

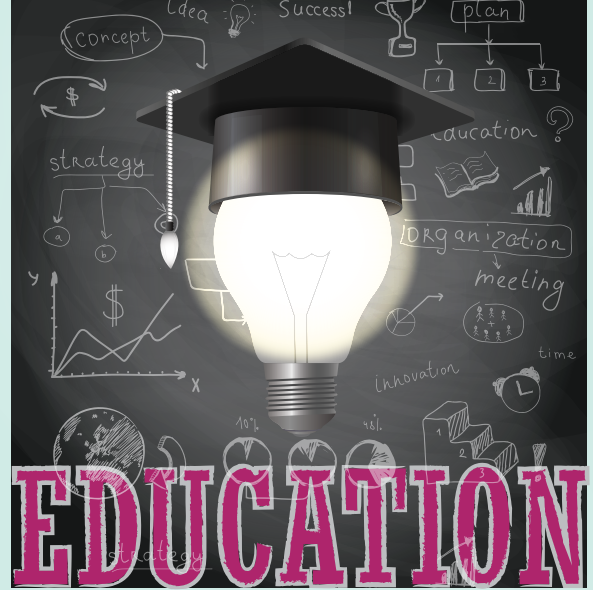


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To Be \neq Not To Be

By: Maissa Azab

Today's world is not different than the world of past millennia in the sense that its dominant nations are those that have scientific and technological edge. Science and technology are indeed at the core of any kind of development; to secure equilibrium, stability, and thus peace in today's world, more nations need to reinvigorate their citizens' involvement in these fields.

Nevertheless, to reach scientific and technological advancement, a nation needs to be primarily educated. It is no wonder then that, throughout history, education and knowledge have been used as weapons of dominance. In our very own Pharaonic history, despite the huge scientific and technological wonders we still observe in awe millennia afterwards, it is a well-known fact that only the elite minority was educated, holding on strongly to the secrets behind these wonders. The vast majority of the population, however, were merely workers with their knowledge limited to their specific fields of expertise to be able to realize their various roles in the accomplishment of these wonders we still marvel about to this day.

Unfortunately, in today's world, education and knowledge are still used as a weapon, not only in dominating peoples, or in political and intelligence

warfare between competing nations, but more dangerously in creating actual weapons, which also serve the purpose of dominance.

To combat the state of utter chaos we find ourselves in these days—politically, socially, and economically—the only way out of this dark tunnel is education. It is true that people basically need water, food, and shelter to survive, but without education, we do not rise above other creatures who share the planet with us; we become just another species of mammals.

Education is not, and should never be, a luxury; for human beings, it is a bare necessity. As such, it needs to be at the top of any nation's priorities, especially in struggling developing countries such as ours.

In this issue, we tackle very lightly the bare necessity that is education. Within such a very wide theme, we discuss some relevant historical aspects, as well as some current social and economic perspectives. Among the most interesting topics covered is the subject of science education through movies—"Interstellar: a Journey into Knowledge", page 4—as well as "Children with Learning Disabilities", page 14.

We hope you enjoy the issue and we look forward to your comments and/or suggestions at PSCeditors@bibalex.org.



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Among all social goods, education is probably among the ones with the most potentials and promises. We have attributed to it prosperity of nations, wealth of economies, and ability to combat poverty. Increasingly, we are also celebrating its role in the advancement of individuals, flourishing of capabilities, emancipation of souls, and contribution to effective citizenry. In all our societies there are living examples of individuals—men and women—whose lives have been transformed by education and who have made it their mission in life to relentlessly insist on the right to education for all.

In developing countries, post-colonial governments have sought to eradicate illiteracy and ensure that formative years of education become compulsory and education itself—among other services—becomes a right to all. Unfortunately, however, the goal is far from being achieved. To date, the Millennium Development Goals (MDGs) have set the goal of universal primary education by 2015 as, despite significant progress, 100 million school age children are still outside school. In many developing countries, dropouts are high and, as we go up the educational ladder, the number of young people who make it to higher levels

of schooling and to tertiary education get thinner and thinner.

Access to schools and educational institutions is a key barrier that prevents millions of young people from achieving their full potentials in life. In our world today, this deprivation is most visible among those disadvantaged by their ethnicity, race, provincial residence, or economic means. Often these axes of inequalities intersect with gender so that more women than men suffer lack of education. Governments and civil society organizations face challenges trying to eradicate structural and cultural barriers towards ensuring that the right to education is ensured particularly to historically-marginalized groups.

However, as we continue to pursue access to education for all, we should not assume that access implies quality. For example, while Egypt is nearing universal education for all children in the primary stage, it ranked as the worst country in the world in the quality of its primary education, according to the World Economic Forum Global Competitiveness Report for the year 2013/2014. Access to education is indeed an unalienable right, but without good quality, access alone does not help fulfill potentials in life. What good is it to send children to schools only to leave them functionally illiterate?

It is unfortunate that in many countries, Egypt included, good quality education is increasingly a function of wealth and high socio-economic status. While the majority of Egyptian families send their kids to public schools with their ailing structures, huge numbers of children, poor academic and recreational resources, and meager pay for teachers, well-to-do families are able to offer their children the luxury of private instruction in foreign languages with all the facilities and resources that only money can buy.

This duality continues into higher levels of education as wealthy students find their way to private universities or to the newly-established fee-paying departments in some public universities. In countries where unemployment is high and where both public and private sectors are unable to absorb the large numbers of graduates, it would not be hard to imagine who gets the good jobs.

Education is an avenue to social mobility. It has great potentials to open doors and break social and gender barriers. However, without opportunities that ensure equitable access and good quality education to all, education can perpetuate social and gender stratification systems, and hence social injustice.

INTERSTELLAR

A Journey into Know

Entertainment is the main purpose of movies; however, some movies do not only entertain people, they also educate them. Such movies are effective for education, because through well-knitted stories, people can be introduced to sophisticated theories. Although *Interstellar* is a science-fiction movie, it does not depart from reality entirely; it introduces people to Theoretical Physics.

Theoretical Physics deals with theories and ideas that cannot be tested. It poses important questions, such as how the universe developed. Without that branch, physics will be stagnant; it ensures that new ideas always arise. Albert Einstein was a theoretical physicist; he enriched our understanding of the Universe and introduced new ideas.

How does science fit into the movie? Kip Thorne, the movie's Executive Producer is a Theoretical Physicist known for his contributions in Astrophysics and Gravitational Physics. The scientific theories in the movie have not been tested, but they are based on an "educated guess".



***We are not meant to save the world. We are meant to leave it.*⁽¹⁾**

Life on planet Earth has always been taken for granted; *Interstellar* suggests that this may not be the case. In the movie, Earth can no longer support life and the future of humanity lies in the hands of scientists and astronauts who venture into unknown territories to find an alternative planet.

The movie poses an important question: Is *interstellar* travel possible? So far, it is not possible. Our galaxy, the Milky Way, is so huge that it almost takes human beings 100,000 years to cross it if they are traveling at the speed of light. Unfortunately, humanity has not progressed that far yet; but, could there be a shortcut?

So far, there is no observational evidence that such shortcuts exist; however, Einstein, along with another physicist Nathan Rosen, reveal through their theories that these shortcuts may exist. Named after Einstein

and Rosen, they are known as "Einstein-Rosen Bridges", otherwise known as wormholes.

Wormholes are theoretical tunnels with two holes, connecting two different points in space-time. Let us imagine that there is a piece of land that is 100 km long, and you want to get from point A to point B. There is a maximum to your speed; but what if that piece of land for any reason gets folded? Consequently, the farthest points in that piece of land get closer and you arrive to point B faster without changing your speed.

How do wormholes form? According to Einstein's general theory of relativity, mass produces curves in space and time, so any mass in the Universe could possibly lead to the formation of wormholes. Wormholes are not as easy to cross as they are depicted in movies though as they may collapse quickly; however, wormholes can be stabilized by using negative energy.



***I'm not afraid of death. I'm an old physicist; I'm afraid of time.*⁽²⁾**

What is time? Is it the same for everyone? Why do people sometimes feel that it passes very slowly while at other times they feel that it passes very quickly? Is it just a feeling or does time actually differ? In *Interstellar*, time plays a significant role; it was a character in its own right, controlling the characters and shaping their lives.

In the past, time and space were viewed as independent entities. However, Einstein changed our understanding of time; he believed that time and space are related. According to him, time and space are one entity; he refers to them as space-time. So what is it that makes time tick slowly for some people and faster for others?

Surprisingly, gravity has an effect on time; it flows slowly when there is more gravity. For example, the clocks in Global Positioning System (GPS) satellites are different from those on Earth because they are in different gravitational fields; hence, scientists adjust the clocks to fix the slight time difference.

In short, space, as well as motion, affect time; it passes faster when people move around and slower when they do not, so it is not just a feeling.



***Today is my birthday. It is a special one because you once told me that when you came back, we might be the same age.*⁽³⁾**

The Twin Paradox is one of Einstein's interesting ideas; it explains how time differs according to different speeds and locations. Imagine we have a pair of twins; one stays on Earth, while the other travels at the speed of light. Time moves slowly for the one who travels at the speed of light; he/she does not feel it, but everything around him/her slows down including his/her own body. When he/she comes back, not so much older, he/she will find that his/her twin who stayed on Earth has become an old man/woman.



***Gargantua*⁽⁴⁾**

Is it possible to travel into space and return safe and sound, or is it a risky adventure? One of the possible dangers is being sucked by a gigantic black hole. In the movie, they call the black hole they are near to Gargantua.

In simple language, black holes are dead stars. The term "hole" gives people a wrong impression; a black hole is definitely not an empty area in space. It is packed with large amounts of matter almost ten times the size of our Sun compressed into a sphere the diameter of which is the same as that of New York City.

The death of any star does not result in the formation of black holes; only the death of a gigantic star creates a black hole. For a star to transform into a black hole after its explosion, it has to be at least ten times

L A R: w l e d g e

By: Basma Fawzy

as huge as the Sun. Once a black hole is formed, its gravity becomes so massive that even light cannot escape it. That is how a “black” hole obtains its name. Objects do not get sucked by black holes unless they are very close to it, at a place scientists call the “event horizon”.



