Learning by Choice & Discovery

By Susan Labadi

*“Children learn best when they are actively engaged in constructing something that has meaning to them-be it a poem, a robot, a sandcastle, or a computer program”- Seymour Papert*

Our role as educators has never been more critical, as the world will change in ways which could hardly be expected. However, there are many people who have given thought to the numerous possibilities, and those scenarios are invaluable for us to examine. Teachers must prepare the problem solvers of tomorrow, a heady responsibility given to those whom Allah trusts. I refer to you who are Islamic school educators and administrators of students’ preparation.

Recently, while attending a halal food conference in Dubai, I had a meeting with a colleague who has launched a business incubator for the multi-faceted halal industries. On his desk was a book that I later downloaded and found to be something worth sharing with you. The title is *Government in 2071: Guidebook* and it is published by World Government Summit.

It lays out potential scenarios for three future eras: 2018 to 2030, 2030 to 2050, and 2050 to 2071. Its research details potential narratives for four demographic categories: single, young couple, couple with children, and elders. It also accounts for the potentiality of war, plague, environmental disaster, and shortages of food and water. It is quite a sobering read, but has value in that it highlights that much work will be done by automation, many people will be unemployed, there may even be a basic guaranteed income, and only those who are well educated in technical skills will likely have a better lifestyle in the global economy. Therefore, it is incumbent upon us to prepare our students for these potentialities so that they can participate as leaders of the future and help be caretakers of the world.

Such a future may seem far away, but one school district in Ontario, PEEL District School Board, has created an approach to the 21st Century. It seems to have a good handle in identifying critical competencies which we find are also linked to Islam.

They are creativity, innovation, entrepreneurship, collaboration, communication its various forms, learning to learn, global citizenship, critical thinking, and problem solving, which will evolve into being able to offer opportunities for future generations.

However, we must ask how can we change the learning culture in our schools? For this we need to briefly visit why our schools became as they are. Later, we will explore what are our roles as educators, and what are effective strategies to bring about positive change? To do this, we will explore the five learning disciplines: systems thinking, personal mastery, mental models, shared visions, and team learning.

**How schools came to be from a pre-Industrial Age to present day**

The United States constitution omitted any mention of education as a federal responsibility, but the Framers did rely on states to set up and administer schooling. We have long had issues with equity, as formerly girls and non-white races did not have the same education if any, and with the rise of factories, people flocked to cities from rural areas to work. Education was needed to prepare workers as advances in design automation made repetitive jobs obsolete and new skills had to be developed for people to find employment (Sheninger, p. 2). No longer did a candlestick maker and shoe cobbler need to reside in every town, and presently we do not even have to employ them in the same country. In present-day, political and technical changes have altered education-access so that schools in lower socio-economic neighborhoods can have resources, and especially internet connectivity, and more open access to knowledge. There is still imperfect equity, but the gap is improved from past decades. Yet, once again, the development of robotics and artificial intelligence (AI), among other technological advances, make us question about what should an education include?

John Dewey, in the early 20th century, advocated that hands-on learning in areas of interest to students was the best way to approach education. That was later seen as communistic and unpatriotic because when the Soviet Union’s launch of Sputnik challenged the U.S. to hone students’ skills in math and science, momentum was created that demonstrated the value of these subjects. Even today, we greatly use these as gatekeepers to higher paying jobs, and criticism of the current education system is largely aimed at those who have poor performance, as does the U.S. relative to several other nations according to standardized tests. In fact, the testing frenzy has caused much grief and animosity among stakeholders, since time and budgeting resulted in social studies, physical education, and courses in art and music to be withdrawn as seemingly insignificant to a student’s preparation for life.

This is in contrast to the statement of former president Obama during the Every Student Succeeds Act (ESSA) signing ceremony where he stated, “With this bill, we reaffirm that fundamental American ideal—that every child, regardless of race, income, background, the zip code where they live, deserves the chance to make of their lives what they will.” (White House, 2015).

**Research on high achiever nations**

Meanwhile, journalist Amanda Ripley, author of *The Smartest Kids in the World,* cited three countries, Finland, South Korea, and Poland, that performed better than the U.S. on the Programme for International Student Assessment (PISA) as issued by the Organization for Economic Co-operation and Development (OECD), which tested half a million 15-year-olds. In 2015, the highest-ranking countries were Singapore, Japan, and Estonia (the U.S. ranked 25th). Ripley contends that a common practice among the countries she visited was “*watching students and talking to them*” (Stronge, p. 10). This corroborates with anecdotal observations and comments shared in a blog which recorded education professionals’ experiences and titled Finnish Study Tour 2017 (http://finnishstudytour.blogspot.com/) whereby colleagues noted that students were held accountable for maintaining their schools, they regularly trekked outdoors each hour for a break, and teachers, rather than standardized test scores, determined the competency of students’ mastery in subjects. The Finns are committed to a renewal of their teacher education, and it is competitive to enter as teachers among their ranks. Teachers are from among the top 10% of their classes and must have at least a master’s degree in the area that they teach. Realizing that the teachers may not have studied and acquired skills critical for the future, they expect ongoing education for teachers as relevant to their profession. The visiting team found that Finnish students felt curious, and even comfortable, initiating conversations with the visiting educators, and, contrary to most American schools, there was no need for disciplinary oversight of students. As a community, the students conducted themselves with manners and self-direction.

