



Stanford eCorner

Engineering Meets Psychology

Richard Miller, *Olin College*

May 25, 2016

Video URL: <http://ecorner.stanford.edu/videos/4264/Engineering-Meets-Psychology>

Olin College of Engineering's Richard Miller points out how some of the tech industry's most iconic entrepreneurs were not even engineering majors and how the success of Facebook stems from its ability to satisfy a basic need rooted in human psychology, not just technical genius. Miller cites research by others showing that improvisation is a necessary skill for innovation.



Transcript

- One of our colleagues, Tony Wagner at Harvard, recently wrote a book called "Creating Innovators: The Making of Young People Who Will Change the World." Tony's done case studies on this, research based. The bottom line, the skill that you need is learning how to improvise. It's the sort of question that doesn't have a unique answer. It's a question that has lots of answers that we don't emphasize enough in the engineering education. So, who we teach? Are we attracting the right people? 4.9 percent. What about people like Bill Gates? You've heard of Microsoft. What about people like Steve Jobs? You've heard of Apple. What about folks like Mark Zuckerberg? You've heard of Facebook. By the way, what does Facebook sell? Think about that. It's not a thing.

What Facebook sells is an opportunity to tell your personal story to a group of people who you really care about. Who knew there was a business model in there? I'll tell you who knew, Maslow. Have you heard of Maslow the psychologist? He did a study on what are the most important human needs. It turns out that after oxygen and after water, the next most important need is to be the most important person in somebody else's life. And the way we have structured our society today, and the way that we are genetically wired has made that very difficult. You prove that you are the you are the most important, or the tool you use for creating the community and the belonging, is telling your personal story. And yet, as people move away on the other side of the country, and families have more kids coming from single parent homes, there's a lot of need for this. It's basically the insight that made Facebook work. It didn't come, by the way, from a Nobel Prize in physics. It came from that red circle on desirability.

So, it's people in that space that had. By the way, how many of these guys were engineers? Zero. None of them majored in engineering. The math science death march.