We have always defined ourselves by the ability to overcome the impossible, and we count these moments. These moments when we dare to aim higher, to break barriers, to reach for the stars, to make the unknown known.⁽⁹⁾

Interstellar is full of interesting ideas that are not yet applicable, but the beauty lies in the possibility. The movie, supported by real science, claims that *Interstellar* travel is not an unlikely dream.

The Universe is a dark, mysterious place and scientists like Einstein light candles into it. Movie makers like Christopher Nolan—Director of *Interstellar*—take difficult theories and introduce them in a remarkable way. A great movie is not a movie that provides people with all answers; it is a movie that urges them to search for answers themselves.

Quotes

- (1) Dr. Brand – Actor: Michael Caine
- (2) Dr. Brand – Actor: Michael Caine
- (3) Murph – Actress: Jessica Chastain
- (4) Cooper – Actor: Matthew McConaughey and his crewmates
- (5) Cooper – Actor: Matthew McConaughey

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By: Basma Fawzy

STEPHEN HAWKING: A LEGACY OF HOPE

“It is a waste of time to be angry about my disability. One has to get on with life and I have not done badly. People will not have time for you if you are always angry or complaining.” *Stephen Hawking*

You must have heard of the Ice Bucket Challenge, where people challenge each other to get a bucket, fill it with cold water, and splash it over themselves. Other than the good laughs, the Ice Bucket Challenge’s main purpose was to raise awareness for a severe disease that no one knows much about, which is Amyotrophic Lateral Sclerosis (ALS).

ALS, also known as Lou Gehrig’s disease, leads to the degeneration of nerve cells in the brain and the spinal cord, which eventually causes the loss of signals between the muscles and the brain. When the muscles fail to receive signals and nourishment, they die. So, paralysis becomes the unescapable consequence of ALS.

A disease as grave as ALS could have broken any spirit; however, some people’s strength and determination are stronger than any disease. Stephen Hawking is one of those towering figures whose spirit was not plagued by the ugliness of disease. At an early age, he was diagnosed with ALS; it left him wheelchair-bound and unable to speak except through a “speech-generating device”. Despite his physical limitation, Hawking’s world has no limits. He confesses that being told that having ALS meant he does not have much time to live motivated him.

Rather than becoming a burden, Hawking decided to educate humanity. He is a theoretical physicist who contributed to fields like cosmology, general relativity, and quantum gravity. Hawking is famous

for a book entitled *A Brief History of Time*; the book is written in a way that makes it intelligible for everyone. In that book, he tries to explain where the universe came from; he also discusses difficult topics like black holes, gravity, and the nature of time.

There are many theoretical physicists out there but there are not many people like Stephen Hawking. As he is such an inspirational figure, a movie, *The Theory of Everything*, was recently released about him and his wife.

His legacy is not limited to his contributions to theoretical physics; Hawking inspired people, teaching them what cannot be found in textbooks: perseverance and determination. His physical limitation did not stop him from working and dreaming. In 2007, he was freed from his wheelchair and given the opportunity at Kennedy’s Space Center to experience an atmosphere without gravity. Hawking is still alive and he wishes to make it into space one day.



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PRIMITIVE WRITING SYSTEMS

By: Moataz Abdelmegid

Among many ancient societies, writing held an extremely special and important role; often writing was so revered that myths and deities were drawn up to explain its divine origin.

More complete writing systems were preceded by proto-writing—systems of ideographic and/or early mnemonic symbols. True writing in which the content of a linguistic utterance is encoded so that another reader can reconstruct with a fair degree of accuracy is a later development. It is distinguished from proto-writing, which typically avoids encoding grammatical words and affixes, making it more difficult or impossible to reconstruct the exact meaning intended by the writer unless a great deal of context is already known in advance.

Writing systems are distinguished from other possible symbolic communication systems in that one must usually understand something of the associated spoken language to comprehend the text. By contrast, other possible symbolic systems such as information signs, paintings, maps, and mathematics often do not require prior knowledge of a spoken language.

Every human community possesses language, a feature regarded by many as an innate and defining condition of mankind. However, the development of writing systems and their partial supplementation of traditional oral systems of communication have been sporadic, uneven, and slow. Once established, writing systems on the whole change more slowly than their spoken counterparts, and often preserve features

and expressions that are no longer current in the spoken language. A great benefit of writing is that it provides a persistent record of information expressed in a language, which can be retrieved at a future date.

When we trace the development stages of writing systems from a conventional proto-writing to actual writing, we will find it following a general series of developmental stages:

- 1) **Picture writing system:** Glyphs—simplified pictures—directly represent objects and concepts; in connection with this the following sub-stages may be distinguished:
 - Mnemonic: Glyphs primarily a reminder;
 - Pictographic: Glyphs directly represent an object or a concept such as chronology, notices, communications, totems, titles, and names, religion, customs, history, and biography;
 - Ideographic: Graphemes are abstract symbols that directly represent an idea or concept.
- 2) **Transitional system:** Graphemes refer not only to the object or idea which it represents, but to its name as well.
- 3) **Phonetic system:** Graphemes refer to sounds or spoken symbols; the form of the grapheme is not related to its meanings. This resolves itself into the following sub-stages:
 - Verbal: Grapheme—logogram—represents a whole word;
 - Syllabic: Grapheme represents a syllable;
 - Alphabetic: Grapheme represents an elementary sound.

In the Old World, actual writing systems developed from Neolithic writing in the Early Bronze Age—4th millennium BCE. The Sumerian archaic—pre-cuneiform—writing and the Egyptian hieroglyphs are generally considered the earliest actual writing systems, both emerging out of their ancestral proto-literate symbol systems, 3400–3200 BCE, with earliest coherent texts from about 2600 BCE.

There is no definite statement as to the material which was in most common use for the purposes of writing at start of the early writing systems. In all ages it has been customary to engrave on stone or metal, or other durable material, with the view of securing the permanency of the record. The common materials of writing were the tablet and the scroll; the former probably having a Chaldean origin, the latter an Egyptian.

Writing is just as important as knowledge is. It can bring and preserve much more knowledge than is possible without writing. When a civilization was able to write, they could record information about how they have done things, their way of life, their life events and their achievements; these records could be exact and could last. Civilizations could also gain ideas from faraway places by writing them down; in fact, a nation that could write was capable of conquering another that could not write, because writing was a source of power.

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The Pen

Transporter of Knowledge

By: Hend Fathy

No doubt that writing is part and parcel of the human pursuit of knowledge. Teaching, learning, and documenting sciences have all depended on it. Writing, respectively, depended on an understood script system, a medium to write on, and an instrument to write with. Just like the journey paper had from papyrus to e-paper—tackled in the “Spring 2013” Issue of the PSC Newsletter—pens had a corresponding history of development.

Early Forms

The walls of caves witnessed the first inscriptions of Man around 6,000 years ago, sharpened stones being the only available carving tools. Around 3000 BCE in Ancient Egypt and Mesopotamia, writing on papyrus and clay tablets respectively flourished.

To write on papyrus, Egyptians used thin reed brushes or pens held in wooden or ivory palettes, which had a depression to hold inks. According to some researchers, the use of reed pens continued until papyrus was replaced by animal skins, vellum, and parchment as a writing surface.

To carve on clay, a writing instrument that would make clear marks without crumbling the surface was needed; hence, they used styluses made of reeds with sharp triangular tips.

Quill Pens

As the use of vellum and parchment flourished, writing with quill pens made of birds' feathers altered the style of writing. The concept depended on the apparent natural ink reserve found in the hollow channel of a bird's feather.

The feathers were plucked and dried with the application of gentle heat. Then, the fatty materials, which would interfere with the ink, were removed. Writers had to sharpen the quill pens for use, and they were easily re-sharpened when the points got dull. Quill pens remained dominant from

600 CE to around 1800 CE; that is, they were still fit for more recent forms of paper.

Metal Dip Pens

It is suggested that the first metal pen was patented in 1803, but was not commercially exploited. In 1819, John Scheffer received a British patent for his half quill, half metal pen that he attempted to mass manufacture. However, only in the 1820s did the mass production of metal dip pens emerge in Birmingham, England.

A more enhanced form of metal pens, the steel-point pen, was patented in 1830 by James Perry. The design of his pen provided a slow and steady flow of ink and provided a smoothness superior to the earlier steel-point pens.

By the 1850s, quill pen usage was fading and the quality of the steel pens had been steadily improving.

Fountain Pens

The next major advancement came with Lewis Waterman's patent of the first practical model of fountain pens in 1884. Earlier models were plagued by ink spills and other failures that made them impractical and hard to sell.

The pen composed of three main parts: the nib, which has the contact with the paper; the feed part under the nib controls the ink flow; and the round barrel that holds the nib and feeds it with ink, and protects the internal ink reservoir.

Ink reservoirs filling technology underwent a number of innovations from different industrialists during the twentieth century. Nowadays, fountain pens still sell, but as a classic writing instrument.

Ballpoint Pens

The idea of using a rotating ball to distribute the ink to the paper was developed

by the American inventor John Loud, patented in 1888. It was originally a product to mark leather; however, it was not exploited commercially.

During the 1930s, Hungarian Brothers Lazlo and Georg Biro began experimenting with a practical ballpoint Pen. Lazlo was issued a patent to the pen in 1938. In 1943, he introduced the commercial model, and the design was licensed for production in the United Kingdom to supply the Royal Air Force who had found that it worked better than fountain pens at high altitude. In many parts of the world, the ballpoint pen is known as a biro.

In 1945, the French Marcel Bich bought the patent from Biro and the pen became the main product of his Bic Company. Bich developed the industrial process for manufacturing ball point pens that lowered the unit cost dramatically.

Roller Ball Pens

In the early 1980s, roller ball pens were introduced. Unlike the thick ink used in ball point pens, the new pens employed a mobile ball and liquid ink, which produces smoother lines. Several technological enhancements during the eighties and the nineties of the past century greatly improved the performance of roller ball pens.

