaced by computers, e-mails, information portals, document management systems, and archiving solutions. Greater accuracy has been introduced into the workplace, which has improved office productivity many-fold. Office employees have been transformed from paper clerks into skilled computer professionals who can now perform an array of tasks from their desktops.

While offices have not become completely paperless, paper has been eliminated at many stages, replaced by accurate computer systems that provide better functionality, enhanced transparency, and greater monitoring than manual systems ever could provide. The staff of TAG-Org includes a specialist team of highly skilled programmers and web developers who have developed several internal applications for many of the organization's business arms. The organization also has a suite of off-the-shelf communication and productivity systems used by over 2000 employees globally.

The global adoption of technologies such as e-signatures, the acceptance of e-payments, and the establishment of governmental e-services, are all society's way of saying that such technology has come of age and needs to be embraced.

We live in a digital revolution and those who do not welcome it will be left behind.

## **Technology improving productivity**

Technology has elevated humans from performing mundane and repetitive tasks, to functions which are more conducive to thinking and innovating. Machinery and technology have now taken over many of the mundane processes which used to be done by people. This is very much in line with the nature of the human species that has had to constantly adapt. It is our uncanny ability to think, analyze, and change that has allowed us to survive for so long and to rule the Earth that we inhabit. Technology has freed humans to think more creatively and develop newer and better technologies to further humanity.

The cycle of thinking, developing and improving, leading to further innovation and enhancement, is the very process that was used to bring about the Industrial Revolution in the 18th century and catapult Western nations to where we see them today. This was when steam engines replaced animal labor and new inventions and machinery were developed to bring about modern manufacturing and improvements in many areas of life, which resulted in social transformations on many levels.

Today's banking sector today comes to mind as an example of this. It has been totally transformed by the introduction of technology, which has brought greater efficiency and accuracy to a very important business we are all reliant upon. What used to be a very laborious, paper-intensive activity has now been transformed into an almost paperless environment. Technologies such as ATM machines, credit cards, e-banking, and the electronic transfer of funds between financial institutions have changed the face of banking and business for good. This has provided greater security of financial information, better auditing and compliance with regulatory requirements, and safer methods of conducting business. The trust in such technology within the banking sector is what has aided the explosion of e-commerce internationally. Many online businesses have come about which otherwise would not have existed, even 20 years ago. This can be seen in the massive growth in India in areas such as Bangalore which have become IT hubs and with the huge online stores that consumers can now purchase from. With the Internet having reached more than one third of the world's population (Source: <http://www.internetworldstats.com/stats.htm> – figures for June 2012), I can see global e-commerce growing tremendously in years to come.

### **Social impact of technology**

The explosion of technology today has led to a new generation of children, for whom technology is native; it is in their blood and part and parcel of their daily lives. These 'digital natives' have the upper hand when using technology, whether for leisure or for work. Their mentors, the 'digital immigrants', are those who came to technology later in life and who started to use technology at an advanced age. While certainly being technology savvy, the immigrants cannot match the intuitiveness of the natives. Businesses and educators need to understand this in order to prepare future generations for the workplace. Technology is now an 'extension' of the knowledge worker and is an essential element in the fabric of the society we see today. This is similar to a child learning a mother tongue who picks it up through absorption, without effort, as learning and usage comes naturally.

As technology and biology advance, the link between humans and technology will become indistinguishable which will have huge implications in the way that businesses function and how future generations will be educated. The singularity, as it is known, has been spoken about widely by many commentators. This is where an intelligence explosion will come about as a result of a symbiotic relationship between humans and technology. They will become so interlinked that they will start to function as one, thus propelling mankind into an age of even greater technological advancement. The impact this will have on technology in business will be substantial and its effect on humanity as a whole will be epic.

## **The effect of technology on education**

Education is a fundamental human right and is something which we are constantly striving to acquire. It is also an aspiration we hold for our children and future generations. We can see the benefits of education in many examples around us with the thriving knowledge-based economies in the world being testament to this. While education is certainly a basic human right, **access** to and the **quality** of education are two great challenges facing educators globally.

