Innovation Culture for Youth Empowerment in the UAE: The Role of ICT

By Racha Mourtada

SUMMARY

A culture of innovation within society can lead to sustained economic growth, greater global competitiveness, enhanced employment and entrepreneurship opportunities, and a more inclusive society for youth. Information and communication technologies (ICT) and the Internet have been repeatedly identified as key drivers for promoting innovation among youth, and for cultivating a more innovative society as a whole.[1] Several factors, however, continue to block the potential of ICTs to create a culture of innovation in the Arab world; namely, access to and utilization of ICT tools; Internet censorship; and the failure of educational institutions to teach innovation and entrepreneurship skills.

This paper explores these factors and their implications for the creation of a culture of innovation and youth empowerment across the Arab region, with a focus on the GCC region and the UAE specifically. Based on the findings of a series of workshops and meetings with senior UAE and GCC policy makers, several policy recommendations are proposed to address existing barriers. These include ensuring universal access to ICTs through upgrading infrastructure; supporting and promoting the digital Arabic content (DAC) industry; reforming educational methods by integrating ICT tools and innovation skills into the classroom; enhancing career options for youth by teaching entrepreneurial skills at an early stage; and, revising Internet censorship laws to better balance cultural sensitivities and the online flow of information, knowledge and technologies.
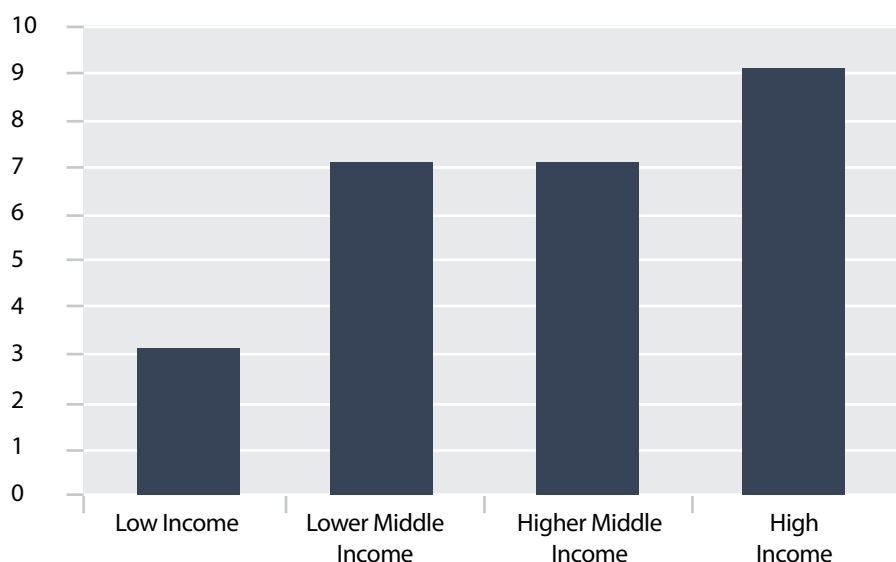
Introduction

"Innovation is the amalgamation of invention and creativity that leads to the generation of social and economic value."[2] It is a key driver for economic growth, global competitiveness and the integration of countries into the global knowledge economy, as well as an essential aspect of good governance.[3] Moreover, the level of innovation within a society generally correlates with its GDP. Figure 1 groups the most recent World Bank innovation indices for countries (on a scale of 1-10) by their income brackets, highlighting this direct relationship.

Traditionally, innovation is defined as "the application of technological knowledge and the creation of a new or improved product or service."[4] For the purpose of this paper, however, the focus will be on innovation in learning, creating and collaborating, from the dual perspective of "inventiveness" in science and technology, and "creativity," with its connotations of art, culture and imagination. Promoting innovation in the way today's Arab youth learn, think and produce —through the utilization of ICTs at home, on the job or in the classroom—will enhance not

Figure 1: Innovation Index and Country Wealth

Source: World Bank database, Knowledge Assessment Methodology (KAM).
Web site: http://info.worldbank.org/etools/kam2/KAM_page5.asp

only their career prospects and employability but will also equip them with the skills to pursue their own entrepreneurial ventures.