Milliards of types and brands of pens marking a huge industrial activity worldwide are available in markets today. Moreover, digital pens converting handwriting into digital data utilized in various applications are trendy input devices nowadays. This long journey will not end as long as the creative human mind continues to design innovative instruments.

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EGYPTIAN WOMEN

By: Ahmed Ghoneim

TO WHOM GIRLS OWE THEIR EDUCATION

Throughout history, there has always been something or another that women were considered inferior in, incapable of, or straight out forbidden to do. Some cultures viewed women as mere babymakers and restricted them to raising children, while others gave them a little more freedom, allowing them to work in the field, as medics, or in markets.

Some cultures, on the other hand, reversed the traditional roles of women and men. However, I believe that the general rule in most societies in history was that women were not allowed to live their full potential. As a feminist myself, I believe that this was—and to an extent still is—a great injustice.

Despite these circumstances though, there are many examples in Egyptian history that proved women were not always in the bad state they were in by the end of the 19th century. Indeed, we had witnessed ages when women were queens and leaders, and participated in many parts of society. However, with the failing state of the Arab nation and Egypt as a part of it, the situation was far from perfect at that time.

Contact with men from outside their kin was prohibited completely, rendering women unable to work or have education beyond the age of puberty. Many families preferred to home-educate their girls altogether and not even give them a chance to attend a regular school. This all started to change thanks to a handful of brave women who stood up to the limiting rules of society and fought for their rights.

Princess Fatma Ismail



Daughter of Khedive Ismail, who ruled Egypt from 1863, for sixteen years, Princess Fatma owned agricultural land in many parts of the country. Rather than enjoying her wealth, she decided to do something positive with it.

When her doctor, Mohamed Elwy Pasha, who was a member of a private committee dedicated to starting a secular university in Egypt, told her about their idea and the financial hurdles it was facing, she decided to help. She donated six acres of her land in Cairo and dedicated a massive 661 acres of her agricultural land's profit to the funding of the university; she even sold her own jewelry to gain more money. That is how much we all owe Princess Fatma for Cairo University.

The University was founded in 1908, but did not initially accept women; it only started accepting women in 1928, twenty years after its founding. Unfortunately, the patron Princess of Cairo University passed away in 1920, before she could see women attending it. Princess Fatma is credited as a main inspiration for that decision; how could you not accept women in a university that owes its entire existence to one?

Huda Shaarawi



Huda Shaarawi was born at the height of women's repression in Egypt. Huda lived the typical traditional Egyptian life. She was home-educated, she had a younger brother who was always given preferential treatment over her, and she was married to her cousin, Ali Shaarawi, who was forty years her senior.

In her book *Harem Years*, Huda explains how childhood experience and early marriage fueled her resentment toward the patriarchal system in which she was raised. Her personal experience has inspired the role she played in the enlightenment of Egyptian women.

Nevertheless, her marriage proved a mutual benefit as Ali often sought his wife's council on political issues and he supported her aspirations and activities. In 1908, she founded the first philanthropic society run

by Egyptian women, and two years later she opened a school for girls focused on academics.

Huda participated in the glorious 1919 Revolution by becoming one of the leaders of the women protests. She founded a committee for women in the Wafd Party and was its supervisor.

In the 1920s, after having returned from the International Council of Women's meeting in Europe, which she attended as the Egyptian representative, Huda founded the Egyptian Council for Women. The Council, under her presidency, called for equality between men and women in everything and before law. Among these was, of course, women's education.

Nabaweya Moussa

Nabaweya lived with her mother and siblings in Cairo and was home-schooled as many Egyptian girls of the late 19th century.

After having taught herself English and mathematics, Nabaweya felt that she wanted more; she was able to enroll into a primary school for girls. She successfully obtained a diploma in teaching in 1908 then was appointed a teacher in a primary school for girls. It was at that time that Nabaweya started to voice her opinions, which began by her writing in various publications.

Nabaweya noticed that men with her same job were given a higher salary than her. She filed an official complaint to the Ministry of Education, but they rebuffed her, claiming that since the male teachers at her school had a high school diploma, they were entitled to a higher salary. Not willing to give up, she set out to obtain that diploma; the only problem was that there were no high schools for girls at that time! Hence, Nabaweya had to study for the high school exams on her own, and in defiance to the whole society became the first female



in the history of Egypt to successfully graduate high school.

The achievements just kept coming; battling the whole society, the major political party at the time—Al Wafd Party—and the British occupation of Egypt, she was still able to prevail against their various attempts to stop her. After firing her from her teaching job for writing what they considered incendiary articles calling for better treatment of women and better education, she sued them and got a hefty reward of over EGP 5000; a very large sum of money at the time.

Using this money, she relocated to Alexandria and built a school; a free institution for primary education of girls there. In addition to all that, she was relentless in calling all over the country for the education of girls, attending women rights conferences, and co-founding the Egyptian Council for Women.

Many More

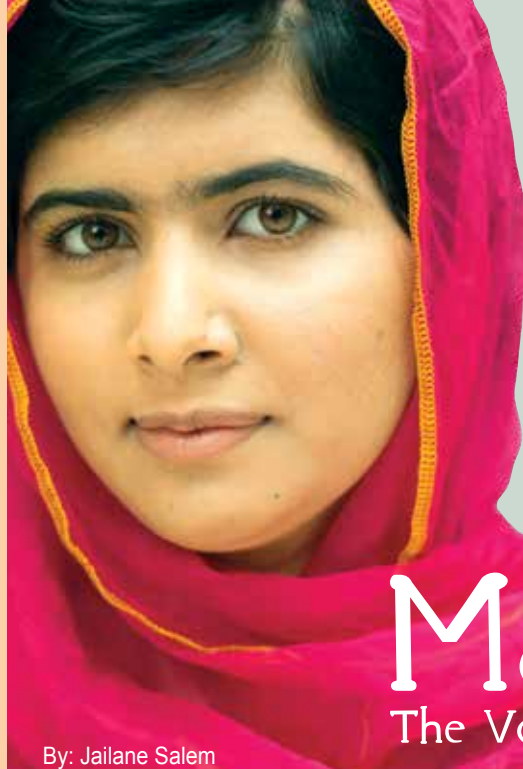
There are countless women in Egyptian history who have fought tooth and nail for girls, their rights, and their education. We have Malak Hefni, the first Egyptian woman to ever graduate primary school; and Sohair Al-Qalmawi, the first Egyptian woman to be admitted to Cairo University and a prolific writer, political figure, and one of the founders of the International Cairo Book Fair.

Let us not forget the South, where the community was extremely close-minded and where Amina El-Saeed, one of the biggest women's rights activists in Egypt's history came from. Last but not remotely least, Dorreya Shafik, to whom women owe the right to vote and be represented in the People's Council since 1956 Constitution.

Women today are much more liberated than before. However, with the recent economic and political challenges in Egypt, they face tremendous challenges within our society. I, a feminist, hope that things will continue to get better, not worse from here on, and that we can use the new technologies at our hands to empower women and fight harder for their rights, never giving up until they have them all.

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Malala: A name synonymous with courage and bravery, for standing up for principles and values one believes in. Malala is a girl who comes from Swat Valley in the Khyber Pakhtunkhwa North-West Frontier Province, Pakistan. She was catapulted to fame when she was shot on a school bus in 2012.

Malala

The Voice of Change

By: Jailane Salem

Taliban militants had boarded the school bus she was on, asked for her by name, and shot her. The reason why these despicable men would take such a violent action against a child is that she was a vocal advocate who called for girls' rights to education to be respected and upheld in an area overrun by the Taliban who wanted to ban girls from getting an education.

Malala comes from a background that explains her impassioned plea and fight for education; her family being in charge of several schools, the importance of education has been imparted to her from a young age. Her father encouraged her to voice her thoughts and opinions without fear. In early 2009, she got the chance to write about her daily experience on BBC Urdu as an eleven year old school girl under threat living in an area occupied by the Taliban.

She wrote under the penname Gul Makai; through her writings people around Pakistan were offered a glimpse into the life of an ordinary school girl in a somewhat unordinary situation. She became well known around Pakistan, and she would travel with her father to conventions where she would ask for girls' rights to education.

On 9 October 2012, when the Taliban had a strong presence in Swat Valley, she was deemed a threat and on that fateful day decided to try and silence her voice; thankfully, they were unsuccessful in their attempt. One bullet aimed at the head; yet, miraculously the young girl survived and endured. The bullet had entered her head, but ended up travelling under her skin down her neck and getting lodged into her shoulder.

Following the attack, Malala was flown to England where she was treated; she ended up moving to England temporarily and

pursuing her education there. Malala was an advocate and campaigner for education before she was shot; after recovering, she took up this role once again. She gave a well-known speech at the UN calling on world leaders to act on ending illiteracy and poverty, and ensuring that children all around the world are able to attend schools.

Malala co-received the Nobel Peace Prize in 2014 for her constant campaigning for education; during the ceremony, she had important questions to ask during her acceptance speech: "Why is it that countries which we call strong are so powerful in creating wars, but are so weak in bringing peace? Why is it that giving guns is so easy, but giving books is so hard?"

At the mere age of seventeen, she is an incredibly intelligent young girl who has the courage to ask questions that unfortunately we still have to ask until today. She states that: "We are living in the modern age and we believe that nothing is impossible. We have reached the Moon 45 years ago and maybe we will soon land on Mars; then, in this 21st century we must be able to give every child a quality education."

As she herself has said before, she is only one girl who is trying to get the voice of 66 million other girls deprived from getting an education to be heard. If ever there was a role model one should aspire to, Malala Yousafzai is that role model.

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Education is key to progress; that is a well-known fact worldwide. Every nation that has risen to become highly developed has a strong educational system, in addition to a deep rooted work ethic that allows it to reach the heights it does. Thus, any nation aiming to join the ranks of advanced nations must first and foremost look to its educational system.

Education is not something that simply takes place in the classroom, for there are many types of education one needs in order to become a fully developed person ready to be a proactive member in society. However, the education the government in charge of is the academic one; they must first ensure that there are proper facilities where students can go to, employ teachers and professors to work in schools and universities, and design appropriate curriculums for each level of education.