In 2011, the United Nations proclaimed that access to the Internet is a basic human right. As the UN GAID chair at the time, I fought for this declaration and contributed to its drafting. We have a challenge to reach and educate those who cannot travel to obtain higher education, whether due to monetary constraints, travel visa restrictions, or the remoteness of their domicile, such as the millions of people living in sub-Saharan Africa and other such regions. This is especially important to the underprivileged so that they can break out of vicious cycles of poverty and combat the unacceptable illiteracy levels we see today. If education is going to truly stand up as a human right, it needs to be of a **world-class caliber**, and **available** to all in an equal manner. This is my belief in the democratization of education.

## **Universities without walls**

In this digital age, students and educators are no longer confined within the walls of a traditional classroom. In fact, such walls are gradually eroding away due to their failure at educating a growing population. Traditional teaching approaches have become somewhat ineffective at educating the masses.

The UNESCO Institute of Statistics predicts that by 2015, the Arab world will be 300,000 teachers short, second only to sub-Saharan Africa, which will be 1.2 million teachers short (Source: *Projecting the Global Demand for Teachers*, UNESCO Report). This is catastrophic for education in the Arab world and needs to be addressed promptly in order to avoid adverse repercussions.

Universities of the future need to be borderless and free from the physical campuses we see today. They need to be technology-based and have technical trainers to teach students how to use the various technologies to their maximum.

The days of the ailing old professor teaching from an outdated textbook on a blackboard are long gone. Instead, professors need to focus on producing excellent content which

will be accessible to many more than in a traditional classroom setting. The digital tablet and the Internet have now taken over.

This change is happening whether we like it or not and educators need to heed the warning signs. Universities that want to survive this tsunami need to change or else they will find themselves irrelevant. In fact, I see the future of universities as being purely digital endeavors with brick and mortar institutes being a thing of the past. The future is **online** world-class education.

### **The tsunami of online education**

Commentators, such as the leading British educationalist Sir Michael Barber and Lawrence Summer, President Emeritus of Harvard University, further expound on this by saying:

*Deep, radical and urgent transformation is required in higher education.*

*The models of higher education that marched triumphantly across the globe in the second half of the 20th century are broken.*

*The traditional university is being unbundled ... An avalanche is coming.*

(Source: An Avalanche is Coming – Higher Education and the Revolution Ahead)

Stanford University President John Hennessy predicts that higher education will be hit by a tsunami of change and says:

*A tsunami comes and remakes the coastline and changes things dramatically. It both destroys some things, but it also creates new things.*

(Source: The Coming ‘Tsunami’ of Online Education, Dr. John Hennessy)

The failure of traditional universities is evident and will only get worse unless radical steps are taken to reform them. Reformation is a requirement in order to meet the growing demands of the digital native students of the world.

Allow me to share with you some additional statements from other prominent speakers and thinkers who have also commented on this failure and the need for the reform of education globally:

- *Revolution hits the Universities.* Thomas Friedman
- *Online education is forcing elite schools to re-examine their priorities. In the future, they will educate the masses as well as the select few. The end of University as we know it,* Nathan Harden
- *An online syllabus could reach many more students, and reduce tuition charges and eliminate room and board. Students in an online university*

- could take any course whenever they wanted, and wouldn't have to waste time bicycling to class.* John Hennessy, President of Stanford University
- *Bail out Universities rather than Banks.* Sean Coghlan, BBC News Correspondent
  - *Our students have changed radically. Today, students are no longer the people our educational system was designed to teach.* *Digital Natives, Digital Immigrants*, Marc Prensky
  - *The Victorians were great engineers. They engineered a [schooling] system that was so robust that it's still with us today, continuously producing identical people for a machine that no longer exists.* Dr. Sugata Mitra, Education Researcher, Newcastle University, UK

Furthermore, here are a few facts and figures reflecting the growth of, and demand for, online education globally:

- *In 2011, 77% of American Corporations were using online learning (in 1995 this number was only 4%).*
- *72% of the 600 companies surveyed said that learning technologies, such as e-learning and mobile learning, helped their business adapt more quickly to change, an increase of 11% on last year.*

(Source: Towards Maturity Benchmark Survey 2011).

