

# International and Domestic Cooperation on Safety Education in Nagoya University

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# Asia University Rankings 2016

*Times Higher Education: The University of Tokyo lost the first position*

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1<sup>st</sup> National University Singapore (SN)

2<sup>nd</sup> Nanyang Technological University (SN)

Peking University (CN)

4<sup>th</sup> University of Hong Kong (HK)

5<sup>th</sup> Tsinghua University (CN)

6<sup>th</sup> Hong Kong University of Science and Technology (HK)

7<sup>th</sup> University of Tokyo (JP)

8<sup>th</sup> Pohang University of Science and Technology (KE)

9<sup>th</sup> Seoul National University (KE)

10<sup>th</sup> KAIST (KE)

11 Kyoto University (JP)

15 National Taiwan University (TW)

23 Tohoku University (JP)

24 Tokyo Institute of Technology (JP)

30 Osaka University (JP)

34 Nagoya University (JP)

46 University of Tsukuba (JP)

48 Kyushu University (JP)

49 Hokkaido University (JP)

*Teaching*

*International Outlook*

*Research Citations*

*Industry Income*

# Asia University Rankings 2016

*International Outlook: The heaviest problem of universities in JP*

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1 <sup>st</sup> National University Singapore (SN) __ 96.2	4 <sup>th</sup> University of Hong Kong (HK) __ 99.5
2 <sup>nd</sup> Nanyang Technological University (SN) __ 94.2	6 <sup>th</sup> Hong Kong University of Science and Technology __ 80.5
7 <sup>th</sup> University of Tokyo (JP) __ 30.3	
9 <sup>th</sup> Seoul National University (KE) __ 30.9	
10 <sup>th</sup> KAIST (KE) __ 33.9	
11 Kyoto University (JP) __ 29.3	
15 National Taiwan University (TW) __ 27.7	
23 Tohoku University (JP) __ 29.3	
24 Tokyo Institute of Technology (JP) __ 31.9	
30 Osaka University (JP) __ 26.6	
34 Nagoya University (JP) __ 27.4	

Barriers to grade up internationality

Problems on language?

Differences on the sense of globalization?

Differences on national characters?

# *New difficulties upon rapid globalization*

*Increasing a number of foreign students without global sense: a shallow idea*

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Old fashioned education and research in the university (former age):

- ♣ It might be possible that a limited number of foreign students or researchers could be educated or trained by a large number of skillful teaching staffs in the campus.
- ♣ Misunderstandings caused by the differences on the culture and nationality might be covered by domestic majority and might not carry out a serious misconduct.

Classical education and research styles in the university upon expanding foreign students:

- ♠ A diversity of nationality and culture may cause a serious misconduct or stress.
- ♠ Misunderstandings between foreigners as well as domestic citizen and foreigner performs may perform accidents.

Modern sense on management, education and research with a sense of globalization:

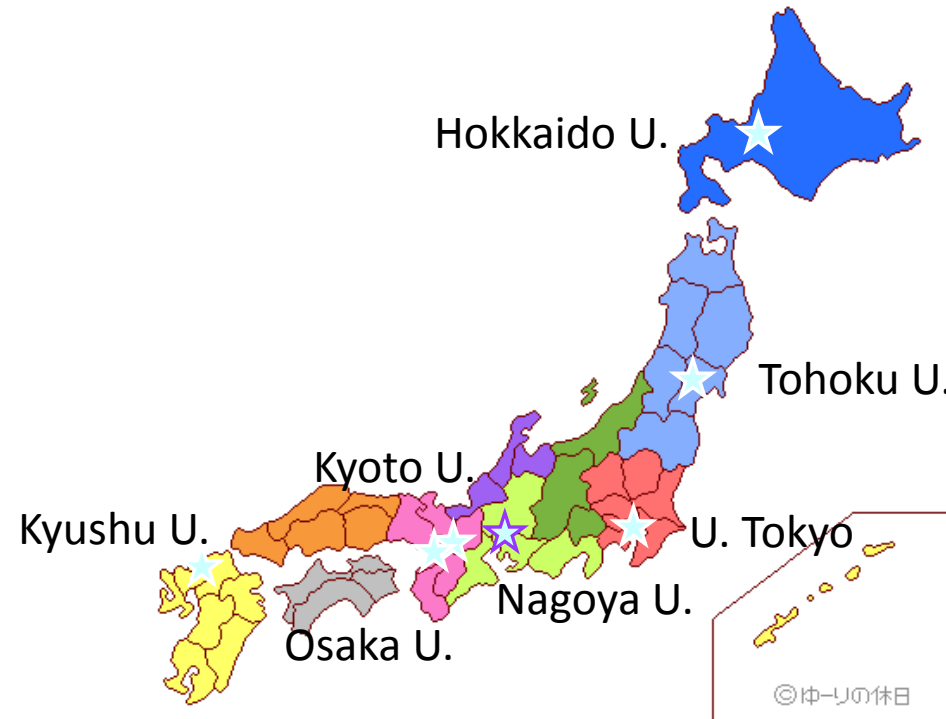
- ♥ Share and adopt successful methods of highly globalized universities (SN and HK).
- ♥ Provide education and training of global standard (language, curriculum and method).