We are witnessing a global movement that is questioning the status quo because current practices give no certainty of a successful outcome for nations that do not hit the right balance between forcing their ideas of what is imperative for curriculum and what can realistically work. However, there are generally accepted guidelines that entities like the PEEL School Board have identified as critical to preparing students.

First, for students to succeed, there is a need to establish an environment that is safe, inclusive and “fosters creativity, collaboration, communication and critical thought,” as expounded in their e-book, *Transformational Practices 2.0*, (p. 4). Additionally, Margie Carter in an article titled “Making your environment ‘The Third Teacher’,” cites a quote from Leila Gandini (1998):

“In order to act as an educator for the child, the environment has to be flexible:

it must undergo frequent modification by the children and the teachers in order

 to remain up-to-date and responsive to their needs to be protagonists in constructing

 their knowledge.”

This approach is found in The Italian Schools of Reggio Emilia, who feature a holistic approach to learning, which has been shown to positively contribute to student well-being, positivity, focus, and performance. The model encourages creativity, exploration, achievement and collaboration (Carter, p. 22). One aspect of this may be flexible seating, and we see that in traditional Islamic education spaces throughout history, there was never an “assigned seat”, so why do we insist on them now? What messages do our learning spaces send to students? What can we do to make them more student-friendly? How can we give students more opportunities to use their voices in a positive and productive manner?

 

**Critical Competencies**

Curiously, the PEEL School Board’s competencies tie neatly to what Islam has propounded traditionally; namely, a welcoming environment and growth mindset, a right to express our thoughts, and challenge through inquiry and discovery.

Mohammad Akram Nadwi writes in *al-Muhaddithat: the women scholars in Islam*, “The Prophet emphasized the need to fix in the hearts of the children, from as early an age as possible, a love for the *din.* He himself did this by engaging with them, playing with them, and involving them in his practice of it” (p. 38). What better modeling for our teachers? Now for those Critical Competencies, as cited by the PEEL School Board (PEEL pdf).

The objective of 21st century learning is to build capacity in areas that promote a resilient society capable of effectively adapting to rapid change…to prepare students

FOR JOBS THAT HAVE NOT YET BEEN CREATED,

TECHNOLOGIES THAT HAVE NOT YET BEEN INVENTED

AND PROBLEMS THAT WE DON'T YET KNOW WILL ARISE.

-Future Tense (PEEL S.D. Empowering Modern Learners)

**Creativity, Innovation and Entrepreneurship**-Break away from the expectation that we prepare students to work for an employer, solely to be exploited. Rather, encourage ownership of business and socially responsible entities who work to procure a better quality of life for humanity. Our beloved Prophet’s wife owned her business, and honest trade is a most honorable profession. The Prophet’s mission necessitated him to play many roles. Among them were politician, teacher, military leader, and foremost of his roles was guardian and protector of the Ummah. We should raise our students to see that their calling is greater than being the seeker of material goods and wealth for wealth’s sake. A noble cause creates empowerment and legacy.

**Collaboration**-Consultation and collaboration can be summed up with “two heads (or more) can be better than one.” The concept of *shura* is an excellent example of this. The Prophet sought the people to help inform his decisions when he was in a leadership position. Even the Iroquois League, on which the U.S. Congress model is based, was a confederation of seven Native American tribes that jointly made decisions for their people. It is a model of democracy that has ancient evidence of wisdom in reflecting the idea of implementing the will of the populace.

**Communication**-Our Arabic language, as applied in the Holy Qur’an, elicits the richness of meaning like no other language. Even the Prophet though, encouraged his deputized couriers of The Message, to travel and share to other people. This necessitated them to learn to communicate in other languages. These days, communication takes many forms, and students must learn as many means a possible to express their messages. Beyond the written word, students should utilize many forms of art and technology. These can be through a multitude of sensory experiences and may use software and technologies that are still evolving. We should help them to be fully versed and facile in as many of these as possible, and our own deficiencies in these areas should not inhibit our students’ progress.

