Show your university in its best light.
5 things to consider
Executive summary

University rankings can exert a strong influence on student enrollment, research and funding decisions, and an institution’s prestige and collaboration opportunities. Therefore, it is critical that institutions do their best to ensure that the data they aggregate for their institution is clean, accurate, centralized and easy to access and update. Researchers need to be engaged in the process, as do IT, HR and information-management professionals. Working as a team and using dedicated systems, whether home-grown or third party, can help ensure that an institution achieves its best possible ranking, whether they have already achieved a place in the rankings or trying for the first time.
Introduction

University rankings are diverse, imperfect—and powerful. Despite their flaws, they can impact universities’ research partnership and promotion decisions, donor sponsorship decisions, government funding allocations, student enrollment and job recruitment, and other facets of the world of higher education. That’s why it makes sense to gain an understanding of your position in the rankings, or why you are not yet included, and recognize that being proactive in managing your institution’s data will bring a better reflection of its capabilities and reputation.

Even if your university has placed high in its valued rankings, ranking algorithms and methodologies change, as do institutional priorities and research outputs. By understanding the inner workings of rankings, and monitoring them on an ongoing basis, both large and small universities can improve their practices in ways that ultimately will influence their ranking.
No ‘correct’ outcome

Lydia Snover, director of institutional research at the Massachusetts Institute of Technology, wrote in a recent Times Higher Education (THE) blog post:

“Let me be clear: there is no such thing as a perfect university ranking. There is no ‘correct’ outcome as there is no single model of excellence in higher education, and every ranking is based on the available, comparable data, and is built on the subjective judgement (over indicators and weightings) of its compilers.”

An article published in Singapore’s Straits Times provides an example. In 2017, Nanyang Technological University (NTU) placed 11th in one global ranking system, whereas the National University of Singapore (NUS) placed 15th. However, in a different global ranking list for the same year, NUS placed 11th, while NTU placed 25th.

Two years earlier, both NUS and NTU had moved up to the top 13 universities globally. NUS went from 22 to 12, while NTU moved from 39 to 13. Turns out their “dramatic rise” was down to a methodological change in the way the ranking organization counted research citations. Such changes can and do occur from year to year, as there are no standardized, validated measures.

Nonetheless, despite their often wide variation and given their power, your only real mistake would be to ignore rankings altogether. “Rankings have become a fact of life,” Tony Chan, PhD, former president of Hong Kong University of Science and Technology and currently President of King Abdullah University of Science and Technology in Saudi Arabia, said in a recent THE article. “However, we should not set rankings as the target. Instead, universities should use the rankings as a tool to enhance their basic mission... Rankings, when utilized in the right manner, should be a useful reference tool for every university to discover what areas they are doing well in, and what needs improvement.”

With that in mind, this white paper focuses on what universities can do to proactively and continually manage their data so that it best reflects institutional achievements. We also include brief overviews from the websites of selected rankings organizations that are transparent about their methodologies.

To make the most of your efforts to meet ranking requirements, consider the following steps.

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US News and World Report

For best global universities, US News and World Report uses the following indicators:

- 12.5% Global research reputation
- 12.5% Regional research reputation
- 10% Publications
- 2.5% Books
- 2.5% Conferences
- 10% Normalized citation impact
- 7.5% Total citations
- 12.5% Number of publications among the 10% most cited
- 10% Percentage of total publications among the 10% most cited
- 5% International collaboration
- 5% Percentage of total publications with international collaboration
- 5% Number of highly cited papers among the top 1% most cited in their respective field
- 5% Percentage of total publications among the top 1% most highly cited papers

The organization has separate criteria for best US universities, best graduate schools, best high schools, best online programs, best global universities and best Arab region universities.

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1 | Identify the rankings you aspire to or where you want to increase your standing.

The mission of your university as well as practical considerations, such as the need/desire to attract students, faculty, collaborators and funding, will help determine which ranking system(s) you might think about pointing your efforts toward.

