

### Example 10.3: Engineering - Change the metrics, change the rankings

When the new QS subject rankings were revealed at the end of April, 2015, one Singapore University promoted itself as tops in engineering fields. However, I had already been playing with engineering with the Thomson – Reuters data where I rank it myself and this is what I found.

Using the date range 2009-2014 and a minimum of 1000 articles in the field, Tsinghua is the top university in output in Asia and the world, and Nanyang Technological University is tops in Singapore and in the top ten in the world. Changing the metric to citations per paper (Citation Impact), Universiti Sains Malaysia is number one in Asia and NUS is number one in Singapore and in the top 20 worldwide. Change the metric again to global research reputation, and the University of Tokyo rises to number one in Asia, NUS is in the top 15 and Universiti Sains Malaysia does not have a score.

Change the date range to 2004-2014, Tsinghua is still number one in the world and NTU and NUS are both top ten, with NTU at three. Changing the ranking to citations per paper, only the University of Hong Kong is listed in the top 20 and once again University of Tokyo has the highest reputation.

Now let us look at one specific category within the 18 engineering choices that are available, “Chemical Engineering.” For both time periods, the results are the same: Zhejiang becomes number one in the world in output, NTU in citation impact and NUS in global reputation. Figure 10;3 below is a bubble graph of research reputation for the top ten universities in the world for Chemical Engineering for the time period 2009-2014

As you can see, I could spend all day manipulating the over 30 indicators, the 250 subject areas and play around the weightings, change the time and output limits and come up with hundreds of different stories.

**Figure 10.3 Universities with Top Reputation Scores for Engineering**



(Includes only individual universities and exclude Chinese Academy of Sciences not included in most rankings as an academic institution).

Searched April 30, 2015