Unfortunately, not all countries have enough resources to prioritize education. Some who do have the resources do not have the strong initiative to give it all the attention it truly deserves due to political issues overriding the one of education. In some African countries, lack of education still remains an issue; even though schools are available, they may not be accessible to all students due to distance or scarcity.

Another issue is that even though there are those who do attend schools, they may face problems in retention. The enrollment rate of students in higher education is less than 7% in Africa. This does not mean that demand for education is low; on the contrary it is high. With the increased demand for education other paths besides the traditional school system are being explored.

One option that can be valid is distance education, also known as e-learning. One does not need to go to a traditional campus in order to learn; a computer or tablet and an Internet connection can be a gateway to education for many. As Aida Opoku-Mensa, Special Advisor to the Post-2015 Development Agenda at the UN Economic Commission for Africa says "quality online education is a necessity".

E-learning is when courses are delivered to students via the Internet, learning can be conducted in one's home, work place, or anywhere they wish to study for that matter. Professors and teachers are not there to teach them in person, but there are a myriad of ways to interact throughout the learning process; you also communicate with other students in the virtual classroom.

Lessons can be live-streamed, and interaction can occur in live time, or lessons can be taped and uploaded



By: Jailane Salem

online. Presentations, worksheets, and assignments can easily be electronically circulated; participation and work is graded just like in an actual classroom. This method has many benefits; students can sometimes pace themselves while taking a course and learn according to their own preferences. Learning can also take place whenever the student wishes—except for live lessons—and so it can accommodate different lifestyles easily.

Many factors need to be present in order to aid in the learning process because otherwise students will have problems with retention. A major factor is that presentation of knowledge has to be conducted in an interesting and interactive manner so that students will be engaged and therefore more receptive to new information. It is easy to vary the content in e-learning since not only text is used, but also sounds and images are as well. By engaging the students with interesting games and worksheets that are easier to present on a screen, they are more likely to stay focused and learn.

Classroom discussions are very important and provide an alternative student-centric space where learners can learn from each other, instead of the more widely teacher-centric learning experience in most schools; this class discussion can be easily had through interactive discussion boards, and this is key to a successful e-learning experience. Teacher feedback is also crucial for students, and unclear

content can be easily explained via live-chat and messaging as well.

The *eLearning Africa Report 2014* that was published by Integrated Communications, Worldwide Events, offered a compiled research report on e-learning in Africa. It also linked the growing demand for e-learning with the burgeoning growth of the communications infrastructure, since Africa has the highest growth rates in telecommunications in the world. This is also reflected in mobile-broadband subscriptions, which will reflect in the increase for the demand for e-learning.

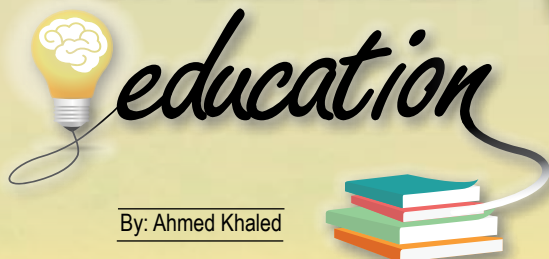
"According to Ambient Insight, a market research firm, e-learning in 16 African countries is just over 15 percent, with revenues expected to reach to \$512.7 million in 2016. Ambient Insight suggests three catalysts of the boom in the African e-learning market: wide-scale digitization of academic content, increasing enrollment in online higher education courses, and increasing corporate adoption of e-learning."

As e-learning becomes more easily accessible to a wider audience, may those who benefit from it help in providing Africa with a brighter future.

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BIG DATA FOR SMARTER



education

By: Ahmed Khaled



Few people seem to have a clear understanding of what big data in education means, what is the output, how it can affect the life of students and teachers or coaches and players, or even the differences between fundamental types of data.

What if teachers have a more sophisticated way to monitor students' progress and obtain clues as to why some gave the wrong answers or struggled to understand certain concepts. Education technology companies are now using big data analytics to offer teachers a new tool to ensure success, using personalized testing to create detailed profiles for individual students, gathering roughly 10 million data points for every child.

Imagine a student at high school had an IQ assessment; by that analysis we can monitor the answers if the student chooses an answer and then reevaluated it. Now we can track the student odds to identify the logic of causing the moment of doubt and using it to measure how he/she responds to the information provided by online learning tools or textbooks to see what works and what needs to be revised.

The idea is to personalize each student's educational experience such as a user watching a video clip on YouTube and switch on the auto-play button to see all the videos with the same genre. The more the online usage the more data is being generated; this gathered data can teach us about the user's behavior towards the way of education.

Big data or educational data mining focuses on developing algorithms for studying data and discovering data patterns taking in consideration what sequence of topic is most effective for the student, which student actions are associated with the grades, which actions indicate engagement and satisfaction, and how the student can improve his online learning by choosing the best feature that leads for better learning experience.

When a student learns or studies online, he/she is using an online learning system affiliated by Big Data analytics, which can interact with the student by delivering individual subject content and assignments; this set of data is collected and stored in a database to make predictions about the student's future performance.

Those predictions are displayed on visual dashboards that help students personalize appropriate learning material that matches their interest and performance level; the same results will be sent to teachers to help the student as much as possible.

School systems in the USA recently deployed a data analytic system using big data technology by creating a computer system to store data in a secure, common format that gave the schools complete control over what data they collected, how it was used, and with whom that data was shared. The software was open source and a non-profit organization was formed to run it, backed with USD 100 million from the Gates and Carnegie Foundations that increased passing rates more than 10% and cutting schools dropout rates in half.

If we are looking for inspiration when it comes to big data analytics, Germany's

national soccer team won the 2014 World Cup by educating the coach and staff with all analyzed data of each player in their team and the opposite teams, and applying the needed techniques to train their players how to win the game. After each match, big data tools collect all videos recorded from all cameras that surround the pitch transforming the pitch into a grid, and assign a unique identifier for each player, allowing their movements to be tracked digitally by collecting numbers of touching the ball, distance travelled, movement speeds, and directional changes.

For the German national team, one of their key targets ahead of the World Cup was to improve their passing speed and that was obvious change from average possession time around 3.4 seconds in 2010, to 1.1 second in 2014. Moreover, the same analysis was carried out on the other teams by studying each player and how they can interrupt their attacks and how they can penetrate their defenses, applying these strategies on the pitch; it was very obvious that there was a big difference between the performance of the German squad and the performance of other teams.

Big data is going to impact all educational systems, not only in schools and universities. It has already begun; if you are part of an education organization, you need to have a vision for how you will take advantage of big data.

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The Art of Education

By: Maissa Azab

In the last issue, I discussed the necessity of self-expression, which is more often than not best realized through an art form. Not only is art a healthy channel of expression, simple creative activities are some of the building blocks of child development. In fact, learning to create and appreciate visual aesthetics may be more important than ever to the development of the next generation of children as they grow up.

For young children, making art—or just talking about it—provides opportunities to learn words for colors, shapes, and actions. When toddlers are as young as a year old, parents can do simple activities such as crumpling up paper and calling it a “ball”. By elementary school, students can use descriptive words to discuss their own creations or to talk about what feelings are elicited when they see different styles of artwork.

When kids are encouraged to express themselves and take risks in creating art, they develop a sense of innovation that will be important in their adult lives. Moreover, drawing, sculpting with clay, and threading beads on a string all develop visual-spatial skills. Even toddlers know how to operate a smart phone or tablet, which means that even before they can read, children are taking in visual information.

“Children need to know more about the world than just what they can learn through text and numbers. Art education teaches students how to interpret, criticize, and use visual information, and how to make choices based on it,” says Dr. Kerry Freedman, Head of Art and Design Education at Northern Illinois University. As a matter of fact, the experience of making decisions and choices in the course of creating art carries over into other parts of life.

Many of the motions involved in making art, such as holding a paintbrush or scribbling with a crayon, are essential to the growth of fine motor skills in young children. According to the National Institutes of Health, developmental milestones around age three should include drawing a circle and beginning to use safety scissors. Around age four, children may be able to draw a square and begin cutting straight lines with scissors. Many preschool programs emphasize the use of scissors because it develops the dexterity children will need for writing.

Moreover, studies show that there is a correlation between art and other achievements. A report by Americans for the Arts states that young people who participate regularly in the arts are more likely to be recognized for academic achievement, to participate in a math and science fair or to win an award for writing an essay or poem than children who do not participate.

Though the arts receive relatively little attention from policymakers and school leaders, exposing young people to art and culture can have a big impact on their development. The problem is that almost no one is bothering to study and document the extent to which the arts and culture can affect students.

There was a rare opportunity to explore such relationships when the Crystal Bridges Museum of American Art opened in Bentonville, Ark. Through a large-scale, random-assignment study of school tours to the Museum, it was determined that strong causal relationships do in fact exist between arts education and a range of desirable outcomes.

Over the course of a year, nearly 11,000 students and almost 500 teachers

participated in the study. Applicant groups who won the lottery constituted the treatment group, while those who did not win an immediate tour served as the control group. Several weeks after the students in the treatment group visited the Museum, surveys were administered to all students.

The surveys included multiple items that assessed knowledge about art, as well as measures of tolerance, historical empathy, and sustained interest in visiting art museums and other cultural institutions. Participants were also asked to write an essay in response to a work of art that was unfamiliar to them.

In a similar experiment—a live-theater study—a lottery was conducted to offer free tickets to roughly half of the 700 Arkansas students applying to see “Hamlet” or “A Christmas Carol” at a professional theater in Fayetteville.

The results across both mentioned experiments were remarkably consistent: students who are exposed to cultural experiences demonstrate stronger critical thinking skills, display higher levels of social tolerance, exhibit greater historical empathy, and develop a taste for art museums and cultural institutions.

It can clearly be concluded that cultural experiences expose students to a diversity of ideas that challenge them with different perspectives on the human condition. Expanding access to art, whether through programs in schools or through visits to area museums and galleries, should thus be a central part of any school’s curriculum.

