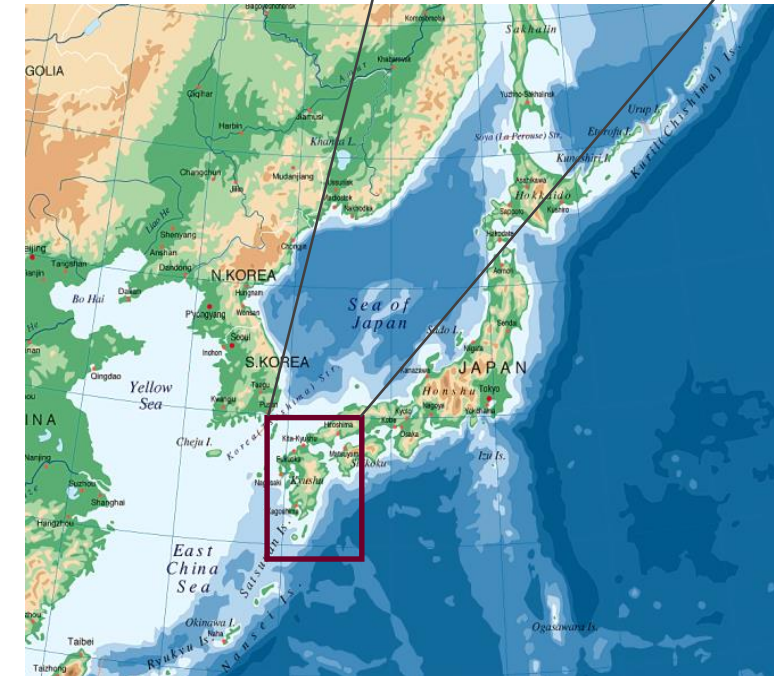


Workshop 4 University Reputation: What Attracts High School Students

The role of University Reputation: what attracts High School Students in Japan?



Masahiro Okamoto, Ph.D.
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The World 100 Reputation Network Annual Conference 2018
(The Univ. British Columbia, Sep 27, 28, 2018)

Kyushu University, Fukuoka, Japan

<https://www.kyushu-u.ac.jp/en>



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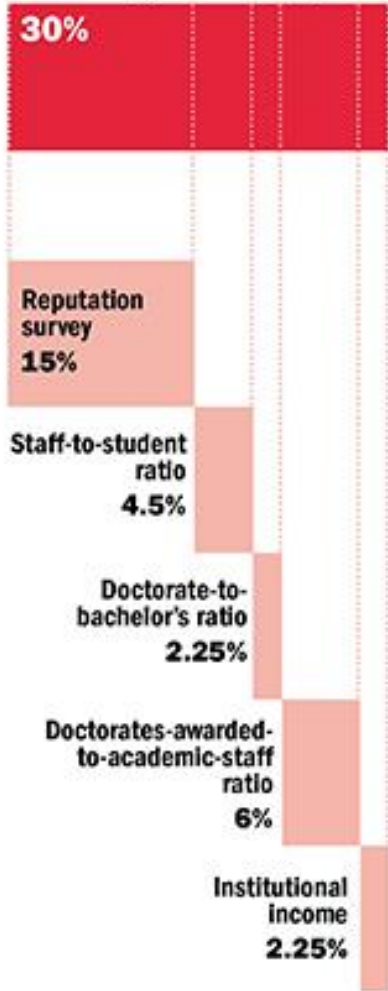
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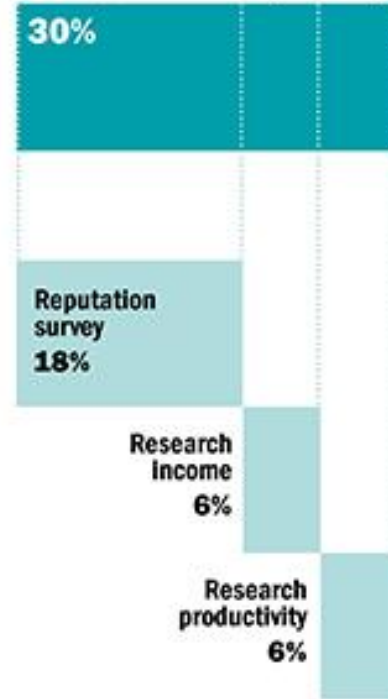
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Performance Indicators of the Times Higher Education (THE) World University Rankings 2018

Teaching (the learning environment)



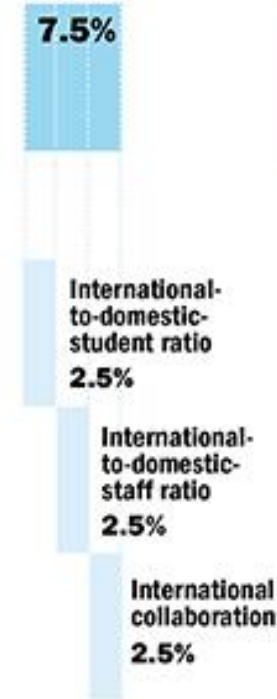
Research (volume, income and reputation)