If, for example, you’re looking to recruit students focused on research, ”it’s helpful to understand your position in the CWTS Leiden Ranking, a global system based solely on bibliometric indicators,” advises Thomas Gurney, PhD, a data scientist and scientometrician at Elsevier.

If your university is already included in multiple ranking systems, which might be more important to achieving current and future goals? Are you looking for more visibility or collaboration opportunities? More recognition in a particular research area, meaning you will need to focus not only on research quantity in these areas, but also quality? Does it make sense to learn more about and potentially target specific regional rankings?

Having a clear direction will help you focus your efforts on the appropriate input.

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**Maclean's (Canada)**

Maclean’s separates universities into three categories—primarily undergraduate, comprehensive and medical doctoral. In each category, institutions are ranked in five broad areas based on 14 performance indicators with varying weights. Schools with fewer than 1,000 full-time students, those that are restrictive due to a religious or specialized mission and those that are not members of the national association, Universities Canada, are excluded.

- 28% Students (awards, access to professors, satisfaction, etc.)
- 24% Faculty (awards, research grants, research publications, etc.)
- 20% Resources (money available for current student expenses, total research dollars, percentage of budget allocated to libraries, etc.)
- 13% Student support (percentage of budget spent on student services, scholarships, bursaries, etc.)
- 15% Reputation (views of faculty and senior administrators at Canadian universities, high school guidance counselors, etc.)
2 | Ensure your data are centralized, clean and current.

Achieving the best possible ranking on any list requires the most up-to-date, accurate data from all researchers, relevant departments and human resources (HR). Rather than simply relying on self-reported information from faculty, many research-intensive universities have systems and full-time staff dedicated to collecting and managing the data.

Data-driven decisions should be based on both complete and accurate data. To achieve this, QS suggests “Universities need to structure all of their datasets and ‘store’ them in connected ‘data warehouses.’ Additionally, “They should have automated connections with analytics platforms, to allow for simplified analysis of the data, that otherwise would be made too difficult.”

Not every institution can afford to have a dedicated office of institutional research. Some universities have data offices within the office of the vice president for research, or the provost’s office. Others have research management offices that draw in data from across different departments and manage the institution’s research information systems. Sometimes these systems are managed by libraries, often in partnership with research managers.

At most institutions, data input goes beyond articles published in the literature and includes books, conference papers, patents, and trade publications. All this data needs to be appropriately attributed to specific researchers and/or collaborators, and institutions. This is part of the “cleaning” process.

As reported by CWTS Leiden on data quality, “The assignment of publications to universities is not free of errors….. Two types of errors are possible. On the one hand, there may be false positives, which are publications that have been assigned to a university when in fact they do not belong to the university. On the other hand, there may be false negatives, which are publications that have not been assigned to a university when in fact they do belong to the university.”

In the United States, particularly, many university systems have similar institutional names. For example, there are 10 separate campuses associated with the University of California. It’s important to know which of those campuses a researcher is from so their output can be appropriately attributed.

A system such as ORCID, which assigns a persistent digital identifier to each researcher, and provides automated linkages between a researcher and their professional activities, such as manuscript and grant submission, is a useful tool for ensuring that data are accurate and motivating researchers to keep their research records up to date.

Information systems such as Scopus® can “disambiguate” data, ensuring that the same information appears only once, properly associated with a researcher or research team. For example, is the researcher Tom T. Harris, Tom Harris, or Thomas Harris? Are they the same or different individuals? ORCID can help facilitate the process of correcting researcher profiles, including affiliations, as needed, in partnership with entities such as Scopus.

It’s important to evaluate your current model for collecting, cleaning and validating data. Do you need a more centralized system? If so, does that mean investing in and building a home-grown system, or exploring a ready-to-go third-party system such as Elsevier’s Pure or others?

Regardless of what service you use to produce and manage research profiles, it is important to confirm that the service has all available data for every researcher, and that the data is properly associated with the university’s profile.
Tips to achieve first-time rankings

If your institution is not yet ranked, do everything you can to understand why; review the requirements for specific rankings (see the grey sidebars on selected rankings) and set your sights on being included in the next round.