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Should Handheld Devices

1 Be Banned for Children 2 under Years?

By: Lamia Ghoneim



"10 Reasons Why Handheld Devices Should be Banned For Children Under 12". The Huffington Post headline catches my eyes as I scroll down my facebook news feed on my iPhone. I catch myself flinching as I glance at my six-year-old daughter, looking actively engaged in a fast game of *Subway Surfer* on her iPad, her eyes tightly focused as her fingers swipe the screen at the speed of light.

"Honey, would you like to do a puzzle?" I ask. No answer. "Sweetie, I am talking to you" I try again. Her shoulders swoop up in a sort of a shrug off, but her eyes remain fixed intently on the screen. She scoots just a little bit further away from me on the couch, and returns to her trance-like state of play, choosing to stay completely engulfed in her *Subway* world.

I click on the link and ponder the words for a moment, hoping against hope that I find it unconvincing. The author, Cris Rowan, a Pediatric Occupational Therapist—whatever that is—is "calling on parents, teachers, and governments to ban the use of all handheld devices for children under the age of 12 years". She follows her plea by, as she claims, 10 research-based reasons warranting this ban: sleep deprivation, obesity, delayed brain development, mental illness, aggression, addiction, and digital dementia⁽¹⁾ are some of her alleged consequences.

She links to studies from the American Academy of Pediatrics, the Canadian Society of Pediatrics, Kaiser Foundation, Active Healthy Kids Canada, and Common Sense Media as the official sources that back up her call.

"Mom, can I download a new game? Please Mom, please type in your password here". My daughter looks at me with pleading

eyes as she thrusts her iPad in my hands, not waiting for my answer. "How about you do something else other than playing with your iPad, like play with your toys or read a book?" I offer. "But Mommy! I really really want this game!" she squeals. Her eyes are now watery and her bottom lip starts to quiver, threatening to burst into full blown hysterics if I insist she follows my suggestion.

"Stimulation to a developing brain caused by overexposure to technologies (cell phones, Internet, iPads, TV), has been shown to be associated with executive functioning and attention deficit, cognitive delays, impaired learning, increased impulsivity and decreased ability to self-regulate, such as tantrums (Small 2008, Pagini 2010)."

"Violent media content can cause child aggression (Anderson, 2007)." "High speed media content can contribute to attention deficit, as well as decreased concentration and memory, due to the brain pruning neuronal tracks to the frontal cortex." (Christakis 2004, Small 2008).

I begin to panic as the alarming words cited in the article start to sink in. In my mind I am going over all the times my little one threw a tantrum or when I felt her attention slipping away from me during homework sessions. Am I really

harming my child by allowing her to use new technology?

I, and many other parents like me, have always considered technology skills as an integral part of learning. By allowing my child to use new technologies such as computers and handheld devices from a young age, I am ensuring she would not fall behind or suffer from "digital divide"⁽²⁾ later in life. I am setting her up to grow into a technologically savvy person, to be able to make the most of new technologies and be motivated by it, and to operate any device the world throws at her.

It is true that I am, and many like me, sometimes guilty of misusing those precious technologies, by letting them babysit my child instead of being more actively involved with her. I admit I sometimes drive my child to use her devices in order to free up time for myself, not just for the sake of her learning something or benefiting from their use.

It is also true that not all new technologies are the same. Video games themselves come in many flavors, varieties, and levels of complexity; a fact the Huffington post article ignores. For example, *Learn my Alphabet* is not the same as *Grand Theft Auto*, and *Angry Birds* can teach children physics while *Fruit Ninja* cannot.

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Children with Learning Disabilities



By: Sara Khattab

Throughout my experience as a teacher, I taught more than 200 different students whose ages vary from five to eight years old. I cannot say that all of my students were high achievers; in fact, I have dealt with students who need one-to-one help in their classwork and whose parents complain they cannot do their homework on their own, or face some difficulty reading or solving mathematical problems. This does not mean that these children are less intelligent; they just have some problems that can make it difficult for them to learn as quickly as other students.

These problems, which fall under the umbrella of learning disorders or disabilities, affect the brain's ability to receive, process, analyze, or store information. Researchers do not know exactly what causes learning disorders, but they appear to be related to differences in brain structures or dysfunction of the central nervous system. These differences can be genetic, which means they can be inherited like many other traits we get from our parents and grandparents; they can also be caused by problems at birth or during pregnancy.

There are some signals of learning disorders that teachers and parents may notice such as difficulty in speaking, reading, writing, or figuring out a math problem, having trouble following rules and remembering what someone just said, in addition to not paying attention in class. There are many different kinds of learning disorders and they can affect people differently. The most occurring disorders are:

Dyslexia

It is the most common learning disorder in children, which affects their ability to learn. This disorder is not due to mental retardation, brain damage, or lack of intelligence; however, it is caused by impairment in the brain's ability to translate images received from the eyes or ears into understandable language.

Basic reading problems occur when there is difficulty understanding the relationship between sounds, letters, and words; connecting speech sounds to letters, then blending letter sounds into words. Sometimes dyslexia goes undiagnosed for years and is not recognized until adulthood. Usually parents cannot recognize the disorder before their children join school; teachers are often the first to notice this disorder.

Dyslexic children can have various symptoms, which include reading speed and fluency, difficulty in letter and word recognition, trouble with spelling, and sometimes late talking. Learning new words, and letter reversal or mirror writing—

such as: confusion between “b” and “d”, “no” and “on”, “25” and “52”, and more—are among the main symptoms as well. These children may also have trouble expressing themselves verbally and putting thoughts during conversation. Dyslexia can also affect other areas of a child's life: focus, memory skills, and organization.

Teachers can help children with dyslexia read through conducting special educational activities and techniques. In a positive and encouraging environment, a dyslexic child will experience the feeling of success and self-value. If there will be “a read aloud in class” session, it is preferable to give the child advanced time to read pre-selected material, to be practiced at home the day before. Using multi-sensory teaching methods can also help; teachers can use techniques that involve hearing, vision, and touch to improve reading skills. For example, listening to taped stories or books, tracing with a finger the shape of the letters used and the words spoken.

Being easily distracted by background noises and struggling with focus, dyslexic



students need more time to complete their assignments so they can be provided longer time to take exams and quizzes. Teachers have to repeat instructions, keywords, and concepts several times to these students in particular to make sure they got them right. Parents can also help by reading to their children aloud, and they can get them books with bigger handwriting and bigger line spacing.

Dysgraphia

It is a learning disability that affects how children acquire written language and how well they use language to express their thoughts. It is not the result of an intellectual impairment, nor is it dependent upon the child's ability to read. According to the researches, dysgraphia can occur due to underlying problems in orthographic coding, which is the process of sorting written words in working memory while analyzing the letters that make up the word during word learning.

Just having bad handwriting does not mean a child has dysgraphia. Children with dysgraphia may suffer from cramping of fingers while writing short entries and may not complete written assignments that are legible, appropriate in length and content, or within given time. Other signs and symptoms of dysgraphia may include slow writing or copying, inconsistent spacing between words and letters, mixed upper case and lower case letters, awkward pencil grip, several spelling mistakes while writing, and missing or incomplete words in sentences.

Totally avoiding the process of writing through using computers cannot be the only solution, no matter how severe the student's dysgraphia is. Treating dysgraphia may include treatment of motor disorders to help control writing movements. Students can practice writing letters and numbers in the air with big arm movements to improve motor memory of these important shapes.

Teachers have to encourage proper pencil grip, posture, and paper positioning for writing. It is important to reinforce this as early as possible because it is difficult for students to unlearn bad habits later on. Students with dysgraphia can practice writing through low-stress opportunities; such as writing letters and diaries, or making grocery lists.

Papers with raised or different-colored lines help with forming letters in the right space. Tape recorders can supplement

note-taking and help in preparing for writing assignments. For slow writers, the teacher can have the student complete tasks in small steps instead of all at once.

Dyscalculia

Individuals with this type of learning disorder have difficulty in understanding numbers, learning how to manipulate numbers, and learning facts in mathematics. Researchers assume that dyscalculia is due to difference in the brain development and function, and the difference of the structure of some parts of the brain; those areas of the brain are linked to learning and memory.

It can also be hereditary. Researchers found that a child with dyscalculia often has a parent or sibling with similar issues. Studies also show that dyscalculia can occur due to injury of certain parts of the brain, which can result in what researchers call "acquired dyscalculia".

Signs of dyscalculia vary from one child to another, and can also look different at different stages. It can be detected as early as preschool, when a child has a delay in counting or has trouble remembering numbers and skips numbers while counting, in addition to having difficulty in stating which of two numbers is bigger; all of these signs would be an early alarm of dyscalculia.

Other symptoms may include confusion of the mathematical signs—plus (+), minus (-), divided by (\div), or multiplied by (\times)—and understanding their functions; difficulty understanding concepts of place value, and quantity, number lines, positive and negative value, and fractions, in addition to difficulty understanding and doing word problems. Students with dyscalculia also have difficulty understanding concepts related to time; such as days, weeks, months, season, and they are challenged making change and handling money.

Children with dyscalculia may fall early in school and may develop anxiety or strong dislike of mathematics; this is why it is important to follow some remedial strategies in order to strengthen the student's mathematical skills. Teachers or parents can use diagrams and draw pictures of word problems to simplify math concepts.

Math-related games can help the child have fun and feel more comfortable with mathematics. Children with dyscalculia should not be assigned too much amounts of work in mathematics so he/she would not



feel overloaded and lose concentration in solving problems.

Learning disabilities should not be confused with other disabilities, such as autism, Attention Deficit Hyperactivity Disorder (ADHD), or behavioral disorders. Although these disorders can affect the child's ability to learn and follow the educational process normally.

An important step is to understand the child's learning difficulties and consider how they will affect their communication, self-help skills, willingness to accept discipline, impact on play, and capacity for independence. Parents can help coordinate the evaluation and work with professionals and teachers to have the evaluation and educational testing done to clarify if a learning disorder exists.

Parents can find different strategies that work with their children other than the above mentioned. Thus, it is important that parents observe their children and take notes to share with teachers and therapists to find the best strategies and support for their children. The sooner you move forward, the better your child's chances for reaching his/her full potential.

