

Who Are Leading the World's Top 100 Universities?

Introduction

The importance of research universities to nations' populations and economies is largely undisputed. Of equal interest are issues of university leadership and governance. Major changes have taken place in the sector through increased competition, and subsequently in the role of university leaders. There has been an explosion of literature in the field of university leadership, but there has been little information available about those who actually lead the world's universities, in particular the world's top research universities.

This paper reports on a study that looks at the characteristics of 100 university leaders. It focuses on those running top universities because it is important to understand the actions of successful organisations. A specific question is addressed: are top universities led by top researchers? If the best universities -- who arguably have the widest choice of candidates -- systematically appoint top researchers as their presidents, this could be one form of evidence that, on average, better researchers may make better presidents.

When looking at the individuals who lead the world's top 100 universities it is possible to find both a handful of Nobel Prize winners and a handful of leaders with few or no research citations. It might be thought from this fact that there is no systematic link between research output and university leadership. Yet there is a pattern. A strong correlation exists between the research background of a leader and the position of their university in a world league table.

Identifying a 'Top' Research University

As higher education has become global, in the recruitment of international students and staff, so have league tables. In 2003 the first global league table of universities was produced by the Institute of Education in Shanghai at Jiao Tong University in China (SJTU). The league table was initially generated because the Institute of Education at SJTU wanted to assess how Chinese universities compared with others around the world. (See <http://ed.sjtu.edu.cn/ranking.htm>).

An advantage of the SJTU global ranking is that it is not produced by a newspaper or magazine. The table is compiled using data such as academic or research performance, number of highly cited researchers and the number of prizes. There are, arguably, weaknesses in the SJTU methodology. However, it is undoubtedly the best of a very small bunch.

Universities in the World's Top-100

The 2004 edition of the SJTU global table reveals that universities in the top-100 are dominated by the United States, where 51 of the institutions are located. US universities are unevenly spread across the world's top 100. They dominate the top 20 with 17 universities, and have 30 in the top 40. Of the 100 total, only 4 in the bottom 20 are US-based.

Thirty-seven institutions out of 100 are located in European countries. Of these, 11 are in the United Kingdom, 7 in Germany, 4 in both France and Sweden, 3 in Switzerland, 2 in the Netherlands, and 1 each in Austria, Denmark, Finland, Norway, Italy and Russia. Finally, there are 12 universities in the rest of the world -- 5 in Japan, 4 in Canada, 2 in Australia, and 1 in Israel.

Who are the Leaders?

The nation location of an institution is not always reflected in the nationality of its president. For example, the top 10 universities are found in two countries, US (8) and UK (2), whereas the leaders come from four, Canada, New Zealand, UK, and the US.

There are 15 female presidents among the 100. What is particularly interesting is that six of these are in the world's top 20 universities, and 10 are within the top 50 group. Thus it is more common to find a female leader among the top universities than those lower down in the 100 group. Regarding their location, North America dominates with 9 female presidents in the US and 2 in Canada. The remaining four are in Denmark, France, Sweden and the UK.

Every president in the group of 100 universities has a PhD. The majority have been academics, though two presidents spent most of their careers in non-research positions in industry or government, and a small group went almost directly into academic administration.

It is increasingly difficult to identify the ages of presidents. Some European universities still publish date of birth information, though they are in the minority. Birth dates can be loosely calculated by using individuals' age at graduation from first degree. Using this method it is possible to produce an approximate average age of the 100 presidents, which is 59 years.

It is interesting also to look at the disciplinary backgrounds of the 100 leaders. Fifty-two have come from a scientific discipline. The scientists are dominated by the life sciences at 50%, but there are also 11 engineers, 6 physicists, 5 chemists and 4 computer scientists.

Thirty-seven of the 100 presidents of the world's top universities are social scientists. The largest disciplinary group among the social scientists is that of lawyers, who number 15. Within a second group of 16 there is an even spread of educationalists, political scientists, sociologists and those from public and social policy. Finally, there are 6 economists.

Only eleven presidents are from the arts and humanities. This group is noticeably smaller. Leaders from the arts have been declining in number since the early 1900s when that was the dominant discipline among university leaders.

Top Researchers Lead the Top Universities

Looking at the research history of the 100 leaders by counting their citations (and normalizing for discipline) reveals that there are 12 extremely highly cited presidents who are among the top 250 in their field (see www.isihighlycited.com). These individuals are more common in the top universities. Six are in the top 20 group of universities, 3 in the next 20, 2 in the next and 1 in the fourth quartile. Finally, there are 3 Nobel Prize winners among the presidents (all in medicine) -- two in the top 20 and one in the 20-40 category.

When the citations of each of the presidents are totalled, normalised for discipline and then correlated with the position of a university in the league table we find an interesting pattern. The higher up the university is in the global ranking, the more likely it is that the citations of its president will also be high. Indeed, those leading the top 50 universities are two and a half times more highly cited than those in the bottom 50. And a president in a top 20 university has almost 5 times the citations of a leader in the bottom quintile. In other words, better universities appoint better researchers to lead them.

Conclusion

A simple link between the position of a university and the research history of its leader does not explain causality. Further research is required. These results do, however, suggest that being a good manager and leader is enhanced in a university context if a president is himself or herself a successful researcher. The core business of a university is research and research-led teaching. It may be that a leader who has inherent knowledge of the core business can make all the difference to a university's performance.