“Understanding University Research Administrators (URAs) in Japan:

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Kanazawa Institute of Technology

Vice chancellor of RMAN-J
Research administrator and manager network Japan
Today’s Topics

• Background of the necessity of URA function in Japan

• Current situation of URA activity

• A model of essential URA function in University Research dynamics
The reason of the necessity of URA

1. Internationalization, Interdisciplinarization of Research
2. Strong Demand to contribute innovation through research
3. Severe financial situation especially decrease the fundamental (basic) research budget

1. Relative decline the research productivity (Japanese specific)
**Joint-research** with more than 10 private companies/ TU owned patent
Total annual budget; ¥100M (≒$1M)

**Start-up Company** supported by the Ministry
3 years total budget; ¥150M (≒$1.5M)

**National Project**
5 years total Budget; ¥4B (≒$40M) 3 Research fields
with 9 companies

Positive influence

Applied Research

Phase 1. NanoParticle
Supercritical Hydrothermal Synthesis

Basic Research

Phase 2. Hybrid-Particle
Supercritical Hydrothermal Synthesis II

Molecular Particulate System
Phase 3. Thermodynamics
1. Crystallization （結晶）
2. Equilibrium （平衡）
3. Property （物性）
The reason of the necessity of URA

1. Internationalization, Interdisciplinarization of Research
   MEXT academic advisory committee (1973, 1984, 1986)
2. Strong Demand to contribute innovation through research
3. Severe financial situation especially decrease the fundamental (basic) budget
4. Relative decline the research productivity

To acquire adequate research fund, research management:

University’s strategy;
Individual → Organizational
Top 1% Researchers earn 14% of total contract budget

(Tohoku Univ FY2007)

No. of faculty

Ratio of the Faculty Population categorized by annual contract number

- 2,298人 (85%)
- 369人 (14%)
- 18人 (1%)

No. of research contracts per faculty member, per year

- Top rank active faculty members they engage more than 5 research contract in Fy 2007

Top 1% Researchers earn 14% of total contract budget

- 2,298人 (85%)
- 369人 (14%)
- 18人 (1%)

No. of research contracts per faculty member, per year

- ¥2,805,292,354 (86.4%)
- ¥441,124,999 (13.6%)

Ratio of the research budget based on the faculty groups

- 0人
- 1人
- 2人
- 2人
- 4人
- 5人
- 10人
- 12人
- 23人
- 24人

(件数)

(人数)
Varieties of research supporting services
depends on the researchers categories

**General Service**
Accounting, IT Network, Intellectual property, Facilities management

**Customer Dependent Services**
- Funding information, Grant infl.
- Proposal advices etc.

- Support team building with industries, interdisciplinary collaboraters

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活動イメージ
- 科研費など
- 多様な競争的資金
- 競争的資金プロジェクト実施

Order-made service for Active Researcher
- 中堅研究者
- 星研究者
- カリスマ研究者

複数のプロジェクトを並行実施
- 世界レベルの拠点プロジェクトを実施

ドクター、ポスドク
- Post Doc.
- Young researcher

若手研究者
- Core researcher

中堅研究者
- Star researcher

研究に応じた体制、プロジェクトの設計や実務体制の確立、個別案件の特性とメンバーに最適な形での支援（=数は少ないが大型）

2009.4.24 自由民主党・立国調査会・研究開発成果実用化促進PT（RAについて、世界最先端（First）の運営のための組織体制に関する検討）での発表資料（東北大 髙橋真木子）
Revenues of World Top rank Univ.

- Univ. of Tokyo
  - 2006
  - 2014
- Tokyo Ins. of Tech.
  - 2006
  - 2014
- UCB 2006
- UCB 2014
- UCSD 2006
- UCSD 2014
- Stanford 2006
- Stanford 2014
- Caltech (除JPL) 2010
- Caltech (除JPL) 2014
- NUS 2006
- NUS 2014
- Oxford 2006
- Oxford 2014
- Manchester 2008
- Manchester 2014
- LMU 2014
- ETHZ 2006
- ETHZ 2014

↑ JPLを加えた総収入は増加している。

Million US Dollars
Top Univ. Mapping by the Financial diversities and Strength of Top management

<table>
<thead>
<tr>
<th>Strong</th>
<th>Top management</th>
<th>Weak</th>
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</thead>
<tbody>
<tr>
<td>Small</td>
<td>Stanford</td>
<td>Harvard</td>
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<tr>
<td>↑</td>
<td></td>
<td>Central Administrationの人件費拡大</td>
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<td></td>
<td>Administration予算の増加</td>
<td>統合に伴う米国型マネジメントの導入（2004）、授業料収入の拡大</td>
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<td></td>
<td>寄付・投資の増加、Institutional SupportとExecutive Managementへの支出増加</td>
<td>授業料収入、外部資金の拡大</td>
</tr>
<tr>
<td>Large</td>
<td>NUS</td>
<td>Oxford</td>
</tr>
<tr>
<td></td>
<td>法人化と米国型ガバナンスの導入（2006）、給与の自由度拡大</td>
<td>日本の国立大学の取組はこれから</td>
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<td></td>
<td>ETHZ</td>
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</tr>
<tr>
<td></td>
<td>第三者資金割合の拡大</td>
<td>Excellence Initiative/(Institutional Strategy)による全学予算（2006-）、Finance &amp; Business Administration担当Vice President配置による研究者と事務組織の連携強化</td>
</tr>
</tbody>
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日本の国立大学（研究大学）
Today’s Topics

• Background of the necessity of URA function in Japan
• **Current situation of URA activity**
• A model of essential URA function in Research activity
Now in 2016

