



Reason, Individualism, Freedom Institute

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Continued from June:
Global Outsourcing and
Education, Part 2,
Lessons and Lectures



Last month, we discussed American workers' heightened need for adaptability, creativity and great

This month we profile our talented Team Member, Kernon Gibes. Project leader and veteran educator Marsha Familiaro Enright will also continue her multi-part article on education, focusing on lectures and the Three Period Lesson.

• Kernon Gibes RIFI Team Member



Kernon Gibes created the college's website, putting in long hours to master the web software and dealing with Marsha Enright's website creation/maintenance naivete! About the college project, Kernon says "it would be wonderful if it succeeded! Particularly if it was fully functioning when my kids were set to go to college! Anyone interested in Rand's ideas would certainly be interested in a secular college that was fully oriented toward teaching college-level materials objectively."

With a B.A. from Bradley University with a double major in Mathematics and Computer Science and in Economics, and an M.A. in Applied Statistics from the University of Iowa, mathematician and biostatistician Kernon Gibes works as Senior Research Statistician for Unilever.

He arrived at Unilever in 2000 after many years working for G.D. Searle on drug efficacy in-vivo and in-vitro, and at NutraSweet, primarily supporting consumer taste tests.

collaborative skills in today's global markets. As Thomas Friedman argues in [*The World Is Flat*](#), technology has equalized the availability of information, empowering individuals around the globe. What we do with the information will now, more than ever, determine the competitive edge. Consequently it is ever more imperative that education must be about how we think, create and integrate.

"The Gartner Group, the technology consultants, coined a term to describe the trend in the information technology world away from specialization and toward employees who are more adaptable and versatile. It calls them 'versatilists.' Building employee versatility and finding employees who already are or are willing to become versatilists 'will be the watchword for career planning.'...Versatilists are capable not only of constantly adapting but also of constantly learning and growing," says Friedman. These are people who not only have the ability to master technical areas, but can easily adapt and move from one area of expertise to another. What fosters these traits? Research shows:

Broad and deep knowledge as a base for any technical subject
Great observational skills, in all fields (scientific method applied to all work)
Free ranging thought
Excellent reasoning skills
Integrated understanding
Goal orientation
High motivation
Persistence
Psychological self knowledge
Shared Inquiry and Active Listening work skills

To nurture these abilities we must

In 1999, he founded Sensory.org, a website forum devoted to sensory evaluation science.

An avid reader and writer, Kernon has completed a first novel. He lives in Mount Prospect, IL with his wife and two children.

Thanks to Kernon for all his work – he made so much possible.

• **Website Re-Design Funds**

Thanks to **Tony Plasil** of Ventura, California and an **anonymous donor** from Chicago, Illinois for generous donations towards the professional re-design of our website.

Research finds effective website design is key to driving interest and donations. We are looking for additional monies to fully fund the re-design. Donations can be made through Paypal or checks to our street address, 9400 S. Damen Avenue Chicago, IL 60620. *Please contact Marsha at the email address below if you can help with this!*

• **"Lessons and Lectures" continued from left column**

student demonstration.

However, as with most excellent methods, the devil is in the details, which is why the new College's Montessori-based teacher training will make a significant difference.

Lectures will be limited to special occasions and unusual speakers and subjects. As a method, lectures are designed to be easy for the teacher, not the student. They allow the teacher to recount his knowledge in his own style, without feedback or interrupting questions and side issues from the students. Although sometimes necessary, lectures are usually a difficult way to learn because they frequently run counter to human learning tendencies.

Research finds that humans learn best if: 1. They

respect human needs through teaching methods honed to fit learning and development. Over the course of this multi-part article, we will examine ways in which the new College's superior curriculum and methods will do this.

The psychologist and creativity researcher [Mihalyi Csikszentmihalyi](#) (pictured above) notes that human beings have limited mental resources and energy when it comes to paying attention (focusing on material), and these should be used wisely. The new College's methods grow out of the application of Montessori's individualist developmental approach to the adult level of education, [Shared Inquiry](#) (the 'Socratic practice' method used to study the Great Books) and the teachers' passionate curiosity as a learning model will be staples. Constant questioning and the challenge of 'how do we know that' will be others. These principles necessitate teachers of the highest order: those with the utmost respect for their students, who can teach by example and guidance through difficult material. Most of the College's classes will be Shared Inquiry- type seminars, hands-on observation, experiment, and team work. Easily engaging attention and motivation are natural consequences of these methods.