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Things We Have Been Taught

SCHOOL

that are NOT TRUE



By: Ahmed Ghoneim

Primary education in most parts of the world is the same; it follows a well-known pattern: the alphabet, counting, math, some general knowledge about nature, the human body, very basic chemistry and physics. As much as we do need a lot of the skills we are taught in school, I believe that the system is just too outdated for modern times. For once, there are misleading facts that have been passed down to us without anybody ever thinking about their origin or truth.

You Have Five Senses

We have been told that we have five senses—touch, smell, taste, sight, and hearing—so anything else is considered a sixth sense! The actual truth, however, is far from that.

You see, there are so many things we, humans, can feel that do not fall into the five aforementioned categories we were taught. For instance, we can feel whether we are balanced or not, which is a sense that can sometimes be distorted when we get vertigo. We can tell if we are hungry or thirsty even if our stomachs are not rumbling and our mouths are not dry because our brains can process the feelings of hunger and thirst in completely different ways.

There are many more senses that humans have and scientists cannot even list them all; they are definitely not five.



1

Your Tongue is divided into Taste Sections

This is a primary education classic: “Hey kids! Did you know that your tongue has taste regions? Yes, that is true! There are different parts that taste the bitter, the sweet, the sour, and the salty!”

Wrong! Just try placing a sweet thing on any part other than the tip of your tongue; do you still taste it? Yes, you do. There is no such thing as taste regions; there may be parts of your tongue that are more sensitive to some tastes more than others, but that is about it.



2

Carrots Strengthen Your Vision

Okay, that cannot be untrue; can it? I mean vitamin A, we all know is essential for good vision. While that is true, and while you do need vitamin A for good vision, there is no proof that an excess of it or that regular ingestion of carrots will make you have super-vision. However, that is not what the British military had people believe during World War II.

British fighters had begun to use radar technology to detect German planes during the War and became very good at gunning them down. The British Food Ministry then started a propaganda campaign claiming that the reason for that was a diet of carrots. It was thought, at the time, that this was a ploy to fool Germany into not discovering that the British were using radars.



3

Spinach is Full of Iron

We have been brought up to appreciate the importance of spinach, whether or not we like it. I personally could never palate the taste of spinach, but was forced many times to eat it because of its supposed benefits for my health, all because of a calculation mistake!

The reason why until today some people still believe that spinach has a lot of iron is a mistake by German chemist Erich von Wolf in 1870. He had calculated that in 100 grams of spinach there are 3.5 milligrams of iron. He accidentally moved the decimal point in this number one place to the right, and the myth was born; 35 milligrams is a lot in terms of iron content! Come Popeye in 1929 and this information became entrenched in society, forever perpetuated by pop culture.



4

5

You Only use 10% of Your Brain

“Hey kids! Did you know that you only use a very small part of your brain? Wow, imagine what would happen if someone were to unlock all of their brain power! That would be awesome wouldn't it?” It is a myth that has been around for a while now, further popularized by online accounts that claim to post facts, and by movies such as *Lucy* and *Limitless*. So how much of it is true, and how much of it is not?

Well, it is true that we never use all of the brain at the same instant; some parts of the brain work more actively at times and some parts do not. However, the truth is much larger than 10%; actually, most of the brain is active all the time, but not all of it. Nevertheless, no part of the brain is just dispensable; just losing a small part of our brain—like from a stroke—could lead to serious disabilities. Furthermore, there is not a part of the brain that is “never used” as the myth states; so there is no way you can “activate” missing parts of your brain and gain superpowers.



6

You Should Drink Eight Glasses of Water per Day

This was told to us in school as if it were exact science: “You need two liters of water a day and you may be in serious trouble if you do not drink them!” Well it is not like that at all. You should drink water when you are thirsty; that is it. If you do not feel thirsty, then do not drink water, because you will end up urinating all of it.

So how did this myth come to be? Well, it came from a study in 1945 by the US Food and Nutrition Board, which stated that you need about 2.5 liters per day. However, what perpetrators of the myth failed to report is that the study stated that most of this water already exists in the food we eat. Furthermore, bottled water companies benefited from this myth and helped spread it to increase sales. What everyone is failing to mention is that the amount is never an exact volume; it is just how much you feel thirsty at a certain day!

7

Christopher Columbus discovered that the Earth is Round

Christopher Columbus was an explorer who sailed West from Spain and discovered the New World; he is correctly credited for that. He is, however, incorrectly credited as the one who discovered that the Earth is round.

For hundreds of years people knew that the Earth was round. Aristotle proposed it, Eratosthenes calculated its circumference, even the Romans proposed sailing West to find India hundreds of years before Columbus. When Columbus did propose that, it was because sailing East was a difficult task, having to pass through Africa to reach there. He was initially refused, but not because people thought the Earth was flat. They knew it was round, but the calculations they made had him sailing very far West that they believed it was too large a distance for him to cross.



An Apple fell on Newton's Head

The version you have heard is: “Newton was sitting under an apple tree when an apple fell on his head; he then had a ‘Eureka’ moment in which he realized there was such a thing as gravity and he formed his theories”. The truth is not too far from that actually, which makes this fact not completely untrue! Newton himself told the story that he was, in fact, sitting under an apple tree when he got inspiration for the gravity theory. It did not, however, fall on his head; he may have seen an apple fall, but that is about it. He also took years to form the gravity theory before he had actually published it, not so much of a Eureka moment as the stories have you believe.

8

Van Gogh cut off His Ear

This is probably the only thing I remember from art class. I am not much of an artist, but I do take interest in art and its history. Since art class was all about how good your drawings were—and how inadequate you felt when you were handed down those horribly bad marks—we were not taught much history. Nevertheless, lots of teachers loved to tell the Van Gogh story.

It went like this: “Van Gogh was a brilliant, yet crazy, artist got into a fight with a friend named Gauguin. In the heat of the fight, he held a razor and cut off his ear, presenting it to a prostitute as a gift later that night”. What a nutcase! Or was he?

Recent findings by two German historians suggest that this is not the true version of the events. It seems that Van Gogh may not have cut off his own ear after all, but rather his friend Gauguin accidentally did that. You see, Gauguin was a skilled fencer, and in a heated argument he cut off Van Gogh's ear. It is probable that Van Gogh invented the whole story about him doing it to himself to protect his friend.

9

Origin of the Word News

Another popular anecdote your teachers loved to say: “Do you know how the word news came to be? Well, it is a compacting of the words North, East, West, and South; because news comes from all over the world! A simple Google search for “etymology of news” shows the following: “Late Middle English: plural of new, translating Old French noveles or Medieval Latin nova (new things)”. There you have it.

In this day and age, any post, link, or photo we see we have to play Sherlock Holmes with, because a lot of the stuff out there is fake. The same applies to what we have been taught in school.

10

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EGYPT'S

By: Shahenda Ayman

Educational Conundrum

Education is the most important factor in the process of developing any country because it is responsible for raising a knowledgeable population or oblivious generations that may be graduated from schools or even universities but are in fact ignorant. Corrupt educational institutions are mainly responsible for the collapse and regression of any country in the world. Egypt, for instance, according to the Global Competitiveness Report for 2013/2014 published by the World Economic Forum, is to occupy the last place in the quality of basic education.

Education reform should thus be at the top of any developing country's agenda; Egypt is no exception. While there are many factors that need to be addressed, the following three factors are key to ensuring sustainably excellent education in Egypt: (1) getting the right people to become teachers; (2) developing teachers into effective instructors; and (3) ensuring that the system is able to deliver the best possible instruction for every child.

One of the main reasons behind the educational problems in Egypt is the

unhealthy environment in which teachers work. In most public schools, for example, classes are overcrowded with students; each class may have sixty students if not more, which is also the case in some private schools. Moreover, the teachers' income is not sufficient to maintain a suitable life standard, which has led to the rise of the private lessons phenomenon.

Furthermore, teachers must be well trained in the latest methods of teaching to face and handle any kind of trouble with the students. The Ministry must have serious exams and tests for these teachers because not anyone is able to teach and manage students at different ages. At first, there was a policy pursued by the Ministry of Education to prepare and train teachers, such as the Institute of Teachers; however, the poor training and education during the study period and even post-graduation did not give fruitful results.

The Faculty of Education then emerged; like most colleges in Egypt, it relied mainly on conservation and memorization only. The curricula were futile and characterized by stagnation in addition to the lack of

practical training. A student at the faculty would graduate to find no relation between what he/she had been taught—and memorized—and the reality. Hence, having well-trained teachers will help a lot in the process of developing educational standards in Egypt.

Changing the way of teaching and the subjects taught are the most important steps that must be taken to improve the educational system. Subjects taught at schools need to meet the students' mental abilities; in other words, every level must have the proper information that fit its students' minds according to their age group.

Moreover, subjects must be helpful to the students in their practical life later, so that they do not have to memorize them just to pass the exams. This will help students think properly about and solve any problem they face in the exams or otherwise, as well as retain the information easily because it fits their age's mental ability.

Lack of technology, adequate laboratories, and libraries are amongst the defects in many Egyptian schools; unfortunately, most schools still do not have any kind of technological devices. School libraries hardly have useful books to use, and the laboratories neither have any proper physical equipment nor any chemical compounds to help students know and visualize what they are taught in class. This is because of the absence of an appropriate governmental financing to many schools in many regions in Egypt.

The Egyptian Government must take serious and correct decisions to eliminate these problems as quickly as possible because the children are the hope of a better future for this country. That carelessness in dealing with the educational crisis will drag Egypt to an even lower scientific state. Teachers need to be better trained to become more qualified, and, hence, be able to motivate students, so that they in turn become productive within their community, which will eventually reflect on the Egyptian economy and therefore stability and prosperity.

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Despite rising unemployment among graduates, post-secondary education is still perceived as highly desirable in Egypt and prioritized by most families. Each year, all faculties and colleges define quotas for the admittance of new students. Thus, secondary education exam time becomes a nightmare for students to compete on a limited number of places at public universities.

Egyptian children and youth spend approximately 14 years in the formal educational system. Having an academic mentor is not common at Egyptian schools; the role of these mentors is to advise, guide, and support students to achieve their dreams. Accordingly, when high school students are asked about their dreams and future plans, they usually give vague and stereotypical answers, such as "It depends on my final score" or "I would like to join a good faculty".

