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Importance of Evaluation Criteria of World Universities Ranking Systems

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Abstract

In this paper, the study examines the importance of evaluation criteria of ARWU, QS and THE Ranking Systems of universities looking into how academic libraries support institutional performance in key global and national ranking systems. The research discloses that libraries are important in facilitating research productivity, teaching quality, internationalization, and student satisfactions, which are the most significant dimensions affecting university rankings. It also documents methodological differences in ranking methodologies, which influence academic library strategic priorities to realign their services to suit different evaluation points. The results highlight the significance of technological adoption, user-focused services, and strategic planning in amplifying the contributions of libraries toward university reputation and competitiveness. The research underlines the imperative for universities to identify and invest in library development as part of comprehensive institutional quality assurance and ranking enhancement initiatives. Through this, academic libraries can enhance their role as critical stakeholders in higher education towards excellence, inclusiveness, and sustainability.

Key words: University ranking, Academic libraries, Assessment Criteria, Evaluation Criteria

1. Introduction

The university ranking has emerged as a powerful driver influencing the strategic orientation and image of universities globally. Amidst this multi-dimensional assessment environment, the position of academic libraries, commonly regarded as the intellectual centers of universities, deserves serious attention. Libraries play a major role in improving different aspects of university performance, ranging from research productivity and teaching excellence to internationalization initiatives and student satisfaction

The evolution of world ranking systems has its roots in the growing demand for accountability, transparency, and benchmarking in higher education. Early initiatives such as the Academic Ranking of World Universities (ARWU) introduced in 2003 by Shanghai Jiao Tong University, and later systems like the QS World University Rankings and the Times Higher Education (THE) Rankings, have transformed the global higher education landscape (Usher &Savino, 2006). While these international systems focus on world-class universities, many countries—including India—have developed their own frameworks to assess institutional quality and performance. Although each ranking system employs different parameters, a common and highly weighted component across nearly all of them is research output. Research productivity—often measured through publications, citations, patents, and international collaborations—serves as a proxy for knowledge creation and global influence (Moed, 2017). Consequently, universities have prioritized the development of research-support ecosystems that enable faculty and students to produce, disseminate, and manage high-quality research. Within this ecosystem, the academic library plays a pivotal role.

Universities across the globe are increasingly concerned with their placement in such rankings because they not only reflect academic prestige but also affect institutional collaborations, research funding, and the ability to attract high-quality students and faculty (Amsler&Bolsmann, 2012). In conclusion, academic libraries have an integrated and dynamic function in university ranking environments. Their roles range from enabling research productivity, improving teaching and learning quality, promoting internationalization, and participating in larger institutional agendas.

2. Evaluation Criteria of World Ranking Systems

2.1 Academic Ranking of World Universities (ARWU)

The Academic Ranking of World Universities (ARWU), also known as the Shanghai Ranking, was the first global university ranking system to gain wide international recognition. It was originally developed in 2003 by the Institute of Higher Education at Shanghai Jiao Tong University (China), with the initial aim of benchmarking Chinese universities against leading world institutions (Liu & Cheng, 2005). ARWU employs six quantitative indicators grouped

into four broad categories: quality of education, quality of faculty, research output, and per-capita academic performance. Each indicator is assigned a specific weight, as shown below (Shanghai Ranking Consultancy, 2024)

1. Quality of Education (10%) – Measured by the number of alumni who have won Nobel Prizes or Fields Medals.
2. Quality of Faculty (40%) – Divided into two indicators:
    i) Staff winning Nobel Prizes and Fields Medals (20%), and
    ii) Highly Cited Researchers (20%) based on Clarivate Analytics data.
3. Research Output (40%) – Measured by:
    i) Papers published in Nature *and* Science (20%), and
    ii) Papers indexed in the Science Citation Index-Expanded (SCIE) and Social Science Citation Index (SSCI) (20%).
4. Per Capita Performance (10%) – Weighted average of the above scores divided by the number of full-time academic staff.

2.2 QS World University Rankings

The QS World University Rankings is among the most influential and widely cited global ranking systems in higher education. It was originally part of a joint venture between Times Higher Education (THE) and Quacquarelli Symonds *(QS)*, which collaborated from 2004 to 2009 to produce a single global ranking. In 2010, the partnership ended, leading to two independent systems: THE World University Rankings and the QS World University Rankings (QS Quacquarelli Symonds Ltd., 2023). Since then, QS has established its own identity, focusing on a broad conception of university excellence that integrates academic reputation, employability, and international diversity along with research performance (Hazelkorn, 2015).