The Arab world currently faces the challenges of a booming youth population (between the ages of 15 and 29), estimated to be about 100 million people, comprising 30 percent of the population and 47 percent of the working-age population.[5] A substantial portion of these youth face unemployment and bleak prospects in the coming years. Fostering a culture of innovation and entrepreneurship within youth and society as a whole will develop their capacities and create job opportunities, thus helping to alleviate unemployment and boost the economies of the Arab world. ICTs can play a pivotal role in promoting innovation, and equipping Arab youth with the right ICT and entrepreneurial skills is vital to the creation of a thriving and innovative society.

Implications of ICT Usage for Creating a Culture of Innovation

Access vs. Utilization of ICTs

In its broader definition, "accessing ICTs" is not an area of concern for the UAE, or for many GCC countries in general. These countries boast highly developed ICT infrastructures, with multiple access channels to the Internet and Web services, whether through personal computers (PCs), community centers, mobile devices, kiosks, etc. Properly utilizing knowledge, information and ICTs, then, is the key challenge. While entertainment usage, such as chatting and gaming, is prevalent among youth, it is possible to turn them on to the educational, creative and research aspects of the Internet. ICT can be introduced into the classroom

through wikis,[6] mobile access, and video conferencing, as well as more engaging tools such as interactive and gaming technologies that deliver educational content.

In 2008, Arab countries showed the highest growth worldwide in ICT infrastructure development, although disparities persist in the region, with the GCC countries outperforming the rest of the Arab world. Internet usage has grown significantly, although in the Arab world, only four GCC countries surpass the world average. However, even countries with high Internet penetration show low rates of Internet use by schools and businesses. Moreover, the scarcity of Arabic content and the lack of proper legislation to promote its growth on the Internet present some of the main stumbling blocks to both accessing and producing content on the Web.

Censorship and Creating Awareness

Taking advantage of the digital revolution while maintaining a country's ethical and cultural codes is a delicate balancing act. Awareness and online child protection campaigns are vital to protecting people from harmful or offensive content; however, overly prohibitive measures such as fully blocking multimedia sharing platforms can greatly restrict the development of a culture of creativity and innovation.

Arab countries vary both in their approaches to censorship and in their filtering methods. Most countries in the Arab world filter Web sites due to religious or moral concerns, but political censorship is also pervasive throughout the MENA region. Blocking of certain ICT applications and tools, such as VoIP (Voice over Internet Protocol), is also

prevalent in some Arab countries, mainly due to fears of cutting into government revenue streams. These kinds of free and expansive communication tools can go a long way towards widening creative networks and enhancing collaboration between people. A strategic impact evaluation of such policies is required to assess and balance between short-term financial gains and long-term national objectives of social and economic development.

Ultimately, censorship of ICT tools and Internet content for any of the above reasons can have the negative effect of discouraging youth from using online tools for creative and educational purposes, and should be approached with this consideration in mind.

Nurturing Innovation: Turning Youth from "Users" into "Producers"

The Arab region generally suffers from poor performance when it comes to innovation indicators, with its overall global ranking decreasing from 1995 to date. To combat this, nurturing creativity and innovation should start at home and in the classrooms. School curricula should be reoriented away from rote memorization toward problem solving, exposure to the arts and the integration of ICT tools into classrooms. Leveraging what is increasingly referred to as "Web 2.0"[7] tools in schools, homes and public institutions will attract the "Web-savvy" young generation and provide innovative new tools and creative outlets for them.

Moreover, promoting entrepreneurship and fostering entrepreneurial qualities is key to helping youth create viable jobs and self-employment opportunities. ICTs and ICT incubators have been known to provide entrepreneurs with the necessary guidance and skills to help nurture and drive the growth

of their enterprises. Incubators for digital Arabic content, for example, have shown some promise in the past few years for promoting entrepreneurial endeavors in Arab youth,[8] as have innovation and entrepreneurship competitions.[9]

Most importantly, a change in the mindset of pupils, teachers and parents is required, to one that embraces innovation and accepts failure as a stepping-stone to success.