**Learning to Learn**-Somehow students may feel incapable of excelling in certain areas of performance. Why might this happen? Perhaps we have tried to force learning content or skills in areas where students are simply not mature or developmentally ready. Maybe our students have had some past failures or mistakes, and these experiences have rendered learned helplessness. We know that self-efficacy plays a great role in learning, and our expectations significantly affect our ability to learn. Muslims have been encouraged to learn from “the cradle to the grave” and this applies especially to teachers who model and lead our youth in this commandment.

In a free Coursera course titled Learning to Learn, one of the instructors, Barbara Oakley, relates her most unusual development from a poor student to one who developed into a Russian language translator, electrical engineer, and engineering professor of the most popular course in their offerings. As of a New York Times article from 2017, there were 1.8 million students from over 200 countries who registered for the course (Schwartz). Oakley’s opinion is that just as schools have chess clubs and art clubs, they should have learning clubs so that students can learn how to work with their brains to optimize their ability to learn.

**Global Citizenship**-Given the state of the world today, the following Qur’anic quote’s salient guidance is apparent. “O mankind, indeed We have created you from male and female and made you peoples and tribes that you may know one another. Indeed, the most noble of you in the sight of Allah is the most righteous of you. Indeed, Allah is Knowing and Acquainted” (49:13). Our welfare is connected to that of humanity and of nature. We are all part of a delicate and balanced system, and our understanding and mutual care favors the interests of all elements in this world.

**Critical Thinking & Problem Solving**-Throughout Muslim history there have been an abundance of lessons which can guide today’s students on how to approach many challenges. What is needed though is the value that a wise teacher leader can bring to demonstrate the relevance of that history to the multitude of issues students face today. For when they are adults, they should know to reflect and research the rich history of Islam for answers.

It was the Muslims who brought mankind from the Dark Ages toward the Renaissance, and students should take inspiration to resurrect that active scholarship and leadership to help mankind today. It is known that ignorance will be the antithesis of the learned ones, so it is our responsibility to cultivate higher advances to address the needs of man and nature.

We look forward to the day when “problems” are mostly resolved, and pursuit of prosperity and higher actualizations of human experience will be universal for all mankind, as Utopia. We should believe and expect it to be possible, for Allah has promised us, according to Bukhari and Muslim, the Prophet of Allah stated, “Allah has not sent down a disease except that he has also sent down its cure.” This may be interpreted as not just limiting to human physical disease, but human frailties of mind and heart. And while mankind is destroying the Earth, he is also doing research to monitor and hopefully rectify those wrongs. We have many examples of this in recycling, reforestation, desalination, water purification, LEEDS certified construction, no and low volatile products, sustainable farming, green chemistry, preserving animals from extinction, and medical sciences, among others.

With these advances, our students have expectations to carry the torch even further, but how will we significantly change from a stale model of schooling to a richer, more aligned model to address the critical needs?

**Five learning disciplines to bring a culture of change**

Nevalainen, Kimonen, and Alsbury described in their 2014 Finnish National Core Curriculum that to meet the future, Finland’s approach is one “which requires teachers to critically reflect on their own operating principles and practices as well as to renew them, in other words, they have to create a new school context” (p. 215).

Peter Senge, nearly thirty years ago, drafted *The Fifth Discipline: The Art and Practice of the Learning Organization*, and presently he and his team have the 1st revision of *Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education.* It is a whopping nearly 600-page tome with numerous contributors who all set what Senge describes as one of the five disciplines, a **Shared Vision**. This is familiar to us in our schools’ vision statements, but we must continually revisit and refine as our perceptions of what students’ preparation entails is dynamic and flows according to changes in society. It is worthwhile to have school leadership not only consider a school’s vision for the school’s sake, but as a response to what society will need in the future.

However, at the core of this vision, is the understanding that each of us needs our commitment to **Personal Mastery**; and as guardians of our students, we need to embody and share our own learning adventures with students and their families. For if we put limits on our own learning, we’ll teach our students to feel the same way.

The power of aspiration is much greater than the power of desperation. – Peter Senge

One of the most radical concepts presented by Senge is that of **Mental Models**, and our questioning our mental understanding or framework of relationships and causes warrants us to look deeply at disrupting the status quo. For example, if we think that the following linear pattern is always true, a hierarchal flow for change, then we are trapped and void of power to affect change. For when rapid, unexpected changes occur, this model is not sufficient.

**Action**

**Outcome**

**Thinking**

Figure source: http://www.tfzr.rs/jemc/files/Vol2No2/V2N22012-03.pdf

To remain adaptive to new and changing circumstances, schools benefit from reflective conversations about what is working and what could be improved. The means of change may entail casting away old paradigms. An example of this in a corporate model was how Dell Computer decided that they could essentially sell computers just by consumers calling them and Dell sending computers through delivery services. Previously, it was expected that a dedicated sales representative from the company would have to handle each sale. Today, we see Amazon doing similar strategies to the point where it is becoming commonplace. Remember when you had to buy a book only at a book store? How about renting a video? Schools can take some lessons from these examples.

