Science in the Time of Google and Smartphones

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Today, we do business, communicate and thrive online. Smartphones have made the use of the internet affordable, quick and easily accessible. In a decade (if we consider the first iPhone launched in 2007), almost 9 out of 10 people in South Korea (the country with most users) and 7 out of 10 Americans now have a smartphone. How has the internet and the use of smartphones impacted the way we do science?

We use smartphones daily and have them on 24/7. We all have used the services of a technology company; however, the scientific community has not fully benefited from its use as other areas like business, marketing, music and television. But is there something we can do to increase our productivity or even better our science using the models of technology companies?

In order to get more perspective on this topic, I interviewed Vince Garcia, VP Travel & Lifestyle Services from American Express (AMEX), to get a corporate vision of this new "Google era" and smartphones.

How has business evolved with the use of Internet?

Vince commented, "There are several ways business has evolved. Social networking has enabled companies to interact directly with customers and engage with them in ways that were not previously possible. Apps have made it easier to interact with companies, through e-commerce, customer service, and loyalty. Mobile market research sent out by companies is now more readily answered via mobile-friendly surveys, promoting brand engagement. Geolocation enabled smartphones to provide for a greater degree of local personalization, GPS directions, and on-demand deals."

What are the lessons to be learned from e-commerce and young entrepreneurs?

According to Vince Garcia, there are three lessons to be learned from this "Google Era",

1.- *"Creativity and Innovation"*
"The key to the success of these new ventures is driven by creativity and innovation that disrupts the status quo and is first to market." Google, for example, has different "out of the box" strategies to promote it.

Google Cafés: places that encourage the interaction between employees from different teams, where they can engage in conversations about work in a "relaxed" environment. Does your seminar room look something like this?

Google Conversations: weekly meetings where employees can talk and ask questions directly to the company's leader.

Google 20%: a strategy to work 20% of your time on an idea that interests you but that is not your project. Most of students and postdocs work several years on one or two projects, but what would happen, if they can spend 20% or 10% of their time helping on projects from other lab members, or even from other labs?

2.- *"It does not have to be perfect at launch"*
"An online product does not have to perfect to launch, but has the stickiness to stay relevant and gain followership as it continues to improve and work out the bugs." I am not suggesting publishing unfinished papers, but this statement got me thinking about post-publication peer reviewing, "that calls for continuous moderation of the published research" (http://about.scienceopen.com/what-is-post-publication-peer-review/).

3.- *"Investors know that most of the business ideas could fail"*
"50% of online business survive past 5 years", however, new startups are being created each day, so failures are part of the investment. Before Travis Kalanick (Uber's CEO) revolutionized the transportation industry, he had two start-up failures. In science, there is almost no tolerance for failures, there is no room for negative results. Imagine a research center with a 50% successful rate or a researcher with two failed grants. I am not advocating to support bad ideas, but I think we have a bias towards the previous success of a researcher. Can we trust in a scientist with previous unsuccessful grants? Our fear to fail is an impediment to submit risky, but innovative projects.

Publications, grants, lab managing, supplies and collaboration are areas that we can improve in science. We need innovation and creativity, and new avenues that can help close the gaps between leader groups, new investigators, and under-represented groups. Technology start-ups succeed in changing the way we do business, we listen to music and live our lives. I think is time that we see a change in the way we do science.

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