



Reflections on Future Education: Ideas for a Model*

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Abstract

A rapid change in technology is creating pressure on education to meet employment needs. Two overarching points are discussed in this article: first, rather than fearing the robotization of humans we should humanize technology to serve humanity and second, any educational reform must be contextualized: in particular social and cultural traditions, values and worldviews, considering the population size, demographics and special developmental challenges, instead of introducing “one size-fits-all” models. It concludes with thoughts about the current Coronavirus crisis and what it tells us about current global leadership, modes of governance, and the nature of education. The question is raised whether emphasis should be on activism or science. Are we better off with building minds or building skills in response to technological advances? The current crisis levels the global field of political and military dominance since the virus crosses borders and transcends dominance. The people are emerging as a force demanding science instead of diluted glib rhetoric. This emergency suggests the path Future Education has to take.

Reflecting on the global future of education one is immediately faced with a big challenge facing modern education which is how to prepare the youth of this generation for today’s job market. It has become a common complaint among young people in the United States, for example, that the degree they worked so hard to obtain does not prepare them for the job market, nor for dealing with today’s world. The key is the rapid change in technology at educational institutions while the educational system either remains the same or changes too slowly in the face of rapid technological advancement. There is also a growing fear that technology is replacing human labor. There is a ‘new normal’ which education is not prepared for, nor is it preparing the working population for the future. This paper reflects on the aspects that need to be considered to provide fresh perspectives as we propose new ideas in this era of digital transformation.

Two overarching points are discussed in this article: first, rather than fearing the robotization of humans we should humanize technology to serve humanity and second, any educational reform must be contextualized: in particular social and cultural traditions, values and worldviews, taking into consideration population size, demographics and special developmental challenges, instead of introducing “one size-fits-all” models.

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1. Does One Size Fit All?

In both identifying the challenges and seeking models for a more appropriate education we must take into consideration the sociocultural context. One size does not fit all. In exploring different countries, we find significant differences that must be taken into consideration. To name a few factors: 1) level of development 2) population size 3) cultural tradition 4) cultural values 5) demographic patterns, 6) gender balance in education and in the workforce, 7) the nature of any barriers, 8) the demographic character: is it an aging or a youth dominated population? and 9) work environments (bullying, discrimination, racism). These and more must be considered when looking at the path education reform takes in order to deal with local conditions. How rapid is technological change?

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To name a few concrete examples for the purpose of clarification let us look at Finland, Qatar and Egypt. Finland is universally praised for an education system “that worked.” But if we look at Finland as a country we are dealing with a relatively low population size and an almost homogeneous liberal Nordic culture. Experimentation in liberal education is possible and is effective. But would it be successful if carried out in a country whose population size is very large, and which is undergoing transitional development, while holding traditional values and a deep civilizational identity? Here I am thinking of the example of Egypt which is undergoing comprehensive reform at every level, both top down and bottom up as it marches onto a global economic landscape in big strides. All this is taking place since the revolution. I have described the two-phase Egyptian Revolution (2011-2013) in earlier publications (El Guindi 2018; El Guindi 2019).

In these publications I described the challenge Egypt was facing taking into consideration the unique social and historical character and the civilizational worldview of harmony and integration cultivated in the country over millennia. Recent confrontations with extremist forces from the inside and orchestrated from the outside forced priorities of defense and militarism, but not at the expense of national and local projects of development. Emphasis on defense is linked to Egypt’s geopolitical position and its valuable population and natural resources, elements which attract threats to its security and must be considered in any realistic analysis. Nevertheless, reform is evaluated as successful by some measures. Since 2013, according to *Business Insider* of France, Egypt ranks 8th after Germany, Turkey and Japan; according to IMF, though a small country Egypt “will be driving global growth in the next five years.” (Kreppmeier 30 Oct 2019, 15:54)

2. The Finnish Model of Education

The model formulated in Finland for Education is internationally praised as a good model. It was highly praised in Qatar when I was invited (2006-2015) as part of its own Reform Initiative to oversee a 'modernizing' of Social Science at the National University of Qatar. The basis of the praise for the Finnish model is Education Outcomes. Outcomes worked well for the Finnish people and within Nordic culture and is hence praised as a success. The question I bring to the discussion here is can we determine outcomes quantitatively outside cultural context? Is it determined by a universal set of criteria, without consideration of a country's level of development, a society's set of standards for education, cultural values and worldview? Finland is a relatively homogenous society, with a small population and holding a very liberal set of western Nordic values. As a model for Finland and perhaps some other similar Nordic countries it is evaluated as a success, but can such a model be exported to other settings? I would argue that most likely it will not work. Education must reflect the demographic, social, cultural and political setting in which it aims to be applied.