The QS World University Rankings currently employ six key indicators with specific weightings designed to capture different facets of institutional performance (QS TopUniversities, 2024):

1. Academic Reputation (30%) – Derived from a global survey of academics assessing perceived teaching and research quality.
2. Employer Reputation (15%) – Based on a survey of employers evaluating graduate employability and institutional reputation in the job market.
3. Faculty/Student Ratio (10%) – Reflects teaching commitment and resource availability.
4. Citations per Faculty (20%) – Measures research impact using Scopus data.
5. International Faculty Ratio (5%) – Indicates the institution's ability to attract global academic staff.
6. International Student Ratio (5%) – Represents the institution's global appeal and cultural diversity.

3.3 Times Higher Education (THE) World University Rankings

The Times Higher Education (THE) World University Rankings is one of the most comprehensive and influential global ranking systems in higher education. Established in Times Higher Education in partnership with Elsevier's Scopus database and is recognized for its emphasis on both teaching and research 2010 after the Times Higher Education magazine separated from its earlier collaboration with Quacquarelli Symonds *(*QS*)*, THE developed an independent and refined methodology to evaluate universities across multiple dimensions of performance (Times Higher Education, 2024). The ranking is produced annually by the British weekly magazine excellence (Hazelkorn, 2015).

The THE methodology employs 13 performance indicators grouped into five broad areas, reflecting the multifaceted mission of universities. The weightings are as follows (Times Higher Education, 2024):

1. Teaching (the learning environment) – 30%
   Measured through indicators such as the academic reputation survey (15%), staff-to-student ratio, doctorate-to-bachelor ratio, and institutional income per staff member.
2. Research (volume, income, and reputation) – 30%
   Combines reputation for research excellence (18%), research income (6%), and research productivity (6%) based on publications indexed in Scopus.

3. Citations (research influence) – 30%
   Assesses research impact through the average number of citations per publication, normalized across disciplines.
4. International Outlook (staff, students, and research) – 7.5%
   Includes proportions of international students and faculty and international research collaboration.
5. Industry Income (knowledge transfer) – 2.5%
   Measures institutional capacity to attract funding from industry, reflecting innovation and applied research.

The evaluation of universities through global and national ranking systems is based on multiple assessment criteria that collectively measure institutional performance, visibility, and contribution to knowledge creation. These criteria reflect a university's effectiveness in teaching, research, knowledge transfer, and international engagement.

The assessment criteria in university rankings serve as measurable indicators to evaluate academic excellence and institutional competitiveness. Their primary purpose is to:

1. Provide objective benchmarks for evaluating and comparing institutions globally and nationally.
2. Encourage continuous quality improvement through competition and self-assessment.
3. Enhance transparency and accountability in institutional performance.
4. Guide students, policymakers, and funding agencies in decision-making (Aguillo, 2021).

In the global context, these criteria have evolved in response to internationalization, technological advancement, and research-driven economies, where higher education institutions are key contributors to innovation and societal development (Hazelkorn, 2015).

3.4 Comparative Framework of Ranking Systems:

Despite methodological differences, most ranking systems align around a few core parameters

Table No 3.4.1: Major Criteria in Ranking Systems

Ranking System	Major Criteria	Focus Area
ARWU	Quality of education, quality of faculty, research output, per capita performance	Nobel laureates, publications in *Nature* and *Science*
QS	Academic reputation, employer reputation, faculty-student ratio, citations per faculty, internationalization	Balanced between perception and bibliometric data
THE	Teaching, research, citations, international outlook, industry income	Emphasis on research influence and learning environment

(Sources: ARWU, 2024; QS, 2024; Times Higher Education, 2024)

This comparative view demonstrates that research output and impact are central to all ranking frameworks, though the relative emphasis varies. Global rankings tend to rely on bibliometric data (citations, publications, international collaborations).

Conclusion

Across all systems, it is evident that institutions with robust research ecosystems consistently achieve higher rankings. The ability to produce high-quality, peer-reviewed, and widely cited research not only enhances institutional reputation but also contributes to national and global knowledge advancement. Furthermore, research productivity is increasingly linked to open access practices, collaboration networks, and digital dissemination — all of which extend the reach and influence of scholarly work. The integration of digital technologies, online databases, and research software has further strengthened the library's role in enabling evidence-based research and collaboration. Moreover, the focus on plagiarism awareness, research ethics, and academic integrity aligns with global standards of scholarly excellence, ensuring authenticity and trust in institutional research.

By fostering data-driven research, supporting interdisciplinary projects, and facilitating access to high-quality resources, libraries directly influence the parameters assessed by global ranking

systems. They act as strategic enablers, bridging the gap between institutional goals and research performance outcomes.

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