A few tips:
1. Find out why you are not in the rankings. Do you have sufficient publications to meet the threshold? Do you need to become more visible to ranking organizations? Software such as Elsevier’s Scopus can create and/or clean a university profile and ensure it is up-to-date and accurate, whereas a program such as Pure can help by creating researcher “fingerprints,” highlighting their work as well as university achievements and media coverage, and feeding all this information to the major Internet search engines.

2. Check rankings methodologies, as available, to learn what data are important for which ranking organizations. While many rankings are based on research achievements, others also weigh factors such as academic reputation, student retention and costs. See the sidebars in this white paper on selected rankings organizations and their requirements.

3. Use software such as Times Higher Education’s DataPoints, which can analyze where you are compared with other institutions and when, at your current pace of research production, you are more likely to win ranking. Elsevier’s SciVal, which works with Scopus, also enables a university to assess their research performance compared with their peers.
3 | Educate researchers on the importance of double-checking data.

The right software can go a long way toward ensuring that data is appropriately attributed and aligned with data ranking systems use—but it can only go so far. “The final validation needs to be done by the individual researcher,” says Elsevier data scientist Eleonora Palmaro, who spoke at the recent THE Research Excellence Summit in Kazan, Russia.6

“Of course, researchers care about publishing. But they don’t necessarily care about what some refer to as the ‘bureaucracy behind the publication’—namely, the data. We suggest to our partner institutions that they spend some time educating researchers about the importance of clean data, and what it means not only to the university’s profile, but to the standing and visibility of their own profiles.”

University Librarians can play an integral part in data stewardship. Scott Taylor from The University of Manchester Library shares a good example of this in his Library Connect article7 “How rich data and a versatile research information system fuel world-class library research services.” His team focuses “on the high-quality interrelated data, which helps us add value in many ways, from informing research assessments to enriching a researcher’s profile.” As Scott puts it, “We are a little obsessed with encouraging our faculty and students to obtain an ORCID. Our Research Services team runs a training called “7 Steps to Raise Your Research Profile” session where we recommend choosing a primary profile.”

Importantly, if researchers don’t review their data in a timely way, they risk finding errors too late in the process, and it may not be possible to make changes. This speaks to the next point: deadlines.

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**Academic Ranking of World Universities (ARWU)**

ARWU uses six objective indicators to rank world universities, including: Canada, are excluded.

- Number of alumni (10%) and staff (20%) winning Nobel Prizes and Fields Medals;
- **20%** Number of highly cited researchers in 21 broad subject areas
- **20%** Number of articles published in Nature and Science*
- **20%** Number of articles indexed in Science Citation Index - Expanded and Social Sciences Citation Index
- **10%** Per capita performance of the university

* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.
Meet ranking deadlines.

Ranking systems have different deadlines by which all your data must be current, clean and delivered. Very few content corrections can be made after a deadline has passed. “If a content correction needs to be made because something is really wrong, that might be handled,” Palmaro says. “But if it’s something like an author who didn’t put the correct affiliation in a PDF, nothing can be done at that point.”

Therefore, it makes sense to allow enough time to make corrections before the data cut-off point established by the ranking organization. If, for example, data must be collected and captured by May 1, consider having data reviewed and validated by February. This gives you some leeway to make changes, if needed, before it’s too late.

WORLD UNIVERSITY RANKINGS

Times Higher Education (THE)

THE rankings evaluate research-intensive universities across all of their core missions: teaching, research, knowledge transfer and international outlook.

THE uses 13 performance indicators to position more than 1,250 institutions worldwide. Performance indicators are grouped into five areas:

- 30% Teaching (the learning environment)
- 30% Research (volume, income and reputation)
- 30% Citations (research influence)
- 7.5% International outlook (staff, students and research)
- 2.5% Industry income (knowledge transfer)

Varying percentages are allocated to each area and subcategories within each area

Universities can be excluded if they do not teach undergraduates or if their research output amounted to fewer than 1,000 relevant publications between 2013 and 2017 (with a minimum of 150 a year). Universities can also be excluded if 80% or more of their research output is exclusively in one of THE’s 11 subject areas.