3. The Failed Qatar Case

In order to fully understand the significance of sociocultural context I bring up the case of Qatar. An enlightened strong Qatari woman was President of Qatar University. She headed a group of colleagues who together embarked on a dramatic path of reform. This involved teaching standards, teaching style, faculty obligations, language of teaching, curricula, prerequisites, accreditation standards, teaching outcomes, research activity, research outcomes, modernizing programs with a special focus to bring the Social Sciences onto the 21st century with the goal of meeting an international standard. Discipline, which was totally lacking in many faculty members and most students, was prioritized. But simultaneously there was a move away from rote memory learning toward an interactive creative learning experience.

This is where I come in. I was invited (2006-2015) as part of the Qatar University Educational Reform Initiative to bring about reform of the Social Sciences at Qatar University. Without delving into too much detail, I would say that despite the good intentions and the very hard work put into this Reform movement, it failed. The question is, why? Students complained to their parents, parents protested, the regime feared a wider political protest at a time when Arab populations were undergoing uprisings protesting against political abuses, corruption and economic inequalities throughout the region. The Reform Project was abruptly stopped, faculty salaries were exponentially raised, and the whole reform project was reversed to what it was before the Reform began. In a future publication I will discuss how I carved my own reform path, labeling it as sustainable reform which has proved to be a success.

Why has the Qatar model failed despite the enormous amount of expenses invested in it and the distinguished level of expertise which was brought from abroad and put into it? Overall the model of education for reform was totally imported from the United States, lock, stock and barrel, as it were. In terms of the Social Sciences the Qatari faculty were not ready for such reform nor could they understand it. Resistance to it was strong. Qatar is a tribal society, and Qataris are pretty much all relatives operating within tribal boundaries. This is in

and of itself not the problem. But it limits dissent. Consent is determined by tribal loyalties. Tribal loyalty is primarily given to their group and to their cultural tradition which is shared by the Arabian region deeply rooted in poetry and surrounded by the civilizational traditions of the Arab region. Why should they simply adopt an American model of education which is in the English language, when traditional literacy and a long tradition of global trade were invented in their region? They were masters of global trade without an MBA. There was also the factor of readiness for a major change.

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The faculty were not ready for such a sudden and rapid change and the resistance to it which was communicated to the students. Why should reform models be comprehensively imported? It is interesting that there was no similar resistance to technological change in other areas. Students had the latest smartphone, the latest computer models, the latest cars, and anything that wealth can buy. Qatar is a very affluent country with a low population. Labor is imported. Any needed skills are purchased. There is no direct connection between the educational system and the labor force. Most Qataris have guaranteed jobs which eliminates the need to seek jobs or connect education to employment. There is no need for jobs. In general, affluent Qataris are employed on a family basis and education has to meet other needs. The assumption that education of the future has to be relevant to employment is not valid in this case. The challenge is different but must be addressed. Should we look at education reform by breaking up the elements of change to determine what can and cannot be absorbed by people and at what pace? Insights are needed to cover such situations even if they are anomalies. Some insights can be drawn from the past, not out of nostalgia but for the effectiveness of the ideas.

4. Is Technological Change the ‘New’ Normal?

There is a need for taking a broad and deep view of the development of humankind in order to appreciate the value of perspective. Perspective can help us understand better the character of change that we encounter. It is worth recognizing that neither change nor technology is new to humankind. We need to be reminded that since our human beginnings, each era and every age since our human beginning, we have been experiencing new normalities, and that new normalities are always resisted, and present new challenges. That is, normalities are not new to the human species. Cultures and societies, even the most traditional, have always been changing. There is no static society nor an unchanging culture. Change is usually slow and hardly noticeable by the people. It is when change is forced internally, imposed externally, or takes place too suddenly or too rapidly, or when it is extremely incompatible with cultural tradition and worldview (and we do have some unusual anthropological case studies showing a culture totally falling apart upon the sudden introduction of an innovation), that societies

encounter instability and people respond with resistance. It is difficult for people to adjust to rapid or sudden change which disturbs their comfort zone. Gradual and particularly compatible change is more easily absorbed. But there is another crucial factor.

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Less known perhaps is the fact that technology is not new either. We tend to think of technology in terms of our present day advances—mobiles, tablets, electronic services, and robots. But the fact is there are studies that have shown that technology is not a mark of modern humans, since rudimentary manipulation of tools was shown to be a characteristic of anthropoids (humans and pre-human apes). But there was a qualitative shift with the development of humans, a shift linked to the unique human cognitive capacity. Significantly, from the moment humans shaped a stone tool they did so to manipulate it and employ it as a means for a purpose of livelihood, in other words they invented technology for serving them. From that moment there was technology and it kept progressively advancing in complexity through the ages. While non-human primates used tools that appear to some as being similar to the way humans did, they actually did so at a very crude and limited level.