The classic Montessori Three Period Lesson ingeniously engages human attention. To small groups of students, teachers (or 'Guides' as we prefer in Montessori) demonstrate learning materials specially designed to focus attention on an important concept, like rates of change in calculus. Pictures, objects, sounds and machines make the idea vivid. Materials engage the student's whole intellect, sensory-motor and conceptual, thereby powerfully

are highly motivated to learn the material for some personal end 2. They are physically engaged 3. They understand the application of the material to their lives.

During lectures, students must exert an enormous amount of effort to stay focused on what the speaker says, for several reasons. A lecture requires the learner to mostly listen and look a little, and the listening and looking done at a lecture involves little sensory motor work which usually helps cement learning in memory. In other words, the lecture does not engage the whole mind including vivid perceptions and imagination, nor the body of the student. This is one of the reasons visual aids like Powerpoint are preferred – they offer at least some perceptual imagery to attend to during the lecture, as well as to associate with the ideas being conveyed. Also, there is very little interaction between student and teacher, and human interaction usually helps to increase interest, as well as physically engage the student. Lastly, the lecture is aimed at a large or general audience and thus cannot address individual student goals and interests.

The best *teachers* in a lecture format attempt to address human learning needs by weaving their information into a story incorporating drama, character, values, passion, meaning and purpose, a climax and resolution. This method utilizes human tendencies to search for meaning and purpose, connect knowledge acquired to personal circumstances and remember people, places and things more easily than abstract ideas.

These teachers use plenty of concretes to make the information vivid and connected to real experience, and to, at least in imagination, stir perceptual memory and bodily feelings of the student. These help the student feel much more engaged in the material. However, information conveyed in a lecture usually can be gained better and at a more individual pace through reading. 'Face time' with a teacher is more profitably used through guided discussion and exploring student questions and issues, and capable to addressing individual needs.

The best *learners* come to a lecture, motivated to learn for their own reasons. They expend extra effort to come up with their own sensory imagery

imprinting memory. The Guide speaks little, allowing the student to focus and observe the examples carefully. She encourages questions from the student, modeling curiosity and triggering discussion with some of her own questions, mostly when students are not forthcoming. Truly successful teachers are exceptional at listening to student questions, surmising what students need to know, and modeling and encouraging thinking.

After the demonstration, the Guide asks the student to explain what to do with the next example, as the guide goes through the demonstration again. Finally, the guide asks the student to demonstrate the material, turning student into teacher and thereby requiring a more complete level of understanding for the student's performance.

After the lesson, the student is free to pursue more problems and practice on her own time-schedule in order to develop mastery.

A key to this method's success is insuring that the amount of material conveyed at one lesson is not overwhelming to absorb. More frequent, shorter lessons with follow-up exercises are preferable to one long demonstration. Of course, preparing shorter, pointed lessons is far more taxing to the teacher, but systems can be created to make this aspect of teaching less time consuming.

The Three-Period lesson can be adapted fruitfully to many college-level subjects. In fact, some college classes like chemistry use a version of the Three Period Lesson, with the experiment as the final

and examples to concretize the ideas they're learning. As they listen, they maintain an internal dialogue of questions with the lecturer, noting what they don't understand and what they take issue with. They also tend to seek answers to their questions after the lecture.

I'm sure many teachers recognize that this kind of student is rare, usually of high intelligence, strong intellectual ambition and great self-motivation. A long school career of lectures and methods out of tune with learning needs turns most students into something else: motivated mainly by external rewards of grades, adult approval, superior social position and the acquisition of credentials. In the main, traditional methods do not nurture internal motivation and inherent interest in acquiring knowledge - qualities essential in the new global economy.

Unfortunately, lectures are so difficult to pay attention to and psychologically painful for most students that they work hard to avoid them. They seek low-energy ways to fulfill requirements while maximizing grades, such as the use of tape recordings, buying others' lecture notes, or passing multiple choice tests without attending lectures. They more profitably spend their limited attentional resources elsewhere. Sadly, they feel guilt, frustration and often anger for 'failing' to live up to the traditional classroom's expectations, with a nagging disappointment for what they've missed - or should have gotten - from education. Many students desperately need help to become active learners, interested in the material and in charge of their own education. Our program will have ways to develop these qualities in students, even after a lifetime of lectures.

In the next issue we will discuss how the new College's seminars will be specially crafted to emphasize the integration of knowledge across domains - a key to developing the important traits of the 'versatilist.' To be continued.

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