**Team Learning** is acknowledging the value of collaborative approaches to finding solutions. This is valuable within our school systems as well as within the classroom. Students, to be future-ready, need to develop and mature in their abilities so that they can be full participants and even lead teams in cooperative efforts.

Lastly, the scope of reform and optimization necessitates **Systems Thinking** in that teachers need to coordinate between grades and between departments to help students. They need to think like relay racers who pass the baton to the next teachers. No more can anyone blame a teacher from an earlier grade. Each student must be assessed and focus given to any gaps so they can continue to advance and build on previous knowledge. Finding these gaps in learning and addressing them is critical for their esteem and advancement. No stigma should be associated with deficiencies; we must expect that all students can learn if we find the means to open them toward learning.

Systems thinking implies that we quantify and track performance. We attempt to train each learner to be a trainer, and even teachers are students in this regard. The Learning Community of each classroom offers a rich environment where teachers are giving students a requisite curriculum, but time is allotted for independent exploration and sharing of topics that hold an interest for each student.

Our Industrial Age method of feeding information and inhibiting questions, not providing time for processing or deeper analysis has cost a price in many students no longer having a desire to learn beyond the required curriculum or to explore and create in areas of their choice. Many of our schools have dissuaded students from entering the trades or vocations that do not require college degrees. Yet, are these not vocations and knowledge that could be categorized as life skills? Even if precious classroom time is limited, clubs during lunch or after school can offer opportunities to give students an outlet for the curiosity that should kindle in every learner. Research has indicated that socially adept people are naturally curious and tend to connect with people due their curiosity about others.

Changing our systems to allow students to learn by choice and discovery can begin at any level and by any stakeholder. It does not need to be initiated by administration, any teacher, parent, or student. But it can begin with any of them, and the shared vision of addressing what our society needs is the start of finding a direction to prepare our students for a future beyond their dreams.

References

Carter, M. (July/August 2007). Making your environment ‘the third teacher’. *Exchange Early Leaders Magazine Since 1978.,* pp. 22-26. Accessed http://www.earlylearning.prn.bc.ca/wp-content/uploads/Environment-as-the-3rd-teacher.pdf

Finnish Study Tour 2017. (2017). Accessed http://finnishstudytour.blogspot.com/

Garner, B. K., (2007). Getting to got it!: Helping struggling students learn how to learn. Alexandria, VA. ASCD

Nadwi, M.A. (2016) al-Muhaddithat: the women scholars in Islam. Oxford, UK. Interface Publications Ltd.

Nevalainen, R., Kimonen, E. & Alsbury, T.L. (2017). Educational change and school culture:  Curriculum change in the Finnish school system. In Kimonen, E., & Nevalainen, R. (Eds.), *Reforming teaching and teacher education: Bright prospects for active schools*(pp. 195-224). Rotterdam, Netherlands: Sense Publishers.

PEEL School District (n.d.) “Empowering modern learners” Accessed http://www.peelschools.org/aboutus/21stcentury/Documents/Empowering%20Modern%20Learners%20-%2012%20page%20Nov%208.pdf

PEEL School District. (August 2017) Transformational Practices 2.0 (interactive e-book) https://itunes.apple.com/ca/book/transformational-practices-2-0/id1273642294?mt=11

Schwab, K. (2016). The fourth industrial revolution. New York, NY. Crown Business.

Senge, P., Cambron-McCabe, N., Lucas, T., Smith, B., Dutton, J., Kleiner, A. (2012 1st revised ed.) Schools that learn: a fifth discipline fieldbook for educators, parents, and everyone who cares about education. New York, NY. Crown Publishing Group, New York

Schwartz, J. (2017). “Learning to learn: You, too, can rewire your brain. Accessed https://www.nytimes.com/2017/08/04/education/edlife/learning-how-to-learn-barbara-oakley.html

Sheninger, E. C., Murray, T.C. (2017). Learning Transformed: 8 keys to designing tomorrow’s schools, today. Alexandria, VA. ASCD.

Stronge, J. H., Xu, X. (2017). What makes a world-class school: And how we can get there. Alexandria, VA. ASCD.

White House. (2015) Remarks by the president at Every Student Succeeds Act signing ceremony. https://obamawhitehouse.archives.gov/the-press-office/2015/12/10/remarks-president-every-student-succeeds-act-signing-ceremony

World Government Summit. (2017). Government in 2017: Guidebook. Accessed https://www.worldgovernmentsummit.org/api/publications/document?id=d9d092c4-e97c-6578-b2f8-ff0000a7ddb6