- *E-learning is proven to increase knowledge retention by 25% to 60%.*
- *4,600,000 college students are currently taking at least one of their classes online and by 2014, this number will increase to 18,650,000. By 2019, **half of ALL classes will be done online.***

(Source: Corporate eLearning Exploring a New Frontier, WR Hambrecht).

- *Corporate training alone is a \$200 billion industry, e-learning represents \$56.2 billion of this. This will grow into a \$107 billion market by 2015.*

(Source: GIA – Global Industry Analysts)

## **Digital natives and digital immigrants**

Universities, like banks, are looking for bailouts to help them 'ride the tide' of the global financial crisis. Government austerity measures in the West are reducing the financial aid available to local students, which is forcing universities to become more dependent on full-fee paying foreign students to make up for the deficit in local student registration. Student uptake is being hampered by increased tuition fees, high living costs, and the difficulty foreign students have in acquiring visas to attend elite foreign universities. This all adds to the problem of restricting access to education.

The solution to this is to provide cost effective, high quality online education. Universities need to start catering for ‘digital natives’ who are increasing exponentially in number. It is these learners that educators need to focus on as they are the future of the world economy.

The International Telecommunication Union (ITU) has provided some very interesting global statistics, detailing the number of digital natives residing in various nations:

China – 75.2 million

USA – 41.3 million

India – 22.7 million

Brazil – 20.1 million

Japan – 12.2 million

Mexico – 9.1 million

Russia – 9.0 million

Germany – 8.3 million

Vietnam – 7.5 million

UK – 7 million

(Source: International Telecommunication Union, 2013)

The ITU defines a digital native as someone who is 15–24 years old and who has been using the Internet for at least five years. I would add to this the millions that are two to three years old and for whom technology is *the* most important learning tool.

The students of today are e-learners and can tap into massive online repositories of knowledge, usually far better than their professors can. They are born with the ‘milk’ of technology from infancy. On the other hand, professors are now seen as digital immigrants who have come to technology later in their careers. Technical trainers, not professors, are required to help students best utilize this technology in the pursuit of acquiring knowledge.

### **The way forward**

Online education in the Arab world is projected to make a massive growth. The most efficient, and perhaps the only, way to serve the growing demand for education is by online teaching. This has led to the development of many online educational initiatives, such as Massive Open Online Courses (MOOCs), Khan Academy, Coursera, MIT Blossoms, to name just a few. These have been designed to provide free, piecemeal chunks of courses to students who, on successful completion, can either gain credits towards completing a full program, or receive course completion certificates.

The problem with these models is their financial sustainability, the level of participation they receive and the end result for the student. While piecemeal courses may be suitable in the short-term or as a training course, they do little to provide the sustained, lifelong learning that an education should provide. The old adage, ‘You get what you pay for’, is very relevant here as putting courses online takes time, requires human resources and, above all, requires money. Free, or close to free MOOCs may be good *if* they are able to sustain themselves.

In order to provide sustained learning, online programs need to be of a high quality, have excellent content, should be built around financially sustainable models, leading to internationally recognized qualifications. While students may certainly tinker with MOOCs in the short term, no student will make a full-hearted commitment to a program that does not lead to a recognized qualification.

Until now, access to elite, world-class education has remained exclusive and unaffordable for the majority of students around the globe. For the first time in history we are in a position to do something about it. Access to world-class education is an inevitability whose time has come. I come from a history of establishing leading world-class businesses over the last 40 years. I do not build on goodwill but on sustainability. We need to shift gears from ‘free online education’ to ‘affordable, elite, accredited online education’.

### **TAG-Org’s technology initiatives**

As a lifelong learner myself, I took it as duty to fill the need of providing affordable, elite, accredited online education and established a concept which encompasses all the characteristics of a world-class university. I have called this the Talal Abu-Ghazaleh University (TAGI-UNI - <http://www.tagiuni.com>).