# Short History of National Universities in JP

*Before April 2004*

Until 2004, all national universities and colleges in JP were controlled by MEXT.

MEXT



There has been no department or division where covers campus safety or occupational health in MEXT.



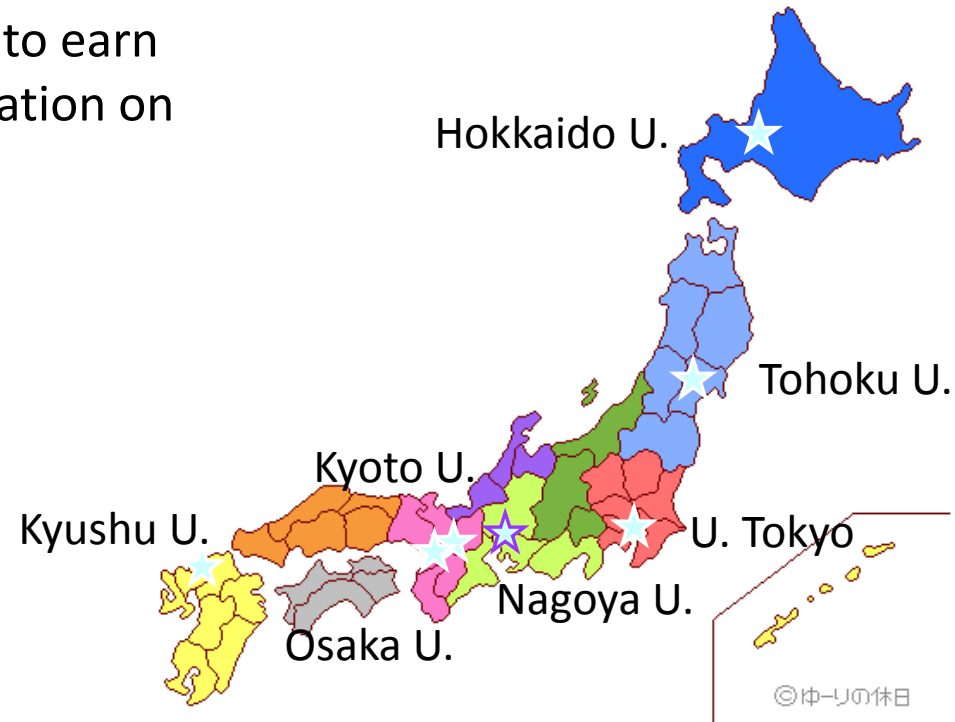
There was nobody who cared about the campus safety or occupational health in each universities.

# Short History of National Universities in JP

*After April 2004*

After 2004, MEXT required all national universities and colleges in JP to earn budget by competition (innovation on education and research).

MEXT



Strong competition occurs not only between universities but also in the same university (even between PIs).

The management system is different at other national universities, even at major university. Discrepancy and difficulty are caused on the campus safety and occupational health management.

