**What was then**

Teaching and learning have progressed fast since my early days in the 60s and 70s. I grew up in an environment where the teacher was the embodiment of knowledge, the know it all persona. Students sat silently in rows of desks and chairs rote memorizing everything that was thrown our way. Knowledge was power; the more you memorized, the smarter you were. The brain was like a black box. Educators did not care what was in the black box and how we processed the information, because what was important was how we behaved. The “behaviorism” learning theory focuses on the observable behavior that results from the learning and does not pay much attention to the process. Learning happened when the expected and desired behavior was observed. Teaching then is about controlling the environment to reinforce the proper behaviors.

**What is now**

Fast forward to the early 2000. Two decades of advances in neuroscience research have had an impact on education. Research has highlighted the brain’s functionality and there is a better understanding of how the brain learns. That mysterious black box is being cracked open. The early years of 2000 were marked by the birth of new learning theories, such as inquiry, user design, and constructivism. These active learning theories believe that learning is internally created within the student’s minds, and learning/teaching is negotiated as meaning is constructed.

*The environment*

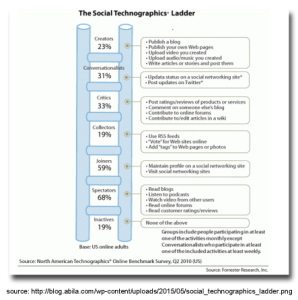
There has been a pronounced shift from the more traditional direct-teaching-based philosophy of a “sage on the stage” to the student-centered philosophy of learning which engages students in active learning and problem solving. Learning environment has been characterized more and more by students seamlessly switching between formal and informal learning environments, in- and outside the classrooms, between different contexts, and between individual and social learning. The internet and the availability, versatility, social interactivity of Web 2.0 tools have, without a doubt, been a main factor contributing to and promoting this type of learning environment.

Characteristics of the learning environment:

* Formal and informal continuous learning, in- and outside the classrooms
* Interactive process of information/knowledge flow where information/knowledge and network of systems/communities connect and grow
* Reinforcement of learning of 21st Century skills
* Technology as a nexus between formal and informal learning environments

*The student*

The learning environment of the 21st Century creates opportunities for students to take advantage of the evolving emerging media literacy and take charge of their own learning as they make connections that are peer supported, and focus on engagement with communities.

[](http://sites.psu.edu/maurakwikpsu/wp-content/uploads/sites/34517/2015/09/social_technographics_ladder_ForBlog.png)Mancabelli & Richardson (2011, pp. 55) offered a spectrum of the levels of participation of students in the online network, from those who participate as consumers to those who make connections and actively engage as creators and producers. This participatory culture adds value which allows students to move up the spectrum, described by the authors as the “Social Technographics Ladder” shown here.

Characteristics of the students of the 21st Century:

* Building bridges among different learning media/infrastructures
* Taking charge of their own learning in authentic, personally relevant context
* Collaborating with others to solve real-world problems
* Using technology for active engagement and collaboration with physical and virtual communities (making internal and external connections that are “friendship-driven and “interest-driven”)

*The teacher*

In the 21st Century learning environment, as the students are shifting their role from just being consumers of information/knowledge, so do the teachers as their roles change in teaching and learning in the digital, network age. Unlike traditional methods of teaching where the focus was on didactic instruction, the teachers of the 21st Century are mentors who facilitate the process of knowledge discovery and reinforce the attainment of 21st Century skills and knowledge by using one of the active learning principles (i.e., inquiry, user-design, constructivism).

The 21st Century learning environment also reflects the need for the teacher to be more active in linking together the formal and the informal environments.

Characteristics of the teachers of the 21st Century:

* Using inquiry, user design, and constructivism theories (active learning principles)
* Facilitating learning
* Effectively and appropriately integrating technology to support learning

*Learning in the 21st Century*

How has this shift in learning environments been impacting student learning? Looi et al (2010, pp. 163) succinctly moved away from the traditional concept of learning of “what you know” to the 21st Century learning of “what you do with what you know” (from consumers of information to producers of knowledge). The authors defined learning as:

* Acquiring relatively permanent change in understanding, attitude, knowledge, information, ability and skill through experience.
* Change in student value and character which can gauge students as lifelong learners and persons-to-be.

