

What Drives Us?

Alan Schoenfeld filmed one of his math students trying to solve a problem. She was a nurse who was never very interested in math until she got hooked on a software program. One of the calculations she was using the program to perform was establishing a slope. If you recall this from high school it is done by dividing the rise (y axis) over the run (x axis). A rise of 5 over a run of 5 (divide 5 into 5) equals a slope of 1. The dilemma comes from trying to calculate a vertical rise since a vertical line has an undefined slope and the X axis then is 0. You cannot divide infinity by zero so the equation fails.

It took her 22 minutes of trying before she finally said “the slope of a vertical line is undefined, ah-that means something now, I won’t forget that.” Alan asked a group of high school students how long they would work on a homework question before they considered it too hard to solve. The answers ranged from 30 seconds to 5 minutes with an average of 2 minutes. This varies by culture. What if a country had persistence inherent in their culture to devote 22 minutes instead of 2? That determination would manifest itself positively in work ethic and all facets of education and that country would excel over those that give up more easily.

This example comes from Malcolm Gladwell’s latest book called Outliers. When I heard it I was struck by the correlation to something that I experienced repeatedly in China but never fully grasped. For several years I taught lighting in Pudong, the financial district in Shanghai. My students were young engineers freshly graduated from Masters programs. They understood the principles of engineering but were now working for a lighting company and needed a lighting education. What amazed me beyond how kind, giving and smart these young Chinese students were, was that they asked more questions than I had ever experienced teaching in the US. I was additionally fascinated by their English skills, so much so that in 2006 we conducted classes without a translator and worked out the few technical terms amongst ourselves. They would study at night and return the next morning to achieve perfect test scores and with additional questions based on their studies. Their appetite for learning seemed insatiable and the commitment to excel shocked me.

Socially they were fun and engaging, inviting me into their homes and to meet their families. We hung out together at restaurants and traveled to interesting villages, markets and tourist attractions. All the time they were inquisitive and wanted to learn. This seems like a generality but in fact it applied universally in my experience in China. Conversely, some groups of students in the States require our company representatives to act as chaperones to prevent them from partying all night and arriving trashed for morning classes. When studying at night is suggested here it elicits laughter, as if so foreign a concept it was a humorous rather than a serious consideration.

One morning over breakfast at the Courtyard in Pudong, I was reading the English version of the *Shanghai Daily*. An article on the front page was addressing the high suicide rate among students. It alluded to the pressure they felt to excel and their

disappointment when they did not achieve their ambitious goals. Studying long hours every day and attending school continuously (without the typical holiday and summer breaks we in America have learned to expect) took from some a heavy toll. These were the extreme consequences of their cultural expectations. They were exceptions as most channeled their drive successfully and seemed at least as happy and content with their lives as their American counterparts.

What can we learn from a culture that is more driven to learn and excel, more persistent at working out problems and values being politely inquisitive until they fully understand?

One of the Dale Carnegie principles is “Arouse in the other person an eager want”. In other words motivate others by helping them to build on your ideas so they can regard them as their own and more eagerly buy-in to them. Americans are at a cultural disadvantage but awareness allows us an opportunity to understand our need for change. The culture in China arouses in their people an eager want. Many reasons exist for this not the least of which would be the educational, vocational and lifestyle advantages for those that excel. While this is true to a lesser extent here, the educational system advances high achievers in China and those with less commitment or ability receive less schooling and are assigned menial jobs. The cities have significantly higher wages but moving to a city requires securing a job there before applying to move. This creates a competitive environment that rewards the highest achievers. The work ethic needed to survive in rural China as a rice grower was evident in their saying “No one who can rise before dawn 360 days a year fails to make his family rich.”

How do we overcome not having these values inherent in our culture and by extension, our lighting companies? We must consciously arouse the desire to excel in our kids and co-workers. What motivates people? That big question has a simple answer. Research shows that the one thing that people want most is to feel valued. This is true in personal relationships and equally true in our careers. We all want to feel that our efforts are understood and appreciated. We want to know that our lives have meaning, that we are contributing something of value.

Too often companies teach employees to perform tasks without conveying how their role interacts with others and impacts the final product. The first time that I sensed how important lighting is to everyone and how much recent generations take it for granted was years ago at Lightfair. David DiLaura was presenting his History of Light and Lighting session. David talked about a rich history including the Jubilee of Light in 1929 where then President Herbert Hoover, Henry Ford, Albert Einstein, Orville Wright, John D. Rockefeller and Madame Curie united to celebrate the 50th anniversary of Thomas Edison’s (also present) electric light which freed the world from flame based sources providing a clean and safe alternative. After the talk I approached Dave and told him how it had affected me and that I wanted to share it with everyone at the company where I worked. He graciously sent me a complete copy with his notes but ultimately came to my workplace to deliver his inspiring message himself.

We in the lighting industry need to be reminded that what we do can improve and even save lives. And everyone involved is working toward that valuable goal. Understanding this is a powerful motivator that will help lighting professionals to want to excel. Money is a motivator but it has no soul, no legacy, no ultimate satisfaction and no lasting value. There is no luggage rack on a hearse. Intuitively we know what makes us feel valued is relationships and helping others. The irony is that by giving without expectation of reciprocation, we ultimately validate our own self worth. Our industry continues to give clean, safe light to the world. We light hospitals, museums and libraries - providing light 24/7 at the touch of a finger. Emergency lighting systems save lives. We are among the first generations to experience this revolution and yet are in danger of forgetting the value of our work and thereby demeaning our efforts. Lighting companies who show value to their workforce and help them to become passionate and convicted about the importance of their jobs are the companies who will succeed.

It took me more than 22 minutes (more like 22 years) to consider this problem of how to overcome motivational deficiencies but the “Oh , I get it” moment is worth the effort. There are applications here beyond lighting, but our industry is at a crossroads so this issue of motivation is especially relevant. We face many problems, not the least of which are economic instability, rapid conversion of our product designs and applications to reduce energy consumption and a growing public impression that lighting is a commodity product to be put in your shopping cart along with the paper towels. We have a history to be proud of and a new challenge toward helping our planets energy crisis by maximizing efficiencies of lighting products. The solution to that challenge addresses all three of the problems noted above. If we save customers money, they will buy our product or service and we will prosper. The new solutions required will not be perceived as commodity because they will look radically different since we cannot solve today’s problems with yesterday’s solutions.

This is not an altruistic message. Sustainability for a company is profit. The win-win scenario here is that companies involved in lighting can continue to bring value and build on the life-changing work done already in our industry by selling new solutions to energy and environmental demands. We can reduce energy use and carbon emissions while continuing to provide a quality of light that affects and improves lives. Passion comes from believing strongly in a cause, like the Green Movement that is inspiring and motivating millions and changing the world around us. We in lighting have a worthy cause. We have a challenge requiring new solutions that will help people and our environment. We have the technology and the ability; what we need is the motivation. If you already have the passion and if you believe in what you are doing, help to create an awareness for all those involved in our industry of the value of their work which will instill the motivation and “eager want” needed to seize this opportunity to perpetuate the legacy of our industry. Over the next year we will be networking with organizations outside of traditional mainstream lighting groups. Optoelectronics manufacturers, environmentalists, alternative energy suppliers and others will need to be educated on lighting. Let’s be ready and motivated to tell them about our proud history and our new solutions.