# Nagoya University Today

*The last established former Imperial University Japan (1939)*

9 Undergraduate Schools  
14 Graduate Schools  
40 Research Institutes and Centers  
9 Centers in Asia  
5 Overseas Liaison Offices

Staff	
President & Trustees	10
Faculty Members	1,694
Research Staff	203
Specialist	1
School Teachers at Affiliated Schools	39
Administrative / Technical Staff	1,897
Total	3,844



**Main Campus**

Student Enrolment	
Undergraduate	9,893
Graduate	5,979
Total	15,872

May 1, 2015

# *Objectives of university*

## *Academic Charter of Nagoya University*

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### **Academic Charter**

Appreciating the intrinsic role and historical and social mission of universities, Nagoya University, as a seat of learning, hereby defines its fundamental principles of scholarly activity.

Nagoya University maintains a free and vibrant academic culture with the mission of contributing to the well-being and happiness of humankind through research and education in all aspects of human beings, society, and nature. In particular, it aspires to foster the harmonious development of human nature and science, and to conduct highly advanced research and education that overlook the broad sweep of humanities, social and natural sciences. Towards this goal, Nagoya University endeavors to implement a variety of measures based on the fundamental objectives and policies outlined below, and to unremittingly carry out its responsibilities as a pivotal university.

### **1. Fundamental Objectives: Research and Education**

Nagoya University, through creative research activity, shall pursue the truth and produce results of scholastic distinction on the international stage.

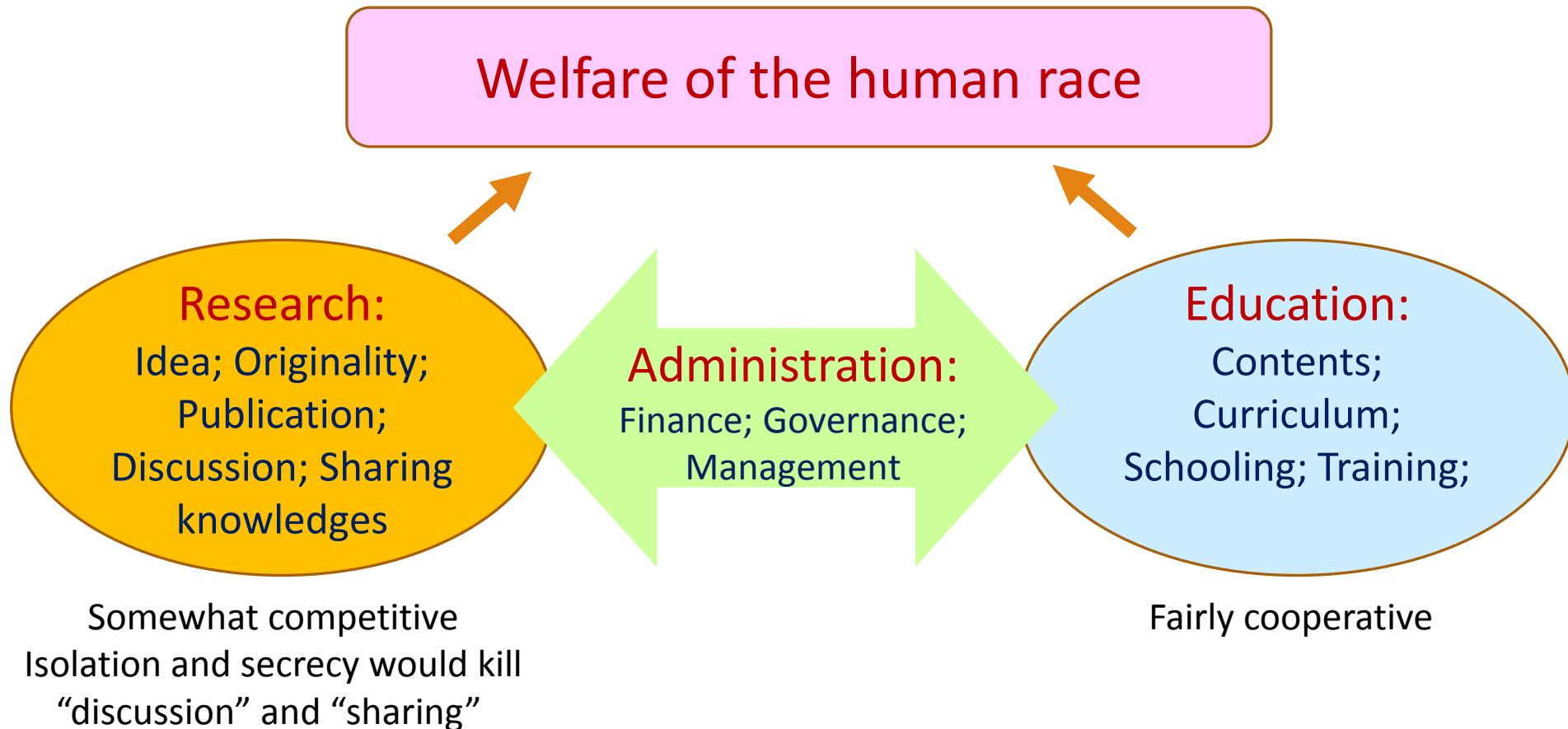
**Nagoya University, through an education that values initiative, shall cultivate courageous intellectuals endowed with powers of rational thought and creativity.**



