

## Restoring the Joy in Learning

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Each time our grandchildren visit we have the opportunity to observe what is exciting and what is boring. Up to the age of 10 or 12, they visit with a curiosity and energy that fills us with a bit of their energy and excitement. The visits are fun and we enjoy the opportunity to expand the fire of their curiosity.

Then something happens - as they enter the teenage years, their curiosity and excitement dwindles. Each of us has observed this with multiple grandchildren. The question for us, two individuals excited by the opportunities to grow the next generation of folks that will contribute to our social and economic fabric, is what happens to extinguish their curiosity?

We think about to our own youth and remember that we were part of an education system - something that was formal, structured and focused on pushing us to remember our arithmetic tables, correct spelling, and historical facts. One of us was a good memorizer (Gene) while the other was a poor memorizer (Frank) - but both of us struggled to find the fun in education and came to the conclusion that there is no fun in education - simply because its the process of filling our heads with concepts and facts we may never use again. Where is the relevance? Fortunately, we were rebel enough to discover that there was another world - that of learning, and we had fun learning. Learning for each of us was experimental, we tried this and that, We disassembled a motor and could not correctly reassemble it. But our parents were fond of us and became our facilitators, helping us with reassembling a motor or radio or developing photographs or cooking a loaf of bread.

There are very few families today where there is one stay-at-home parent so that fueling curiosity is left to our public and private schools. They struggle with maintaining curiosity but are limited by the requirement that their classes must touch the least talented student while maintaining the excitement of the most talented student.

We believe that the attenuated curiosity of our grandchildren is a reflection of the averaging of the educational process that occurs in the traditional classroom. We believe, though, that with a little imagination, the averaging process can be abandoned in favor of what we call internet-centric learning.

The internet simply reflects electronic connections between computer memories located around the world. Because this memory is electronic, it has a degree of reliability far beyond that of our biological memory. So we ask, why do we insist that our grandchildren memorize the same information we memorized (but rarely used), an exercise in *just-in-case* learning. The internet levels the knowledge playing field. The curious student from a depressed region has access to the same information that the brightest Duke professor has. The only missing link is the facilitator.

We believe its time to revisit our educational paradigm and question the utility of mastering facts we'll rarely use. We believe its time to revisit the relationship between members of our educational programs. We prefer to dismiss the concept of education and replace it with learning. We prefer to dismiss the concept of faculty and students and replace it with a community of learners, senior (experienced) and junior (inexperienced) learners. We prefer to dismiss the concept of broad-based content mastery and replace it with mastery of essential core skills (reading, writing, arithmetic and searchology (the skilled use of google.com)).

Educational reform starts in the home, where parents must equip their children with access to the world's information stores. Education continues in the schools where we can compress the 12 years of primary and secondary education required to memorize basic information to perhaps 6-8 years of understanding basic concepts and supplementing our human memory with the internet memory. Education continues within our universities and professional schools, where we can produce workers that can make significant contributions to society with less faculty and less time than at any time in the past. Why? Because the repetitive actions needed to memorize and then understand will be replaced by the repetitive actions needed to simply master concepts within the context of our internet memory. Moreover, forgetting is less of a problem. Many educators fail to understand that there is a sort of symmetry in learning and maintaining that which we learned. If we rarely use a concept or rarely recall a fact, we forget it. You can view a sort of forgetting curve where the less frequently we use something, the more likely we are to forget it.

For the first time ever, we have the requisite tools for efficiently amplifying our learning and reducing exposure to the forgetting process. By focusing learning within a problem based framework, we know we are learning only that necessary to solve the problem, i.e. *just-in-time* learning. Of course, we are free to learn anything we choose. But if we understand the forgetting process and master the Internet memory and Google, we can efficiently direct our learning while minimizing the destructive effects of forgetting. Internet-centric learning and problem-solving will enhance chasing our curiosity and restore the joy of learning.