ICT and Innovation: The Case of the UAE

Based on the findings of a high-level government workshop held in 2009, several challenges were outlined regarding the utilization of ICTs in creating a culture of innovation for youth empowerment in the UAE:[10]

- **Utilization, rather than access, is the main stumbling block** to realizing the potential of ICTs in the UAE. The UAE has one of the most advanced ICT infrastructures in the Arab world, comparable to most developed countries, with pervasive Internet connectivity in homes, workplaces and higher academic institutions. Schools, however, are generally perceived to have a lower rate of access due to a low ratio of PCs to students. So, although access to ICTs does not pose a hindrance, more systematic research is required to capture youth Internet usage trends in the UAE before social policy makers can promote those usage trends that can potentially foster creativity and innovation.

- **Balancing the positive and negative aspects of ICTs** is an area of concern when it comes to promoting a culture of innovation in the UAE. Apprehensions about preserving local culture and blocking offensive content

raise questions of striking a balance between creating a "safe" environment for youth and one that might restrict creativity and innovation.

- **Creating a generation of "producers" rather than "users"** is another challenge. Archaic teaching methods and rote learning often hamper the spirit of innovation and stifle creativity. Despite the recognition that the arts can promote capabilities and skills that are beneficial to other areas of study and learning, and in spite of efforts to make curricula more student-centered,[11] teaching remains textbook-driven and pedagogical.[12] Moreover, school curricula tend not to factor in job market demands, thereby hindering the next generation's chances of employment.

- **Prohibitive practices regarding ICT and software access** is an issue that needs to be addressed through ICT policies. Setting unaffordable Internet connection prices, especially for educational institutions, or blocking applications for fear of cutting into government revenue streams can hinder the development of ICT skills vital to the promotion of creativity and innovation in youth.

Policy Recommendations

Empowering youth and enhancing their employment opportunities through the promotion of a culture of innovation will ultimately create a more innovative society as a whole, thereby increasing the UAE's competitiveness and driving its economic growth. The UAE already places highly in innovation,[13] ranking 27 of 133 countries and leading the Arab world in the World Economic Forum's 2009/2010 Global Competitiveness Report. The proposed policy recommendations below can help to further foster a culture of innovation that will sustain

and improve the UAE's position as a leader in the global knowledge economy.

Access vs. Utilization

ICT is being widely used in the private sector and government organizations in the UAE and the GCC countries, but schools (especially public ones) still lack vital interactive ICT tools in their classrooms. As such, this brief proposes the following:

- **Development of a national strategy on e-learning** at the primary and secondary school levels. Such a strategy would guide the development of ICT infrastructure, tools and skills that allow youth to benefit from the many educational and creative uses of the Internet. It should focus on the integration of ICT tools and the Internet in the classroom and into the learning process from a young age.

- **Promoting development of digital Arabic content (DAC)** for the Internet is also key to getting people, and Emirati youth specifically, to utilize the Internet in educational and beneficial ways. To do so, the UAE government should[14]

  - promote digital Arabic content by including it in national social strategies; building Arabic-based online government repositories of information would create demand for content;

  - encourage the private sector to create digital Arabic content and foster a DAC-focused industry through incubation, incentives and attracting capital to encourage investments;

  - continue to take part, in collaboration with other regional stakeholders, in Internationalized Domain Name efforts[15] and in unifying standards for Arabic script.

In Arab countries outside the GCC, where the provision of adequate ICT infrastructure and access is still an issue, policies should address the balance and trade-offs between upgrading and improving infrastructure in some areas, while focusing on enhancing competition to provide better ICT services in others.