This leads to a situation where many young Egyptians study subjects not out of personal interest or talent, but mainly due to their final score—at least for those who are confined to the public educational system—and they just give up on their dreams.

That could be the easiest thing young people can do; they put their dreams on hold just for the lack of an opportunity. While there is nothing wrong with that, we have to ask, will this make us happy individuals on the long term? Whether you are a school or university student, or even a graduate, never give up on your dream; always seek to achieve it sooner or later. In fact, you will never be too old to follow a dream.

Many organizations worldwide implement regular initiatives, which help individuals pursue their studies and achieve their dreams, whether in the form of guidance or actual support. Accordingly, many online portals have appeared to help students access different support forms, such as scholarships.

Scholarships exist for everyone regardless of their social backgrounds, interests, nationalities, religious, or political views. There are always scholarships out there, but it entails some effort from your side; thus, you have to keep looking. Some examples for scholarships search resources are:

- CollegeNET.com;
- CollegeScholarships.com;
- Foras4all.com;
- Fundsforngos.org;
- IIE.org;
- InternationalScholarships.com;
- Scholarshiper.com;
- Scholarship-Positions.com;
- Scholarships.com; and
- StudyAbroad.com.

The Bibliotheca Alexandrina (BA) has implemented many initiatives in education one of which is the "Higher Education

LOGIST ENGINEER
LAWYER DOCTOR
WEB DEVELOPER
R DENTIST PROGRAMMER
ALIST BANKER PHARMACIST
T VETERINARIAN JOURNALIST
ENTIST ACCOUNTANT

Do not GIVE UP on a DREAM



By: Esraa Ali

Funding Opportunities in the Arab Region

online Directory, launched in 2011. The online Directory provides information on scholarships opportunities, provided to Arab students.

Moreover, the website includes a guide in order to acquaint students with application process and universities requirements, and commonly used academic terminologies. Besides, it provides practical advice on how to fill out applications and to prepare university application supporting documents, such as Curriculum Vitae (CV) and recommendation letters. The online Directory and the students' guide are available for free access at bibalex.org/he_funding.

Another initiative implemented by the BA is the series of "Sketch Your Future" conferences, started in 2006. The conference is organized annually in order to transmit the message of "Be what you want regardless of the university you join". It displays the differences between school and university education systems to students who are about to join university. It also guides them to choose the faculty that best suits their skills by highlighting the fields of study and different job opportunities. More information about the conference and its dates are available at bibalex.org/yesbu.

Success Story



Many could find locating an opportunity farfetched; however, there are dozens of success stories of Egyptian youth who were able to achieve their dreams.

An example of these students is Aliaa Elzeiny who applied

to the Middle East Partnership Initiative (MEPI) "Tomorrow's Leaders Scholarship Program", managed by the America Mideast Educational and Training Services (AMIDEAST), and was granted a four-year university scholarship in 2008.

Through the scholarship, Elzeiny studied Political Science at the American University of Beirut (AUB) and was able to get an internship at Dickinson College offered to students who have the potential to become leaders, in 2010. In addition, she participated in an essay contest organized by the AUB in 2011, and won a prize with her essay "An Egyptian, an Arab, an AUB Student".

After graduation, Aliaa gave a number of speeches at various events about her experience to inspire youth. On her own blog, she introduced herself as "I am Aliaa Elzeiny, the young woman who is striving for excellence, reaching out to maximize her potential, struggling to figure it out".

Living in a society such as ours, there should be more support available for young people who want to chase their dreams and are not ready to settle for the safer option. The society and its institutions should be doing much more to encourage young people to follow their dreams to avoid a future of missed opportunities and regret. It takes time to learn how to own our lives, nurture our goals, and realize our dreams, but fortunately we have time if we are willing to seize it.

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By: Maissa Azab

VOCATIONAL EDUCATION

THE FUTURE OF REFORM

In Egypt today, one feels overwhelmed by the calamities we are entangled in, not knowing where or how to begin the road to reformation. This state is the conclusion of decades of shortsighted decision-making.

There are so many areas where deep and collaborative thought, intensive research, and arduous efforts are desperately needed; however, one key area that is at the heart of everything is education.

Although there are so many aspects that require attention, one seems to me the most pressing: vocational education. If we have any hope of solving Egypt's main problem, which is unemployment of millions of youth, we urgently need to work on solving this issue, at the core of which is nothing else but misshapen social perception.

The size of the workforce is considered among Egypt's most important competitive advantages. According to the Central Agency for Public Mobilization and Statistics, it was estimated that labor force has reached about 27 million persons with an average of 400,000 university graduates per year (2012). This makes Egypt the largest workforce in the Arab world and the Middle East, and among the largest pools for university graduates in the world.

However, it has become evident that the competency of university graduates is below the market requirements. As university graduates exceed public universities' capacity, the quality of education is decreasing dramatically. Meanwhile, Egypt is continuously facing shortage in technical expertise offered to non-university graduates, due to the low

social status and lack of prestige connected to technical jobs.

The current problem is the result of the country's policy in the wake of the 1952 Revolution regarding equity. All citizens became entitled to free university education, which eventually led to an excessive surplus of university graduates. Primarily, the Government had promised governmental employment to all; however, decades later, it became impossible to accommodate more and more of the thousands who graduate every year, not to mention the superfluous of unnecessary bureaucratic jobs that have emerged in the process.

Over the decades, university education has become everyone's goal; anything short is deemed kind of failure. Consequently, more and more university graduates cannot find jobs befitting their training and end up either having to concede to a job they are not really qualified for, or refusing to do so and ending up unemployed altogether.

To change the public's perception, technical expertise has to be privileged in some aspects when compared to university education. In 1976, vocational education in Japan provided new technical knowledge not offered by universities. It changed the culture to believe in the possibility of gaining higher managerial positions and better technical skills through vocational rather than university education.

Moreover, a legislation recognizing training schools that meet high standards of quality with a higher level of accreditation was passed. As a result, the number of special training schools increased from 893 schools

in 1976 to 2,520 schools in 1980. Similarly in Brazil, a law was passed in 1996 creating vocational education schools within higher education institutions, leading to drastic change in perception, whereby the number of technical schools increased from 178 in 2000 to 612 schools in 2002.

Businesses know best their technical needs, and should be encouraged to be the main providers of vocational education. In the Japanese model, special training schools were 90% run by the private sector. Large corporations—such as HITACHI—provided high quality vocational education and ensured employment after graduation, which is in itself a motivation to choose a technical school.

Skills are vital for poverty reduction, economic recovery, and sustainable development. As a consequence, policy attention to Technical and Vocational Education and Training (TVET) is increasing worldwide. UNESCO is thus deepening its support for it as the cornerstone of education and training reform, and not the weakest link in education systems.

UNESCO recognizes the indispensable role of TVET in development and particularly its importance in addressing youth unemployment, equity and income disparities, socio-economic development and, more broadly, quality of life challenges. It is high time, prompt action is taken here in Egypt to remedy the image of TVET and to foster a new generation of well-trained, proud laborers who can redeem Egypt's workforce status locally, regionally, and internationally.

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THE HOUSE OF WISDOM

By: Dr. Mohamed Soliman
Director, Manuscripts Museum

The House of Wisdom is considered the first establishment for learning and education during the Islamic Golden Age, which extended from the mid-eighth to the fourteenth and fifteenth centuries. The House of Wisdom lasted throughout the reign of three Abbasid Caliphs: Abu Ja'far al-Mansur, Harun al-Rashid, and his successor, al-Ma'mun.

The House flourished and became well-known during the reign of al-Ma'mun, who was known for his love of science, language, literature, and knowledge in general; he lavished money on writers, poets, and scientists. The House of Wisdom thus became a destination for scholars, a gathering of scientists, and a center of translation.

Several heritage sources mentioned the House of Wisdom, sometimes called the Treasury of Wisdom. To understand the significance of this name, let us recall Hegel's quote: "Wisdom is the highest state humans can reach. When knowledge is completed and history reaches its peak, wisdom happens. A wise man thus occupies a higher rank than a philosopher, for wisdom is the following and final stage after philosophy. Wisdom is the highest peak and the ultimate goal; blessed are those who achieve wisdom and equilibrium."

The House of Wisdom was not limited to the keeping of books; it was an edifice for the industry of knowledge in every sense of the word. The illustrations of the House in old manuscripts reflects its stature as a forum for scientists' debates, conversations, expression of opinions, discussions, and seminars for science and learning at the time. The House of Wisdom was similar to the Ancient Library of Alexandria in its mission and the role it played in the cultural and educational life at that time.

According to modern perception, the House of Wisdom was a deposit library; books were brought to it from various parts of the globe. These deposited books were called *Takhleed* (Memorial) as stated in *al-Maktabāt fī al-Islām: Nash'atuḥā wa-taṭawwuruḥā wa-maṣā'iruhā* (Libraries in Islam: Origins, Evolution, and Destinies).

The Caliph al-Ma'mun also ordered a group of specialists to buy books from Roman countries, which is similar to what we call today the Committee of Supply, to increase the balance of the House of Wisdom of books. Dr. Abdel Moneim Majid

stated in *the History of Arab Civilization*: "The Abbasid state made deals for buying books, paying the highest of

fees, especially during the era of al-Ma'mun, who was the wiser of the children of al-Abbas. Al-Ma'mun submitted all resources and routed all means to unravel intellectual treasures captivated in the libraries of Constantinople and Cyprus."

We cannot mention the House of Wisdom without referring to the translation movement at the time, in which the House played a major role in the transfer of the sciences of the Greeks and others. The Caliph al-Ma'mun played an important role in supporting this movement; historians agreed that: "All the renaissances of Arab sciences are branches of the root planted by al-Ma'mun, and the translations of Greek heritage during his reign is proverbial". Not to mention the translations from other languages, such as Persian, Sanskrit, and Syriac.

Moreover, a place for copying and binding was attached to the House of Wisdom, which is the equivalent to the role of publishing houses today. Book circulation outside the House of Wisdom was also allowed, in exchange for a deposit to be paid until the book is returned.

