Building a First Class University: the Role of University Library & Knowledge Information Service

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1. National Competitiveness
   - Excellence of Higher Education

1. Global University Rating Agencies
   - THE, QS, ARWU, CWLR, CWTS, and NTU
   - Criteria of Global University Ratings

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1. National Competitiveness

• Excellence of Higher Education
• Competitiveness of Universities
• Public Investment
2. Global University Rating Agencies

- Times Higher Education (THE) World University Ranking
- Quacquarelli Symonds (QS) World University Ranking
- Academic Ranking of World Universities (ARWU) Shanghai Ranking
- Center for World University Ranking (CWLR)
- Centre for Science and Technology Studies (CWTS)
- National Taiwan University (NTU) Performance Ranking of Scientific Papers for the World Universities
2. Global University Rating Agencies

• Criteria of Global University Rankings
  – Teaching: the Learning Environment
    • Reputation, Academic Peer Review, Alumni as Nobel Laureates & Fields Medalists
    • Faculty / Student Ratio
    • Institutional income
2. Global University Rating Agencies

• Criteria of Global University Rankings
  – Research: Volume, Funding, and Reputation
    • Reputation Survey, Employer Reputation, Highly Cited researchers, Papers Published in *Nature* and *Science*
    • Research funding
    • Research productivity, Per Capita Academic Performance of an Institution
2. Global University Rating Agencies

• Criteria of Global University Rankings
  – Citations: Research Impact
    • Citation per faculty
    • Papers indexed in Science Citation Index-Expanded (SCIE) and Social Science Citation Index (SSCI)
2. Global University Rating Agencies

• Criteria of Global University Rankings
  – International Outlook: Staff, Students, and Research
    • International Student Ratio
    • International Faculty Ratio
    • International Collaboration
  – Industry Income
    • Knowledge Transfer
3. Global University Ranking

• Methodology

  – Selected top 10 universities from the global rankings of 2018 and top 10 universities from the Asian rankings of three world-class rating agencies (THE, QS, and ARWU)
    • 14 universities in global rankings, and 13 universities in Asian rankings are listed within the top ten rankings of THE, QS, and ARWU

  – As for global rankings, an average was taken of the universities’ rankings, and the five universities with the best average rankings were selected.
3. Global University Ranking

• Methodology

  – As for Asian rankings, only four universities were common among the three rankings, therefore these four universities were chosen.

  – The University of Hong Kong (HKU) was chosen as an exception because although it was ranked 11th in Asia on ARWU, it was ranked 4th in Asia on THE and 3rd in Asia on QS. HKU’s high rankings on both THE and QS warrants special attention.
3. Global University Ranking

- University Rankings

  - According to average of the three rankings, Stanford University ranked first, Harvard University and MIT both ranked second, University of Cambridge ranked fourth, and University of Oxford ranked fifth.

  - In Asia, Tsinghua University ranked first, National University of Singapore ranked second, University of Tokyo ranked third, Peking University ranked fourth. University of Hong Kong (fourth on THE, third on QS) was selected as an exception.
• Purpose of the study

– This study focused on providing basic information and services that are common to most of the top 10 university libraries with a special emphasis on referencing knowledge and information services.

– This study analyzed the role of libraries in the world’s leading universities and suggests how other libraries can prepare and work towards helping their universities become first-class universities.
4. Libraries of the Global University

• Limitations

– There was difficulty in obtaining data about the libraries’ infrastructure and other background information. Complete data was often unavailable.

– Data contained substantial differences depending on their criteria, period of time, countries, institutions and universities that provide them. These differences made comparative research difficult.
5. Top University Libraries (Global)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Stanford</th>
<th>Harvard</th>
<th>MIT</th>
<th>Cambridge</th>
<th>Oxford</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Staff</td>
<td>2,180</td>
<td>2,400</td>
<td>1,867</td>
<td>1,687</td>
<td>1,791</td>
</tr>
<tr>
<td>Students</td>
<td>16,430</td>
<td>22,000</td>
<td>11,466</td>
<td>19,955</td>
<td>23,195</td>
</tr>
<tr>
<td># of Items*</td>
<td>9.5 million</td>
<td>20.4 million</td>
<td>5 million</td>
<td>8 million</td>
<td>13 million</td>
</tr>
<tr>
<td>Important Characteristics</td>
<td>20 libraries</td>
<td>76 libraries, 800 staff</td>
<td>Open Access Collection</td>
<td>114 libraries, Legal Deposit Library</td>
<td>28 libraries, 560 staff, Legal Deposit Library</td>
</tr>
</tbody>
</table>
### 5. Top University Libraries (Asia)