TAGI-UNI is a pioneering alliance bringing together the best educational institutions globally, under one umbrella. Acting as a gateway to online education, TAGI-UNI ensures that only the highest quality online programs from reputable international universities and training institutes are offered to its students. This eases the burden on students to find a reputable online program, supports them in registering with a world-class institution, and provides them with the assurance that they will be backed throughout the duration of their studies by the reputation of the TAGI-UNI mother company, the Talal Abu-Ghazaleh Organization (TAG-Org).

This is supported by education-focused technology initiatives which TAG-Org is working on to develop a pan-Arab network for ICT-enhanced learning. The objective

is to provide an unprecedented chance to share information and experience about the successful implementation of ICT and to unlock the region's huge potential. These initiatives represent an independent, one stop shop that supports ICT for development, education and training to connect the entire Arab world and everyone wishing to engage with it. My ultimate aim is to boost economic development and ensure long-term stability and sustainability.

This approach is comprehensive and wide-ranging. It aims to promote excellence at all levels and in all sectors of education and learning, from early childhood to secondary education, higher education, vocational training, workplace learning, and lifelong learning. Activities span the whole cycle of educational reforms, from setting up new tools to the integration of ICT infrastructure into education and learning systems.

As a passionate advocate of elite online education and technology, I have been instrumental in establishing up a number of projects in the sphere of online education apart from TAGI-UNI. These include:

- Talal Abu-Ghazaleh Cloud (TAG CLOUD, <http://www.tagicloud.com>). This is the first private cloud implementation in the Arab region. I am proud of such an achievement and my vision behind it was to have a pool of scalable IT resources that can be provided upon demand without the need for costly administration. This supports TAGI-UNI's academic programs, connects students to the world, helps to simplify operations and reduces costs by utilizing virtualization technologies. It is used internally by the Talal Abu-Ghazaleh Organization to host all the critical applications that support its 83 offices worldwide.
- TAGEPEDIA (<http://www.tagepedia.org>). This is a unique concept for putting verified Arabic content on the Internet to disseminate credible knowledge from the Arab world, covering all spheres of life and acting as a portal for disseminating Arabic knowledge globally.
- 'ICT in Education in Five Arab States' report (<http://www.uis.unesco.org>). This was a joint collaboration between TAG-Org and the UNESCO Institute for Statistics. Its purpose was to build capacity in Arab states by strengthening national capabilities to define and measure the use of ICT in education, as well as to manage ICT policy development and implementation. This brought together policymakers from around the Arab region to see how ICT usage in education could be improved.
- TAGITOP (<http://www.tagitop.com>). This is a joint partnership with Samsung to produce custom-made, affordable notebooks for Arab citizens. TAGITOP is a state

of the art, portable computer that comes with a variety of pre-installed applications and tools for learning, including professional Arabic dictionaries in accounting, law, and ICT.

- E-infrastructure as a platform. Across the globe, specialized, high-speed communication networks have emerged as dedicated e-infrastructure platforms for research and education. Through these networks, students can seamlessly access widespread and diverse educational content and resources. I am investing to become part of this global interconnectivity through a pan-Arab e-infrastructure that links Arab institutions with reliable means of communication at the regional level.

These projects are a part of my humble contribution to the digital natives and for generations to come.

## **Conclusion**

Technology is, and will continue to be, a key factor in developing both business and education. It is a freight train that cannot be stopped. We all need to adopt it and rely on it if we want to remain relevant and not fall behind. The generations of the future cannot survive without this technology and governments need to do more to regulate it, promote its use, and provide consumers with access to it. Businesses need to be avid technology adopters as the world they are operating in is rapidly changing. Those that do not will find themselves quickly closing shop.

My objective is to change peoples' attitude towards digital education. I want to prepare graduate students to become global citizens, equipped with the best skills to perform, make their mark in their respective economies, and compete on a global level. Digital education stemming from accredited international institutions is now within the reach of all students. It allows for world-class higher education to reach across cultures to learners and it promotes 'elite education for all', not just 'education for all'.

No doubt there will be challenges associated with technology adoption along the way but, as with the industrial revolution, the digital revolution is indeed unstoppable. I am sure that future generations will read in their history books about the radical roles that technology and online education have played in shaping their destiny.