# Isolationism and secrecy

*A stupid idea for global innovation of university*

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# *International cooperation in Nagoya University*

*Creating a better future*

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Global 30 Program: The Nagoya University Initiative (since 2009)

Education Programs Fully in English: about 600 undergraduate and graduate students, admission examination carried out outside office (7 countries)

Academic Consortium 21 (AC 21) (since 2002)

The global University-Architect: with **19 universities** in **11 countries**

Transnational Doctoral Programs for Leading Professionals in Asian Countries:  
Nagoya University Asian Satellite Campuses (ASCI, since 2014)

Top Global University Project (since 2015)

Developing joint Ph.D. programs with University of Adelaide (AU),  
University of Edinburgh (UK), Lund University (SE).....

# *Cooperation of fundamental business with other universities*

*It's not so easy*

Cooperation and sharing on administration business with other universities is not easy in JP.

- ♠ Many national universities employ own and different management systems: Sharing the business would be fairly difficult even between major universities.



“wrestling”

# *Cooperation of safety management with other universities*

*Domestic partnership makes a grate success*

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☆ **Conference on Environment Protection and Safety Management in 7 Major Universities**

member: Hokkaido, Tohoku, Tokyo, Nagoya, Kyoto, Osaka, Kyushu

subject: EP, SE, OH, HZ, WM, DM

☆ **Conference on Environment Protection and Safety Management in Regional Universities**

member: universities and national institutes in Tokai and Hokuriku area

subject: EP, SE, OH, HZ, WM, DM

☆ **The Academic Consociation of Environmental Safety and Waste Management, Japan**

member: national, public and private universities and national institutes JP

subject: EP, SE, OH, HZ, WM, DM

EP: campus environment protection, SE: safety education, OH: occupational health, HZ: hazardous materials, WM: wastes management, DM: disaster management

# *Cooperation of safety management with other universities*

*Domestic partnership makes a grate success*

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☆ **REHSE** (organized by Prof. Y. Oshima)

member: national, public and private universities and national institutes and companies

subject: SE, lab.-safety

☆ **ACSESS**

member: national, public and private universities, national institutes and companies

subject: management on chemicals

EP: campus environment protection, SE: safety education, OH: occupational health, HZ: hazardous materials, WM: wastes management, DM: disaster management