Creative inventions and imaginative uses of technology mark the development of humankind as a species. In terms of our present-day concerns and fears about the takeover by technology of our lives and livelihoods, it should be mentioned that every step in technological advancement had a similar impact on humankind. They were considered new normalities and humans had to face these novel challenges by both resisting them and gradually adjusting to them while advancing technology further. In other words, nothing stopped the advancement of technology until today.

Such advancement is a function of the plastic capacity of an imaginative human mind, which, whether given to us by God or by Evolution, is an enabling capacity to deal with the progressively changing conditions whether by organizing socially, by building institutions of action or ideas, and at the same time manipulating the environment by using tools humans themselves imagined, designed and created (for a current and full development of this point on cognitive capacity and social organizing see El Guindi 2020). There is serious discussion in scientific circles today on how a complex¹ notion of society and culture is unique to humans (Gazzaniga 2008).

5. Humanizing Technology, NOT Robotizing Humans

Considering the human capacity to create, and the challenge today posed by technology which is rapidly robotizing the human world, the affirmative response becomes: humans created this technology and should be able to control it. What is needed is to humanize technology to serve humans rather than robotize humans or live in fear of being replaced by robots. This

fear comes from an over-romanticized illusion about technology and an over-rated sense of technological advances, perhaps for reasons of profit rather than the service of humanity.

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No matter how advanced technology becomes, it will remain robotic and can never acquire human cognitive capacity. Robots can be successfully employed for a better life for humans and humans should drive forward striving for more humanly creative tasks enabled by their unique minds and aided by robotic inventions. Robots, if intelligently manipulated, can make human lives better in quality. Humans need not be robotized; they need to become more creative. Education can be reformed with these premises as a guide.

6. Global Concerns for Future Education

One of the themes posed for presentation at the Final Plenary of the Conference on Future Education held in Belgrade in 2019 was the premise of multi-culturalism versus inter-culturalism with regard to the role they play in the future of education. At the onset, this paper challenges the polarity by which this duality tends to be framed, namely multi-culturalism versus inter-culturalism.

The question to raise is whether our understanding is served by looking at these two phenomena as reified polar opposites between which a choice needs to be made in order to characterize the path education should follow in its future development. It is contended in this paper that the factor of cultural diversity need not be dichotomous, and an alternative framing is presented using historical examples from the beginnings of academies which were present in the Middle East since ancient times through the Golden Age of Islam.

We can journey back all the way to 3rd century BC in Alexandria to focus on the Great Library of Alexandria (Bibliotheca Alexandrina), or the 8th century to the Great Library of Cordoba built by the Umayyad Dynasty in Andalusia, a dynasty that lasted from 756 to 1031, or to 9th century Baghdad during the Abbasids, all the way to 11th century Cairo. While these academies and many more spanned centuries, I focus here on two special ones; Bayt al-Hikma of Baghdad, or House of Wisdom, in the early 9th century and Dar Al-'ilm of Cairo, House of Knowledge, Egypt 1005 CE.

7. What is 'Ilm and What is Hikma?

Both Bayt al-Hikma of Baghdad and Dar al-'Ilm of Cairo are houses of learning and teaching and research. Bayt and Dar in Arabic mean house/home. Hikma is an Arabic term meaning both wisdom and knowledge and 'Ilm means both science and knowledge. These

notions merging wisdom, science and knowledge reveal a unitary conceptualization of what is here being proposed for education, namely to universally embrace this integrated whole as its core character.

The two academies like many of the classic academies during that period shared common elements. They were gathering places of teaching, learning, knowledge exchange, research sharing, translating, printing, reading, documentation. They merged academy and university, library and archive. They served as magnets to curious scholars across ethnicities, faiths, cultural traditions: Arabs, Persians, Indians, Central Asians, Muslims, Christians, Jews—all faiths, sects, men and women. They had music, art, poetry, philosophy. They combined discovery, invention and translation of existing knowledge. An observatory was essential. Thousands and thousands of books, documents and, pamphlets were on shelves and in cabinets. There was regaled public access. Teaching, learning, discover and production of knowledge as well as sharing and communicating knowledge merged. There was writing and debating.

This is a picture of integration and dynamic interconnectedness and interactive interdependence of parts that we seek in a paradigm of education. In this context, while the space was multi-cultural, its character was that of inter-culturalism. The latter goes beyond form and becomes a process of interaction and integration. This way there is no polarity since one is form and the other is a process, one is a static condition, the other a dynamic integrated interactive process. It is such a dynamic interconnectedness grounded in culture that we seek in a paradigm for future education with insights drawn from history and from present challenges to reform. Perhaps, instead of asking how to change education so that the public can acquire skills to prepare for the new technology, we ought to be saying that we as humans invented technology and should be able to creatively humanize it in such a way as to meet our needs in the emerging global world, rather than robotizing humans to fit technology.