A two-minute video provides highlights of the system
"Communication is key to doing your best to meet ranking requirements," Palmaro says. "Internal communications need to be robust and consistent in sending the message that doing what’s necessary is important, even if it’s boring to use tools that can make a difference in where the institution ends up in the rankings." Research managers need to communicate with researchers, all departments need to communicate with IT, and IT may need to connect with HR regarding certain input.

Software also needs to communicate with software—across departments to ensure that all data is seamlessly aggregated, across tasks such as profile creation, and between different systems and departments across the university. Utilizing systems that facilitate integration of accurate data from both internal and external sources, and make this data accessible in real-time, often can save time and reduce needed resources.

External communication also is critical—to third-party vendors and partners who may be helping to facilitate data aggregation, curation and submission, and to specific ranking organization that may require specific information in a very timely way.
Financial Times

The FT ranking has 20 criteria. Alumni responses inform eight of these and 11 are calculated from university data. Criteria include:

20% Weighted salary (average alumnus salary three years after graduation, with various adjustments)

20% Salary increase (average difference in alumni salary from before MBA to now)

3% Value for money

3% Career progress (according to changes in the level of seniority and size of companies now compared to before MBA)

3% Aims achieved (extent to which alumni fulfilled their stated reasons for doing an MBA)

2% Career service (effectiveness of career counseling, personal development, networking events, etc. as rated by alumni)

2% Employed at three months (percentage of the most recent graduating class who find employment within three months of completing their studies)

2% Alumni recommend

2% Percentage of female faculty

2% Percentage of full-time female students

Percentage of female members on the university’s advisory board

4% International faculty

4% International students

2% Percentage of the board with a different nationality from where the school is based

6% International mobility (alumni citizenship and countries where they worked before MBA, on graduation and after)

3% International course experience (exchanges, research projects, study tours, internships in other countries)

1% Number of extra languages required on graduation

5% Faculty with doctorates

5% PhD graduates

10% FT research rank
QS World University Rankings evaluate universities according to six metrics:
40% Academic reputation
10% Employer reputation
20% Faculty/student ratio
20% Citations per faculty, sourced from Scopus
5% International faculty ratio
5% and International student ratio

QS University Asia Rankings use the following metrics:
30% Academic reputation
20% Employer reputation
10% Faculty/student ratio
10% International research network
10% Citations per paper
5% Papers per faculty, sourced from Scopus
5% Staff with a PhD
2.5% Proportion of international faculty
2.5% Proportion of international students
2.5% Proportion of inbound exchange students
2.5% Proportion of outbound exchange students
The bottom line on rankings

Rankings are complex and preparing for them is a time-consuming process that requires allocation of funds and resources. Plus, there are no guarantees that your efforts will produce a result you are hoping for. Is it worth it? Arguably, yes.

In a recent UNESCO publication, Rankings and Accountability in Higher Education: Uses and Misuses, the organization notes, “the explosion of interest in rankings has been outmatched by the volume of criticism from virtually all spheres, including academics, universities, policy-makers, development agencies, education service providers and students. Diverse as these constituents may be, they mostly start with an acknowledgement that ‘love them or hate them, rankings are here to stay.’”

UNESCO goes on to acknowledge the power of rankings and how they are used by the above-mentioned constituents. While calling for methodological improvements, it also places rankings in a larger perspective.

Rankings, it says, “have acted as a wake-up call about the value and importance of higher education, especially for nations who may not have been investing sufficiently.” Further, “with the onslaught of global rankings, the higher education world has become more competitive but also multi-polar. Many more countries are shown to be making a contribution to knowledge creation and dissemination.”

“Ultimately, it matters little whether a stated comparative objective is to ‘rank’, ‘list’, ‘score’, ‘benchmark’ or ‘map’,” the organization concludes. “If such initiatives, regardless of their results or the controversies they provoke, raise the profile and importance of addressing the need for quality monitoring and quality enhancement in higher education, then they have indirectly proven their worth.”

References

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