Censorship

While many societies deem necessary a certain amount of filtering of Web sites to block access to harmful or offensive content, over-blocking can lead to the suppression of valuable content that can facilitate creativity and innovation. Governments should consider the following recommendations to address this balance:[16]

- **Create policies that outline specific and transparent criteria for filtering,** and incorporate techniques that adhere to international regulations and guidelines[17] as appropriate and feasible within local customs and traditions. The UAE already implements an Internet Access Management (IAM) policy that provides clear criteria in the form of a list of prohibited content categories. However, compliance with international guidelines would also serve to raise its status in the international community.

- **Distinguish policies that filter content on the basis of moral/ethical issues from those that block technology and applications that may cut into state revenue,** such as VoIP. Focusing on the long-term benefits of the latter toward creating a culture of innovation, rather than possible short-term monetary losses, should diminish the perceived threat of new technologies and ease restrictions on them. In the UAE, the Telecommunications

Regulatory Authority has announced in 2010 that it will be allowing the use of VoIP services, although only through the licensees, du and Etisalat.

- **Promote user participation** and set up a societal body to receive any feedback, complaints, or grievances in case of erroneous blocking. In the UAE, service providers already practice this through the provision of online feedback forms on blocked sites. Utilizing Web 2.0 tools could facilitate the larger involvement of society in the decision-making processes of Internet filtering, hence creating a more open, responsive and representative approach to filtering.

- **Conduct awareness campaigns at a national level on ways to safely use the Internet,** and allow users to be more proactive and vigilant about the content they access, thus creating less need for censorship by the government;

- **Put the tools for filtering into the hands of end users, rather than the government,** by providing users, and parents, specifically, with access to "censorware," modem locks and other devices that filter Internet content. This is implemented to a certain extent in the UAE, as many sites are blocked due to public request.

Youth and Innovation

Creating a culture of innovation and instilling it in youth means equipping them with the right skill set, which is not fully developed at school and university. Public policies need to be formulated to align the interests of parents, government, educators and the private sector to find out the most appropriate resources and skills that need to be developed by youth. These resources

include ICT skills and tools, which should be integrated across the curriculum, creating a "digital learning environment," rather than treated as a separate subject, as is currently the case is in most UAE schools, with outdated content and hardware. Specific proposed policies include the following:

- **Reform university admissions policies** (from a focus on standardized testing to more creative and holistic forms of evaluating applications, such as emphasizing recommendations and volunteer work) to encourage new learning methods in lower grades and develop skills like communication, teamwork, problem solving and critical thinking, which the collaborative and participatory nature of ICTs can help achieve.

- **Focus on developing entrepreneurial qualities in youth at the primary and secondary education stages,** rather than exclusively at the tertiary education stage and beyond. Emphasizing the integration of entrepreneurial skills into the traditional school curriculum, rather than just through specially designed extracurricular programs, will ensure a wider reach, as will integrating ICT tools and skills such as the use of social networks and online forums to promote creative collaboration and the exchange of ideas.

Conclusion

The UAE, and the Arab region as a whole, is home to a steadily growing demographic of underutilized young people. Innovation can serve as a powerful tool in creating opportunities for them, as well as reducing

unemployment, driving economic growth, and promoting good governance. This paper outlines the main challenges to utilizing ICTs in fostering a culture of innovation for youth empowerment in the Arab world, focusing on the GCC region and the case of the UAE in particular. Based on findings from a series of policy forums, it proposes policy recommendations to address the issues hindering the full utilization of ICTs to promote innovation in the UAE. These can be extrapolated to Arab states that share similar societal characteristics, acknowledging the variations in their relevance to different Arab countries.

Certain issues, such as Internet access and censorship, are heavily influenced by factors such as GDP, the legal environment, and social and cultural influences, and vary widely across the Arab world. Policy recommendations should be tailored accordingly. Other issues, such as the promotion of the digital Arabic content industry, are of concern to the Arab region as a whole, and consequently should be tackled collaboratively on a regional level.

Ultimately, innovation is about creativity, which encompasses several fields ranging from art, literature and music to science and technology. It is not merely about creating something new, but also about taking what already exists— be it a product, process, service or concept— and improving on it. It is vital to embrace this wider definition of innovation and harness it to serve the needs of Arab youth and of the Arab world as a whole, in line with job market trends, economic roadmaps, and social development goals.