It is evident that we are talking about a comprehensive educational, cultural, and academic institution. It was a meeting point for scientists, discussions, and debates; a place for lectures and learning; a place for translation and authoring; another for publishing and copying; and a public library for reading, erudition, and circulation, under the direction of the greatest authority in the State—the Caliphate at the time.

The end of the House of Wisdom was also similar to the end of the Ancient Library of Alexandria, which was burnt during the war between Cleopatra, Julius Caesar, and Caesarion. The House of Wisdom also ended up burnt and vandalized by the Mongols led by Hulagu, when they entered Baghdad in 656 AH/1258 CE; authored and translated books were burnt and forever lost.

The legend that was the House of Wisdom ended forever. It seems now that Baghdad has also ended forever after the American invasion and the destruction of its museums and libraries in recent decades. With Allah is the decision, in the past and in the future.

Exploring the Human Civilization Enigma

EPISODE
6

By: Dr. Omar Fikry
Head, Planetarium Section
Planetarium Science Center

Morning is about to break; you ask yourself: Won't these creatures ever leave my room? Why don't they utter a word? Why don't they move or make any gesture? You want to start your new day with your usual morning habits, but they are with you in your room and they still did not tell you their secret.

Suddenly, they convert to a human form; a very tall man, the other is very fat, and the third is very short. You feel relieved with this sudden change in their looks; all your feelings of astonishment and insecurity fade and are replaced by other feelings and more questions: What will you tell your parents about the identity of these three persons? You are waiting for them to continue their conversation with you.

The tallest starts talking, saying: "We appreciate your patience and apologize for any negative feelings you have felt because of our breaking into your house and your room". The fattest continues in his usual way but in his new human look: "It is time my friend to know who we are and where we come from". The shortest intervenes: "Our home is not so important; you just need to know that we have come from a planet that was similar to yours, which you have neglected". The tallest interferes, saying: "We invite you my friend to visit our planet, which precedes your planet in terms of reforming and taming the ways of living".

He looks at the fattest and then continues: "On our planet, children are taught to practice the utmost responsibility, and are directed to the careers that comply with their passions and abilities. They are born in very good health from healthy parents after deep thought and full preparation from the mother before deciding to get pregnant". He looks at the shortest to continue as if the three of them are reading from a book; the shortest then says: "Children are raised in the best health conditions; their natural desires to play and learn are enhanced by the latest and most effective educational tools. Their hands, eyes, and other organs have all the possible opportunities to train and grow. Children on our planet know how to draw and write, how to express themselves, and use a large

variety of symbols that help them expand their scope of thinking. We also teach them the meanings of tenderness, kindness, politeness, and astuteness, because everything that surrounds them on our planet is fragile and gentle".

He stops and looks at the tallest, signaling him to continue; but you stop them to ask: "You say your planet "was"? Does that mean that you have faced the problems and obstacles we are facing here right now and you got over them? Does that mean that you were like us one day? I am very interested in hearing what you will say and I am sorry for the interruption".

The tallest nods in agreement and continues: "On our planet, the children's abilities to imagine are monitored, encouraged, and developed. Children are taught the history of their world and race, and how human beings on your planet, as on ours, struggled—and is still struggling—to leave behind their previous narrow, animalistic horizon, their ego, and their selfishness, towards the dream of Utopia, which they still do not fully understand.

He signals to the fattest, who says in an automated manner: "On our planet, children's wishes are softened and improve; they learn from poetry, successful figures, and the love of those who surround them in order to overcome their worries and concerns. On our planet, children's curiosity

is directed towards science, harnessing their ego and ambition into accomplishing joint achievements with their peers. When they grow up, children pursue the careers they love and are attracted to; they choose what they do".

Their words intrigue you, so you ask: "Sorry my friends, but you are talking about a utopian situation that I don't think will ever develop on our planet. However, I want to know what happens to a lazy or unproductive person on your planet?" The fattest rushes to answer your question: "If a person is lazy or slow, he will not cause a great damage to the community; on our planet there is room for everyone. However, he will not find anyone who loves him, he will not grow or develop, and he will lose a lot of our abilities that you have witnessed some of tonight".

"On our planet, we do not love those who lack the enthusiasm and will, those who do not want to develop their abilities and capabilities." The shortest interrupts: "We do not have games or performances to be watched. Our world is so beautiful and wonderful for spending vacations, but not for those who do not do anything".

The tallest continues: "Our dear friend, a huge miracle happened on our planet and it is hard to be explained or comprehended. Thousands of centuries ago, we were just like, made of flesh and blood, with a fixed head, hands, and feet, and we did not have the ability to overcome gravity, so we were bound to the ground just like you because of this gravitational force".

You listen to all this with an open mouth as all of this—according to you—is just a fantasy; you cannot do anything but listen. The tallest continues talking: "The miracle that freed us from the prison of our bodies and from the era of chaos is our passion for knowledge and exploration, and the desire for deep thinking in order to solve our problems". The shortest adds: "And do not forget our ancestors' desire to play and have fun, which continued well into adulthood till it became an insatiable instinct for knowledge and creative exploration until—many centuries later—they became as you see now; free creatures with limitless abilities". The conversation stops when your phone alarm rings to wake you up.

To be continued.....



VISITORS INFO

Planetarium

Available Shows

Stars Show

45 min. Live Show by the PSC Resident Astronomer

Oasis in Space

25 min. Full-dome Show

Stars of the Pharaohs

35 min. Full-dome Show

Seven Wonders

30 min. Full-dome Show

The Life of Trees

33 min. Full-dome Show

Kaluoka'hina

35 min. Full-dome Show

Mystery of the Nile

45 min. IMAX Show

Cosmic Voyage

35 min. IMAX Show

Alexandria, The Cradle of Astronomy

22 min. Full-dome Show

Visitors INFO

- For the Planetarium daily schedule and fees, please consult the Center's official website: www.bibalex.org/psc
- Kindly note that, for technical reasons, the Planetarium maintains the right to cancel or change shows at any time without prior notification.

History of Science Museum

Visitors INFO

Opening Hours

Sunday–Thursday: [9:30-16:00]
Saturday: [12:00-16:00]

Guided Tours Schedule

Sunday–Thursday:
[10:30, 11:30, 12:30, 13:30, 14:30, 15:30]

- Museum entry fees are included in all Planetarium shows tickets.
- For non-audience of the Planetarium, Museum entry fees are EGP 2.-
- Museum Tours are free for ticket holders.



ALEXploratorium

Visitors INFO

Discovery Zone

Opening Hours

Sunday–Thursday: [9:30-16:00]
Tuesday: [9:30- 12:30]
Saturday: [12:00-16:00]

Guided Tours Schedule

Sunday, Monday, Wednesday,
Thursday: [9:30, 11:00, 12:30, 14:30]
Saturday: [12:00, 14:00]
Tuesday: [9:30, 11:00]

Entry Fees

Students: EGP 5.-
Non-students: EGP 10.-

Listen and Discover

- For the list of shows available at the "Listen and Discover" and the schedule, please consult the Center's official website: www.bibalex.org/psc.
- For reservation, please contact the PSC Administrator, at least one week before the desired date.

Show fees

DVD shows:

Students: EGP 2.-
Non-students: EGP 4.-

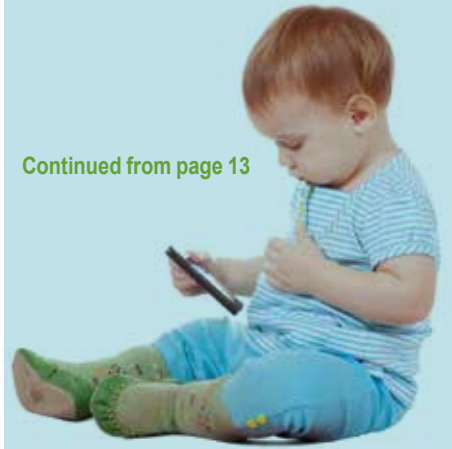
3D shows:

Students: EGP 5.-
Non-students: EGP 10.-

4D shows:

Students: EGP 10.-
Non-students: EGP 15.-

Continued from page 13



The writer also neglects to mention that most of the research cited is linked to passive television exposure of unidentified programs and violent video games, not interactive educational programs or even simple games that enhance problem solving skills or dexterity, such as the aforementioned *Subway Surfer* or *Fruit Ninja*.

The writer also did not mention the fact that there is other research suggesting a positive link to games and brain development, as well as research that sustains that handheld devices and TV programs are an effective tool in learning, especially when a parent or a teacher is involved. Chiong, C. (2010), Fisch, S.M. (2004).

When I discussed the author's call to ban handheld devices with other parents, I found that most parents were leaning towards controlling and supervising their use instead of completely banning them, which most found unrealistic and unwarranted.

No parent wants to see their child falling behind in an important area such as technology skills. However, are we really able to control the use of those devices, or are we to fall into the trap of their misuse?

"Mom, please... The new game..." my daughter whimpers. "How about we do that puzzle together, then we can play a game together on your iPad, one that you and I pick?" I suggest.

Her face lights up at the magic word: together.

Glossary

1. **Digital dementia:** Deterioration in cognitive abilities such as short-term memory dysfunction caused by relying heavily on technology.
2. **Digital divide:** A term that refers to the gap between demographics and regions that have access to modern information and communications technology, and those that do not or have restricted access. This technology can include the telephone, television, personal computers, and the Internet.

References

www.huffingtonpost.com
www.slate.com
www-tc.pbskids.org

Museum Delusions

This is one of Van Gogh's famed self-portraits. As you all know, Van Gogh lost his mind and cut off his own ear to give it to the woman he loved!

This is a sculpture of the great explorer Christopher Columbus, who is most famous for discovering that the Earth is round.

Why is everyone so sure I cut off my own ear?! I had a fight with my pal Gauguin; maybe he cut it off!!!

What a shame?! Yes, I discovered the New World; but, I did not discover that the Earth is round! How could I have discovered that when Eratosthenes calculated the Earth's circumference back in the 3rd century BCE?!