# Sharing system of accident information in seven universities

Example

Date	Place	Classification	Situation of accident	Damage or injury	First-Aid		
2005/2/9	工学部	発火・発煙	温度を制御する装置を用いて無機半導体を合成する実験の準備を行っていた。あらかじめ、プラスチックの容器に水を張り、温度を30度に設定して恒温状態を保っていた。その間、反応溶液を準備していたところ、センサーまたは温度制御部の故障により、温度が異常上昇し、プラスチック容器に引火し、火災が発生した。	プラスチック容器が破損し、実験台の一部などが発生した火災により損傷した。*火災発生時は研究室は無人。火災警報で火災が判明。	火災警報装置が鳴り、他の専攻の教員並びに守衛室の職員が駆けつけ、発見した学生と共に、消火器(1本)で鎮火した。けが人はなし。		
2005/2/9	医学部附属病院	転倒・転落・激突等	教職員	女性	廊下を歩行中、前を歩いていた外来受診中の患者様が気を失い転倒され、たまたま後を歩いていた同人と接触し、転倒した。転倒の際、廊下に設置されている消火器で右頬部及び側頭部を打撲した。	右頬部及び側頭部疼痛。	本院総合外来 受診。
2005/2/9		有害物等との接触			薬品(トリフルオロ酢酸)を分注中に瓶を倒してしまい、同薬品が顎、首、胸、手にかかり火傷	不休業	トリフルオロ酢酸の試薬瓶に「ドラフト内で使用すること」というラベルを貼った。有害性・腐食性のある試薬の取扱は必ずドラフト内で行うことを研究室で確認した。また、保護具着用の励行も呼びかけた。
2005/2/9		きれ・こすれ・刺し			実験用のピーカーを洗浄中にピーカーが割れ、割れた箇所が手に刺さる。	不休業	ヒビの入ったガラス器具は躊躇せず廃棄するよう心がける。

Almost all kinds of accidents, incidents, or near-miss has been reported from 7 major universities: during schooling, research, sports, or traffic. See: Prof. Yamamoto's presentation

# *Why sharing the accident reports is useful?*

*Repeating the similar accidents*

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There have been 5 fire accidents in Nagoya University for 2 years!

- ♣ Caused by waste containing Pd-C catalyst X 4
- ♣ Caused by tissue paper with vanadium micro particles X 1

Common sense in chemistry: Catalyst for reduction can work on oxidation!

We send the first notice to all chemical users 2 years ago, and the warnings have been published every time just after accidents.··· It might be useful that all chemical users can access the warning just at the time of risk assessment.

Sharing the information between Nagoya U. and NUS is under negotiation.

# *Which information can we offer or do we need?*

*In the case of Nagoya U.*

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*We can offer:*

- 1) Management of hazardous chemicals in laboratories.
- 2) Reinforcement of laboratories (not buildings) against earthquake

We need:

- 1) Methods and contents for safety education and training to foreign students and researchers on the global standard
- 2) ) Methods and contents to teachers in the safety education



Chemistry lab in Tohoku U/03 2011



# *International partnership on safety management with other universities*

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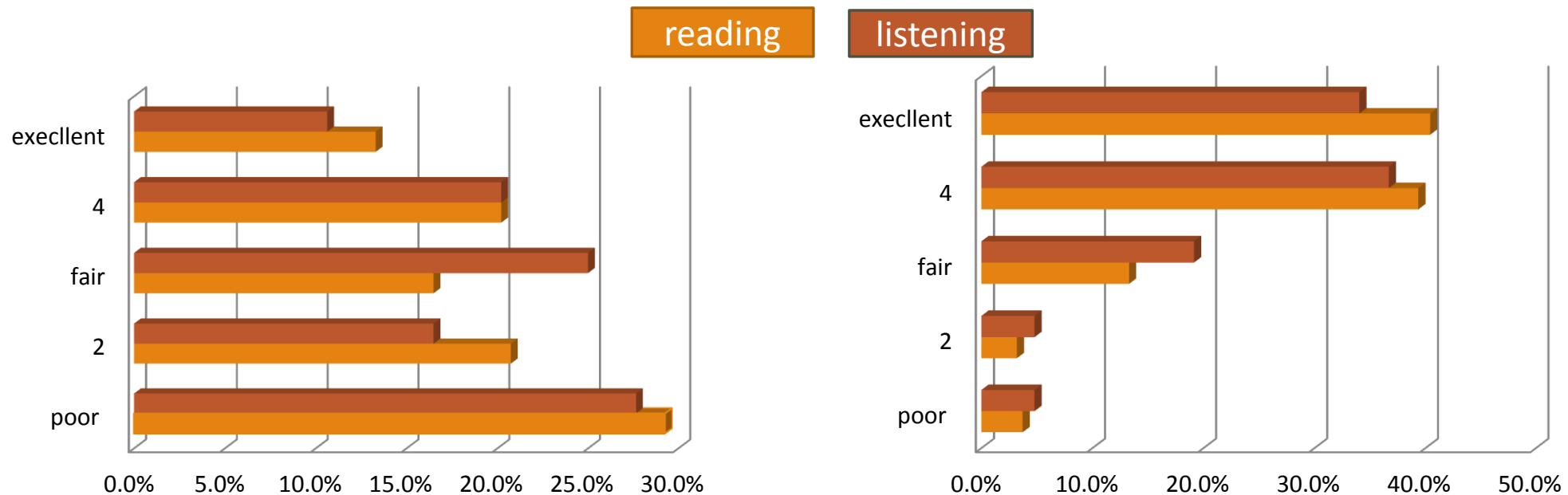
- ♥ National University of Singapore (SN)
- ♥ University of Freiburg (DE)
- ♥ Seoul National University (KE)
- ♥ National Taiwan University (TW)
- ♥ University of Adelaide (AU)
- ♥ University of Edinburgh (UK)
- ♥ ACSEL Meeting
- ♥ ♥