8. Epilogue: What the Coronavirus Crisis Tells Us

I conclude this article with my thoughts about the current crisis which is caused by the appearance of the Coronavirus (COVID-19) and its rapid worldwide transmission and fatality threat across borders turning it within months of its appearance into a pandemic, despite the fact that, as far as we currently know, it is not airborne and only transmits by touch. I like to reflect on what the crisis tells us about our current human condition, the efficacy of governance by nation-states, the effectiveness and inevitability of global institutions, the paradigms developed by think tanks, including the World Academy of Art and Science, and significantly the implication of all this for Education, the main subject of this article.

In previous publications (2018; 2019) I had stressed the need for taking a ‘whole system’ or integrated approach of balance and harmony whether through worldviews or actual governance, situated in cultural context to meet today’s needs, moving away from abstract dichotomous polarities in our thinking and analyses. What the coronavirus crisis tells us today is that we live in a global world, interconnected and interdependent through governance by nation-states (some tribal-based), and in critical need of world organizations (such as WHO), and should be informed by a scientific education aiming at building minds. The very notion

of leadership is being tested. Capital is posed against human welfare. Governance cannot continue with business as usual prioritizing the global economy over human welfare. People want to be sure knowledge of the disease is scientific. They want their governments to take measures to protect them, not capital. Is this possible when the two are now so interconnected by globalization processes? Global chaos is setting in. Going back to the issue of whether we should prepare youth to meet changes in the job market (that is focus on teaching trades), it is now resolved. During grave global crises of the kind that the spread of Coronavirus is producing, people are demanding protection based on scientific knowledge. There are of course inevitable reactions taking us to theories of doomsday and the end of the world. But there are also sober calls for leadership mastering scientific knowledge to inform the regular folk about the nature of this medical calamity and how to intelligently deal with it. Will governance protect capital over human survival or can we protect both? In terms of education, this crisis shows the need for providing populations with a good science-based education. Negative rhetoric about “silos” and ideological leanings toward feel-good hocus pocus over science is not what is needed today. Worldwide, people fearing the threat of the virus have been clearly asking for ‘science-based’ data, facts, and medically sound treatments.

People are not interested in a political whitewash or an ideological feel-good approach. They appreciate science-based information coming out of the World Health Organization. They are scrutinizing the effectiveness of their governments in dealing with this crisis, taking a whole government approach which brings together all aspects of governance and the regular and social media together. This crisis shows no leaning toward ‘feel-good’ approaches or glib rhetoric, but rather a loud call for scientific research about the infection and a cool-headed whole-government response to protect the people. The direction that some educational institutions are taking, such as the University of California in Los Angeles through its Department of Physical Sciences building a new specialization in Climate Science, and the newly configured Data Sciences, is where Education should be moving. Undergraduates are flocking in large numbers to such a major. The website identifies the following as their learning outcomes.* They stress “demonstrated mastery of the basic principles and tools of science, demonstrated analytical and mathematical skills through the application of learned concepts and tools in solving relevant theoretical, computational, and empirical problems, ability to apply knowledge gained to independently identify, analyze, and understand real-world problems and issues, demonstrated effective oral and written communication of results and conclusions, and understanding of the societal and policy context of climate science.”

The current global health crisis demonstrates how we need a science of health and climate change, not activism based on emotional opinions and glib rhetoric borrowed from science and used in diluted form without a full understanding. The model of dominance and power has shifted, as the infection is not limited by borders, frontiers or military dominance. The global field is level. Instead, the current coronavirus crisis has uncovered a real need in our world today whether in governance, health, climate, education or heritage for scientific knowledge, integrated with society and culture, linking elements of governance—global, nation-state, regular media and social media, local groups and communities, and an education

* <https://catalog.registrar.ucla.edu/ucla-catalog19-20-404.html>

based on data and analytic rigor, integrating rigor and the different elements of life as well demonstrated in the academies (Bayt al-Hikma, Dar al-'Ilm) in earlier history discussed in this article as well as what is learned from the response to the current crisis about COVID-19.

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5. Kreppmeier, Lea. "These 8 Countries Will Dominate Global Growth in 2024, Says the Imf." *Business Insider*, 30 Oct 2019, 15:54.

Notes

1. Complex is used here in terms of its scientific, rather than literary, usage.
2. The **Umayyads** were the first Muslim **dynasty**, established in 661 in Damascus