Good things are

- More than 700 URAs
- Beginning to recognize the necessity of URA functions from FA, researchers.
- Skill set, Training course, Network community (RMAN-J),
Structure of Japanese URA Employee in FY 2015,

Data source:
- 699 URAs. In 69 Univ. and research institutions.
- National univ. 34, Public Univ. 6, Private Univ. 11, National Res. Institutes. 3

1. Sex
- Female 36%
- Male 64%

2. Generation
- Under 40 27%
- 40s 39%
- 50s 17%
- 60s ~ 17%

3. Financial source
- Inside 36%
- Outside 64%

URA allocation survey by MEXT 2015 March 「URA配置に関する取り組み状況について」調査（H27年）
Models of URA organizations structure in US research universities
米国の研究大学におけるリサーチアドミニストレーション組織構造の類型化

A: 伝統的モデル(Classic model)

B: Post-の適正執行を重視したHybrid型

C: Pre-とPost-の断絶を防ぐ統合型(Integrated model)

D: プロジェクトの円滑運営を重視した型(Project-based model)
Organization type of URA office
Centralize or decentralize? Depends on the size?

URA allocation survey by MEXT 2015 March
「URA配置に関する取り組み状況について」調査（H27年）
Important URA function from the evaluation side depends on the Research activity?

![Bar chart showing percentages of research activities in different categories]

- **Research Development**
  - Pre Award: 26.4% (Research intensive Univ., 25.9%)
  - Post Award: 8.9% (Research intensive Univ., 12.5%)

- **Other professional skills**
  - Research intensive Univ.: 6.1%
  - Middle grouped univ.: 4.8%
  - Lower grope univ.: 6.8%

GOOD PROPOSAL, GET $!

※ Categorized by the acquisition of the KAKENHI (Japanese major competitive research fund)

URA allocation survey by MEXT 2015 March
「URA配置に関する取り組み状況について」調査（H27年）

Takahashi KIT 2016
Now in 2016

**Good things are**

- More than 700 URAs
- Beginning to recognize the necessity of URA functions from FA, researchers.
- Skill standards, Network community (RMANj) & training course

**Bad things are**

- Very rare tenure position
- Lack of URA office budget, personnel expenses

To change this situation?

Difficult to evaluate this kind of activity;
management, not be a first author, not be a PI to get external research $\text{M.Takahashi KIT 2016}$

Make clear the URA function, establish the evaluation
Indicators for grasping the benefits of establishing URA functions (using US example as a reference)

<table>
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<tr>
<th>Goals of Japanese URA system</th>
<th>★ Indicators to grasp effectiveness and response measures (US example)</th>
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</thead>
<tbody>
<tr>
<td>1. Establishing good environment for researchers</td>
<td>Required processing time per project</td>
</tr>
<tr>
<td>Securing research times</td>
<td>PI satisfaction level</td>
</tr>
<tr>
<td>Construction of an optimized research planning/execution structure</td>
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<tr>
<td>2. Strengthening research support systematically</td>
<td>Peer Review Program (PRP)</td>
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<tr>
<td>Grasping social needs, promoting use of its benefits</td>
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<tr>
<td>Establishment of strategic external funding cycle</td>
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<tr>
<td>Appropriate response to compliance</td>
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<tr>
<td>3. Increase Diversified career paths for PhD.</td>
<td>Professional Society (SRA, ARMS, )</td>
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<tr>
<td>Staking out new work fields and expanding employment</td>
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<tr>
<td>Interchange of human resources inside/outside the university and between industry, academia and government</td>
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</tbody>
</table>

→★ Appeal clear benefits of URA function is universal issue
Research manager and Administrator Network Japan

- Established in March 2015
- 2016 annual meeting: 400 more attendees.
- 20 universities members & 100 individuals members
- [http://www.rman.jp](http://www.rman.jp) (only Japanese sorry)

Welcome;
2017 annual meeting:
28 & 29th, Aug. in Tokushima Univ.
### Research Development: 3
1. Survey of Science and Technology Policy
2. Research Ability Analysis (Institutional Research)
3. Planning Research Strategy

### Pre-Award: 5
1. Support Res project Planning
2. Collection of Funding Information
3. Internal negotiation for Project Formulation
4. External negotiation
5. Support for Application

### Post-Award: 5
1. External adjustment
2. Progress Management
3. Accounting
4. Support for project evaluation
5. Reporting

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**Other Professional skills**

1. Education
2. International collaboration
3. University Industry collaboration
4. Intellectual Property
5. Institution Branding
6. Public relations
7. Event
8. Safety
9. Compliance

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Every field have **3 levels** (beginner, middle, senior)
- Beginner: 1-5 years experience
- Middle: 5-10 years
- Senior: more than 10 years
Today’s Topics

• Background of the necessity of URA function in Japan

• Current situation of URA activity

• A theoretical framework of essential URA function in Research activity
Theoretical framework understand the URA function in whole Research dynamics

Strategic Planing

Pre-Award

Manag & Admin

Education

Research

Human Resource

Res. Support staff

Res. facilities

Res. Budget

Res.fund(Competitive/Industry)

Operation cost (運営費交付金)

Tuition(授業料)

Licensing/Donation

[Public Asse.]

[Res. related activity]

[Res related activity]

Compliance / Res ethics

Post-Award

Acad.reputation

Social reputation

Innovative reputation

Tech. Transfer Start ups

IR / Res. assesment

Takahashi & Yoshioka ( 2016)
The efficiency to use this framework

To URA practitioners
• Understand their business position in whole research dynamics
  ▶️ easy to collaborate & communicate

To Headquarter of University
• Fined the Key Performance indicators,
  ▶️ help to prioritize the resource.
  ▶️ not too much concentrate on domestic competition, but find their own characteristics, be aware about own growth rate.

Thank you

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