

# The Gap between Education, Talent and Technology in the UAE

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The UAE Vision 2021 National Agenda aims to make the UAE an economic, touristic and commercial capital, in part by transitioning to a knowledge-based economy, and by promoting innovation and research and development. To achieve a knowledge based economy, the UAE needs to educate, nurture and retain its talent with appropriate skills and experience, whilst at the same time developing the TMT sectors to house innovation and productivity.

Currently, there is a wide gap between the education and talent available and the TMT sector roles needed to diversify the UAE. The UAE, however, already has some significant advantages in meeting these challenges; for example, the UAE already has a 90% literacy rate, amongst the highest in the world.

In general, the Middle East is already positioned to gain considerably from the expanding TMT sector. Deloitte estimates that the market for cloud services in the Middle East will exceed \$1 billion in 2016. There has been some confusion within the GCC about the legality of use of Voice Over LTE or Voice Over Wifi. This, to some extent, has been due to the security concerns surrounding these technologies. As technological advances lead to enhanced security, the UAE could be able to tap into the 300 million customers already using voice over LTE or voice over WIFI. To give some scale to growth in TMT, this figure is five times higher than at the beginning of 2015. There are few other industries that are continuously growing at the rate of TMT.

Another related aim set out in the UAE Vision 2021 National Agenda is for the UAE to be a world leader in entrepreneurship, leading to unlocking the potential of UAE nationals and enabling them to be a driving force in the UAE's economic development through small and medium enterprises in the private sector.

Three key areas that will enable the UAE to to achieve the knowledge-based economy set out in Vision 2021 are:

- Diversifying investment into TMT: the economic conditions which impact how companies interact and their decisions to hire, educate and expand;
- Education for TMT roles: how to achieve modern-day skills which are suitable for an innovative and technologically advanced workforce; and
- Gender diversity: taking advantage of inconsistencies between the EU and the Middle East legal norms.

## **Diversifying Investment**

The shift in current economic conditions has pushed investment authorities to diversify their asset allocation. Abu Dhabi has the second largest sovereign wealth fund globally (approximately US\$792 assets under management) known as the Abu Dhabi Investment Authority ("ADIA"). The ADIA has traditionally invested heavily in property, stocks and financial institutions. The ADIA's size and expertise has meant that it has started to invest into non traditional areas such as aerospace, green technologies, renewable energies and mobile government. Examples of these are the investment into Greenko Energy Holdings and Evolve Knowledge Investments.

The Indian renewable energy company Greenko Energy Holdings received a US\$230 million investment and the ADIA invested US\$30 million into Evolvence Knowledge Investments (Repton School and Foremarke Hall in Dubai, and Repton School Abu Dhabi and Dubai Humpty Dumpty).

## **Education**

Expanding and developing the education system is key in achieving long lasting effects in innovation, creativity and ambition. The UAE needs to ensure that young graduates have a skill set that is equipped to service the TMT sectors. These evolving sectors are driven by a curriculum that is based on coding, software, data, algorithms and using innovative designs and theories to shape products. Such topics are not necessarily provided for in standard education. By upgrading the UAE curriculum to support growing the TMT industry, it is hoped that the need for outsourcing to a skilled immigrant workforce will no longer be necessary and local talent will be start to be sufficient to match the skills needed.

The UAE is already starting to incorporate these modern skills into the education system. Computer Science First was an initiative that was launched on 22 November 2015 as part of the UAE Innovation Week by the Abu Dhabi Education Council. This initiative enables nearly 250,000 public and private school pupils in the Emirate of Abu Dhabi to learn the basics of computer coding within the next two years.

Europe and the United States provide examples of such achievements. Most of the top coding programs are based in the United States, which has already build a track record for creating hubs dedicated to TMT. Palo Alto is synonymous with creating TMT giants such as Facebook, Google, Hewlett Packard and VMware and this is why San Francisco and California has become a hub offering bespoke software coding and other computer science courses which now attract students all over the world.

Europe too offers alternative examples. Sweden has undoubtedly grown to be the front runner for tech start ups. This is a direct result of having a strong legal core, an outstanding educational platform, and government agencies such as Almi which help fund and give valuable expertise to start-ups to get them up and running. This has resulted in big names such as Skype, Spotify and Soundcloud and has also enabled Sweden to break into the gaming industry (valued around US\$100 billion in 2015) and to capitalise upon the profitability of this.

## **Gender diversity**

Worldwide TMT is a mainly male dominated industry with few women rising to key positions within the industry. It has even been suggested that women are discouraged from science and math courses at stages as early as primary school. Graduate figures show that only 18 percent of US university computer science graduates were women in 2013, which is down from 37 percent in 1985. The UK statistics are similar with only 17.1 percent of computer science students being women (2013/14) which make up a very small percentage of women who undertake higher education which is currently at 56 percent.

Increasing gender diversity in the UAE is paramount to getting an active TMT workforce and to realising the UAE Vision 2021. One way to approach this is to take advantage of the lack of discrimination laws which are currently within the UAE in relation to targeting “females only” or “males only”. For example, companies in the European Union, due to strict discrimination laws, are restricted from creating services that only target one sex. This is not the case in the UAE, and there is potential to create a focus on women, paying particular attention to their needs and skill set. There are currently a few start ups, Amalkum, mumsatwork.ae and hopscotch.ae, to name a few, that are taking advantage of this. Start-ups such as Amalkum are dedicated to targeting both the local and expat community through merging women, education and technology, offering roles that cater to their particular needs and skill sets. This can certainly help in increasing the specialised workforce which can cater to the TMT industry.

## **Conclusion**

As companies increasingly seek lower prices and more flexible markets, the UAE is well-placed to improve

its educational environment's ability to provide a sustainable proficient workforce tailored towards TMT. The educational system's place in the fostering of talent is a necessity in order to gain traction to build a clear foundation for any industry, but is especially so for TMT.