ENDNOTES

1   Elaine Byrne, Brian Nicholson, Fadi Salem, eds., *Assessing the Contribution of ICT to Development Goals. Proceedings of the 10th International Conference on Social Implications of Computers in Developing Countries,* (Dubai: Dubai School of Government and International Federation for Information Processing, 2009).

2   United Nations Development Programme and Mohammed bin Rashid Al Maktoum Foundation, *Arab Knowledge Report 2009*, (Dubai: UNDP and MBRF, 2009), http://www.mbrfoundation.ae/English/Pages/AKR2009.aspx.

3   Fadi Salem and Yasar Jarrar, *Cross-Agency Collaboration in the UAE Government: The Role of Trust and Impact of Technology.* Report by the Dubai School of Government and Cisco Executive Thought Leadership (Dubai: Dubai School of Government, 2009).

4   United Nations Economic and Social Commission for Western Asia (UN-ESCWA), *New Indicators for Science, Technology and Innovation in the Knowledge-Based Society,* (New York: United Nations, 2003), http://www.escwa.un.org/information/publications/edit/upload/sdpd-03-5.pdf.

5   Navtej Dhillon, Paul Dyer, and Tarik Yousef, "Generation in Waiting: An Overview of School to Work and Family Formation Transitions," in *Generation in Waiting: The Unfulfilled Promise of Young People in the Middle East,* ed. Navtej Dhillon and Tarik Yousef (Washington, DC: Brookings Institution Press, 2009).

6   A wiki is a Web site that allows the easy creation and editing of any number of interlinked Web pages via a Web browser.

7   "Web 2.0" encompasses a range of online tools such as blogs, wikis, social networking sites and multimedia-sharing sites that allow users to produce and create content collectively, as well as forge social ties and relationships online.

8   UN-ESCWA, for example, hosted a series of digital Arabic content competitions in 2008 to promote innovation in young Arab graduates, and to encourage their participation in DAC-related initiatives and businesses.

9   Examples include the "Philips Innovation Program," a joint venture between the Mohammed Bin Rashid Al Maktoum Foundation, Philips Corporation, and Berytech Technological Pole, launched in February 2009 to promote entrepreneurship in the Arab world; and, "Dragons' Den," a venture-capitalist television program that allows entrepreneurs to pitch their ideas and secure investment, launched in the Arab world in 2007.

10   The workshop on "ICT and Innovation Culture for Youth Empowerment in the UAE" was held at the Dubai School of Government on May 7, 2009. Participants included officials from the UAE Ministry of Culture, Youth and Community Development and other federal government departments (Telecommunications Regulatory Authority, the General Authority of Youth and Sport, the Ministry of Labor, and the General Information Authority), as well as experts and scholars from the Dubai School of Government, and private sector practitioners from Microsoft Corp.

11   For example, efforts made by the Abu Dhabi Educational Council (ADEC), which has been at the forefront of curriculum development in the UAE.

12   Samar Farah and Natasha Ridge, "Challenges to Curriculum Development in the UAE," Dubai School of Government Policy Brief 16, (Dubai: Dubai School of Government, 2009).

13   The World Economic Forum calculates its innovation rankings based on seven pillars. Further information is available at http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm.

14   UN-ESCWA, *Regional Profile of the Information Society in Western Asia*, (New York: United Nations, 2005), http://www.escwa.un.org/information/publications/edit/upload/ictd-05-6.pdf.

15   An example of this is the UAE's collaboration with ICANN on the Arabic Domain Names initiative and the registration of إمارات. as a Top Level Domain Name for the UAE.

16   Ronald Deibert, John Palfrey, Rafal Rohozinski, Jonathan Zittrain, eds., *Access Denied: The Practice and Policy of Global Internet Filtering,* (Cambridge: MIT Press, 2008).

17   One example is the International Covenant on Civil and Political Rights, http://www2.ohchr.org/english/law/ccpr.htm.

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