<table>
<thead>
<tr>
<th></th>
<th>Tsinghua</th>
<th>NUS</th>
<th>University of Tokyo</th>
<th>Peking University</th>
<th>HKU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Staff</td>
<td>3,133</td>
<td>3,816</td>
<td>2,429</td>
<td>7,317</td>
<td>3,013</td>
</tr>
<tr>
<td>Students</td>
<td>36,300</td>
<td>43,504</td>
<td>28,253</td>
<td>42,655</td>
<td>20,203</td>
</tr>
<tr>
<td># of Items*</td>
<td>5 million</td>
<td>2.9 million</td>
<td>9.5 million</td>
<td>11 million</td>
<td>2.3 million</td>
</tr>
<tr>
<td>Important Characteristics</td>
<td>7 libraries</td>
<td>Digitized rare book collection (Open Access)</td>
<td>27 libraries</td>
<td>Largest library in Asia</td>
<td>7 libraries, HKUL Digital Initiative ExamBase</td>
</tr>
</tbody>
</table>
5. Top University Libraries

- Knowledge and Information Services
  - Library Task Force & Strategic Plan
    - Library Implementation Working Group (LIWG) for Harvard University Library, Ad Hoc Task Force on the Future of Libraries at MIT
  - Finding Resources
    - Search engine for library collection providing access to information
    - A one-stop search and delivery solution for quickly accessing library information resources regardless of type, format or location
5. Top University Libraries

• Knowledge and Information Services
  – Academic and Research Support
    • Library services, products, and guidance for faculty in support of instruction
    • Library services for students’ learning as well as a place to work, to find books, articles, course reserves, and relax
    • Research data management / Research front
      – To support future research and to facilitate new discoveries
      – To assist research with data management, curation, sharing and archiving
      – To analyze and publish research frontiers and hot topics of various disciplines based up on the various data sources, including paper published recently, the numbers of papers downloaded and cited, users; retrieve data, users’ focus data
5. Top University Libraries

- Knowledge and Information Services

  - Collections

    - Notable/Special collection, Digital Library/ Collection, Exhibitions/Online exhibits

    - Emphasis on showing the university library’s treasures and how research about them is contributing to major breakthroughs in different disciplines
5. Top University Libraries

• Knowledge and Information Services
  – Digital Humanities / Digital Preservation
    • Integrating digital technology with humanities at the university library and creating an ideal academic environment
    • Exchanging information and discuss certain topics on the intersection of humanities and technology
    • Ensuring digital materials collected by the university library are, over time, reliable, authentic and accessible source of information and research
    • Identifying library needs around digitized images, digital archives and research data
    • Developing a strategy for the future planning as well as testing digital preservation systems to see which best meets the needs
5. Top University Libraries

• Knowledge and Information Services
  – Networks of library space
    • Identify ideal location and environment for study
    • Develop a book delivery system from the main university library to other libraries
  – Library Storage Facility (LSF) / Book Storage Facility (BSF)
    • Great flexibility in managing space and providing easier access to high demand collections
    • The most appropriate printed material is kept in the most suitable and useful location for readers
    • University asset for future research as part of our responsibility to preserve the scholarly record
5. Top University Libraries

• Knowledge and Information Services
  – Institutional Repository (IR)
    • To collect, preserve, and showcase research output of the university researchers and departments through a repository
    • Increase the research visibility of their excellence in research to the world
  – Open Access / Open Research Data
    • Ensuring the widest possible access to research
    • Managing and sharing data produced in research
    • Openly available research data with as few restrictions as possible
    • Providing comprehensive/standardized curation and management services for research data and promoting research data reuse/reproduce/quote and publish
6. The First Class University Libraries

• Roles and Responsibilities

– University’s circulatory system provides the lifeblood of information to every aspect of the academic enterprise

– Libraries were a critical factor that made the university stand out from other institutions by contributing to research and teaching

– Libraries should continue to examine its library systems to make integrated strategic decisions about the digital future as well as how to use library resources to maximize utility to their users.
6. The First Class University Libraries

• Preparation & Efforts
  – Library Task Force on the future libraries
    • Gather input through a variety of formal and information mechanism (open forum, idea banks, etc.) from faculty, students, staff on their visions for the future of libraries and making integrated strategic decisions about the digital future.
  – Open global platform
    • Operate libraries as an open digital platform for sharing of the full range of ideas and outputs associated with the process of research.
    • Such sharing will benefit global scholarship, accelerate discovery and accumulation of new knowledge, and provide unprecedented worldwide access to research.
6. The First Class University Libraries

• Preparation & Efforts

  – Fundraising for the long-term sustainability
    • Renovate and redesigns library spaces based on a renewed mission to support new modes of instruction and collaboration
    • Catalogue, conserve and digitize the valuable holdings and keep its collections open and accessible to future generations
6. The First Class University Libraries

- Preparation & Efforts

  - Openness, Collaboration, Creativity, Innovation, and Human well being
    - To foster openness among world-wide university communities
    - To work with others to identify collaborative solutions to global challenges
    - To foster creative work
    - To make a model for innovation in research libraries
    - To advance human well being
6. The First Class University Libraries

Library Task Force on the Future libraries & integrated strategic plans

Open global platform: a supporting hub across the globe

Fundraising for the long-term sustainability for future generation

First Class University Libraries:
The future of knowledge depends on these libraries. Build new libraries together.

Openness, Collaboration, Creativity, Innovation, and Human well being
See Your Vision.
Hear Your Passion.
Read Your Future.