Learning happens when students internalize their knowledge and externalize their experiences. Technology and Web 2.0 tools make learning visible by providing artifacts of learning as students reflect, create, communicate and collaborate. In the 21st Century learning environment, technology becomes an essential feature of learning. It allows teachers to access the best teaching materials available. The fast array of delivery methods allows students to choose the best way for how and when they learn. Effective and appropriate integration of technology in learning is a powerful tool that can be used to motivate students as they self-direct their learning, explore, participate actively in the acquisition of knowledge and understanding, engage in social interactions to develop connections not just with the topic at hand but also with other students, critically evaluate the experiences, and develop higher-level thinking. These are 21st Century skills that are key factors to be successful in work and life.

References:

Looi, C.-K., Seow, P., Zhang, B., So, H.-J., Chen, W., & Wong, L.-H. (2010). Leveraging mobile technology for sustainable seamless learning: A research agenda, *British journal of educational technology, 41*(2), pp. 154-169.

Mancabelli, R., Richardson, W. (2011). Becoming a networked learner, personal learning networks: Using the power of connections to transform education, pp. 33-57.

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Over the summer, teachers reflect on the year and often redesign and perfect their teaching strategies and plans. In essence, they get back to the basics of what they believe is the best way to inspire learning in their students -- in other words, they revisit and refine their philosophy of education.

A school district might ask a teacher or principal applying for a job about her or his philosophy of education. In this post, I've decide to share mine, and I am curious to see if any of my beliefs resonate with you. So here they are:

1. Students need to learn.

Students want and need to learn as much as they need food, clothing, and shelter. An educator's primary job is to fill that primal need for learning by creating engaging and relevant learning experiences every day. The greatest gift a teacher can give students is motivating them to experience repeated learning success.

2. Students need to be active participants in learning.

Students learn best by doing, and active teaching encourages active learning. Teachers should treat students as active participants in the learning process, providing them with skills, such as:

* How to study
* How to take notes
* How to memorize
* How to express themselves effectively

These skills will help them be part of a high-performance learning team. Also, students need to be encouraged to explore and research information beyond the confines of the classroom and textbook.

3. Learning is a physiological activity involving the whole body.

The best way to engage a student is to have a solid classroom management plan and a well-planned lesson that is grounded in relevant, purposeful activities designed to enhance that student's knowledge and skills and leave her or him wanting to learn more. Teachers should be strongly aligned with student-centered and student-directed learning that embraces exploration, discovery, experiential learning, and the production of academically rigorous products.

4. Students need timely feedback to improve.

Teachers gather data on student performance to adjust the learning environment and instruction so that they can target students' learning needs. Teachers administer pretests to find a starting point for learning and post-tests to determine the students' increase in performance level as well as the teachers' effectiveness.

5. Students need structure and repetition to learn.

A teacher should be able to organize a standards-based lesson sequence, successfully implement the plan, and then evaluate student learning. A teacher should be able to create an exciting learning environment that makes it difficult for students to not learn. A teacher should know how to include all students in learning at their own level, and a teacher should be able to inspire the students to push themselves to the next level.

6. Students need information, knowledge, and skills.

Having access to knowledge resources is as important to a child's education as the actual curriculum content. Relevant and current information must be at the teachers' and students' fingertips to provide answers when the questions are still fresh. Information "on demand" is more valuable than information "just in case."

7. Students need tools and resources.

Students should know how their *taxon* and *locale* memory systems work. Students should have skills and strategies to be able to work effectively in the different levels of the cognitive domain as defined by Benjamin Bloom. Students should be aware of their own learning preferences, and teachers should assist with creating a plan to develop other learning skills. Educational tools are a means to an end. For example, technology used appropriately can greatly magnify the students' capacity to learn and the teachers' capacity to teach, inspire, and motivate.

Please share your philosophy in the comment section below. Also, if you wish to analyze mine and give me feedback, I would appreciate that, too.