“仲良し”      Friendship

# Questionnaire for foreign students and researchers in Nagoya University

Q1. How would you describe your level of Japanese and English?

Majority of foreigners in the campus could not be educated in Japanese.

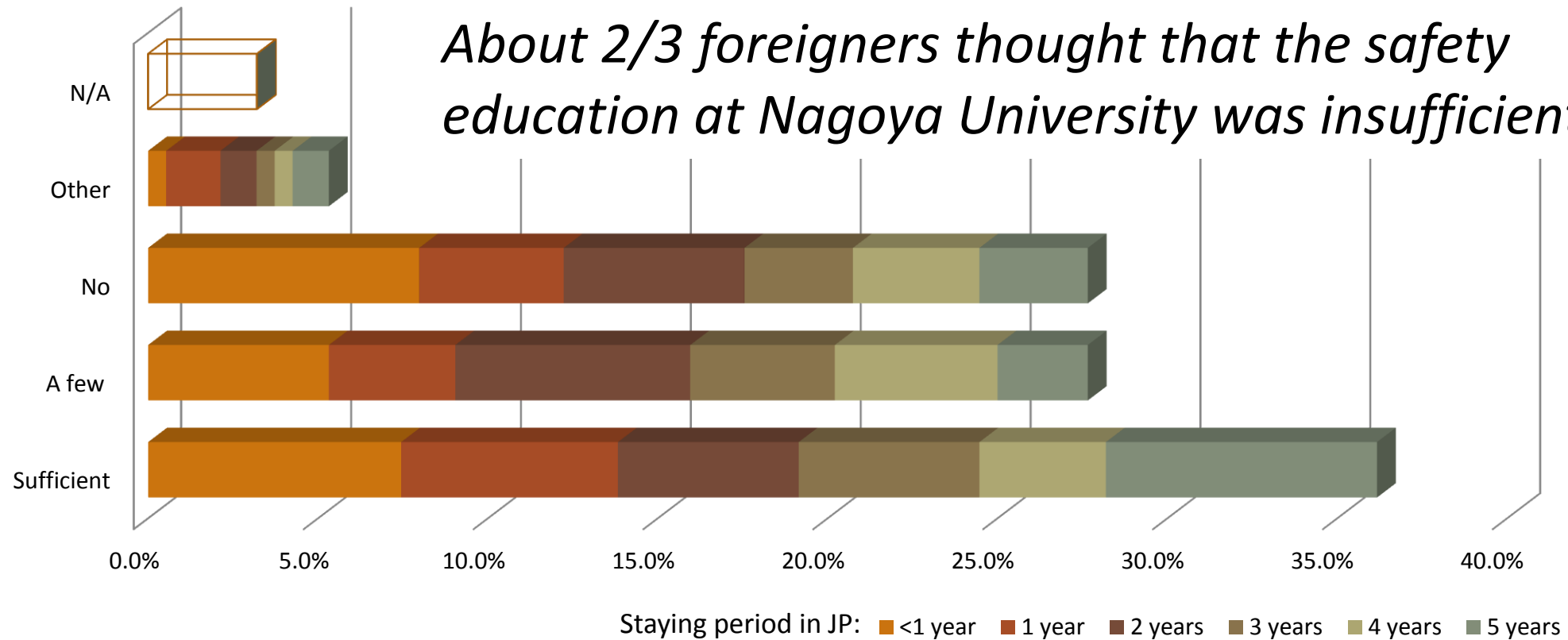


1. Japanese reading ability
2. Japanese listening ability

3. English reading ability
4. English listening ability

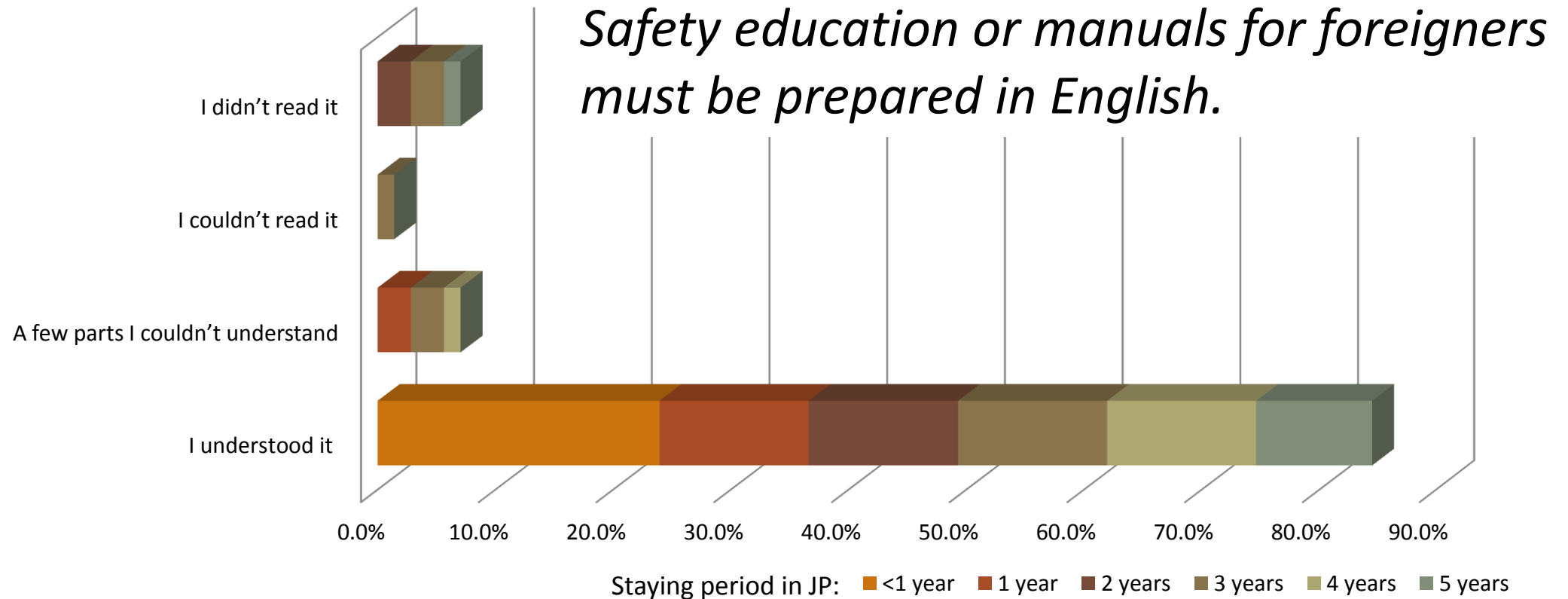
# Questionnaire for foreign students and researchers in Nagoya University

Q8. Did you receive lab safety lectures, lab safety training or the equivalent at Nagoya University?



# Questionnaire for foreign students and researchers in Nagoya University

Q18. Did you understand the information in the English version of the safety manual?



# *Aknowledgements*

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To: Related offices or divisions in the partnership universities and their staffs,

Related offices or divisions in national universities JP

All staffs at EH&S Office, Nagoya University

All staffs at Facilities Control Department, Nagoya University

All staffs at Technical Center for Nagoya University