

The education of Nobel Prize winners

By Eduardo Andere M¹.

The 2012 Nobel Prize edition is over. Most Nobel's awards throughout history have been assigned to people of a country, whose pre-university education is deemed, by the fans of league tables, mediocre or deficient.

In the international league table OECD's PISA game, the US is located at around the mean result. For example, in the latest published PISA results, 15 to 16 years old American students ranked somewhere between the 21 and 29 position in mathematics out of 34 OECD countries. Mexico and Chile are tied at the bottom. Finland and South Korea, meanwhile, top the list. So, the U.S. is closer to the bottom than it is to the top.

Most disappointing is the fact—the critique goes—that US pre-university education is among the most expensive in the world. While Americans spent in 2007 (latest published data) \$ 129,000 per elementary, middle and high school student, the Finns spent 87 000, and the South Koreans 80 000 (OECD 2010). This makes each PISA point cost the U.S., \$87, while Finland and South Korea pay 53 and 49 respectively.

Let's see what happens at the other end of the educational and knowledge pyramid. The Nobel Prize is one epitome of the educational, scientific and technological apparatus. The award is given in five categories: physics, chemistry, medicine, literature, economics and peace. In many cases an award is given to several winners, so there are more winners than prizes. In 2012, for example, there are 10 winners and five awards: two in physics, two in chemistry, two in medicine, two in economics, one in literature and one, peace award, to the European Union.

Of the nine human-recipient awards, five are American by birth, one is Moroccan, one Japanese, one British, and one more, Chinese (literature). And of the eight who have university affiliation (because the literature prize has not so) six are affiliated to U.S. universities.

Historically, from 1901 through 2012, 555 awards have been granted to 863 people, of which 246 are US nationals. From a total of 620 university-related laureates 321 are affiliated to US universities. And if one looks at the top ten universities with Nobel laureates nine of them are American.

China, whose Shanghai province and the Special Administrative Region of Hong Kong, obtained outstanding results in PISA 2009, has a total of 10 Nobel winners in history. Finland, South Korea and Singapore, the top countries in basic and high school education, have earned three, one and zero Nobel Prizes.

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If one delves deeper into science, technology and innovation, the United States shines with most of the production in all three areas. And within the realm of business success in the knowledge era, all, or almost all star companies in the 21st century, which permeate the lives of all of us, such as Google, Apple, Amazon, Intel, Facebook, Dell, Yahoo, Microsoft, Wikipedia, YouTube, PayPal, and Twitter, among others, are of U.S. origin.

So, what is going on? If the Nobel contest is the point of a knowledge iceberg, the so-called quality education assessment of students, schools and teachers is missing something. How come the shooting stars of basic education pale in higher leagues?

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