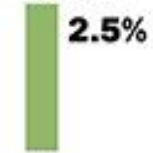
Citations (research influence)



International outlook (staff, students, research)

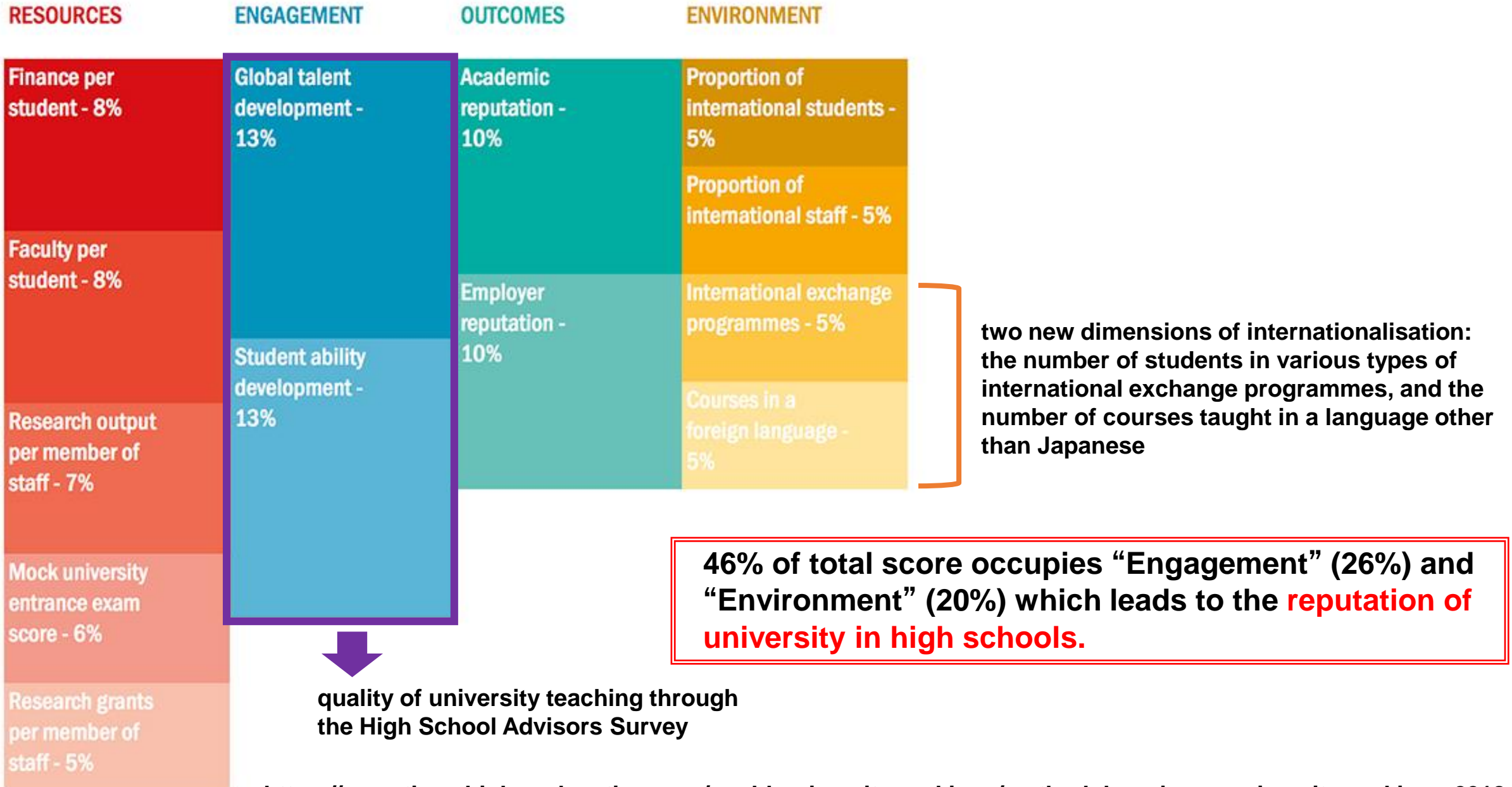


Industry income (knowledge transfer)



judge **research-intensive universities** across all their core missions: teaching, research, knowledge transfer and international outlook

Performance Indicators of the Times Higher Education (THE) Japan University Rankings 2018



Overview of Universities in Japan

- No. of graduated high school students: 1,075,000 (2017 FY)
- University entrance rate: 54.8 % (2017 FY)
- 18 years old population: 2.05 millions (1992 FY) → 1.18 millions (2014 FY) → 1.03 millions (2018 FY)

Major factors for the selection of undergraduate schools (through high school teachers in Japan survey)

at this present

Major Factor	rate(%)
difficulty level	68
career paths	39
entrance exam. subjects	36
department/division	35
education/teaching	35
notability	20
school expenses	15
research	14
school location	12
3 policy (AP, CP, DP)	10
licence	7
school circumstance	6

hereafter (expected)

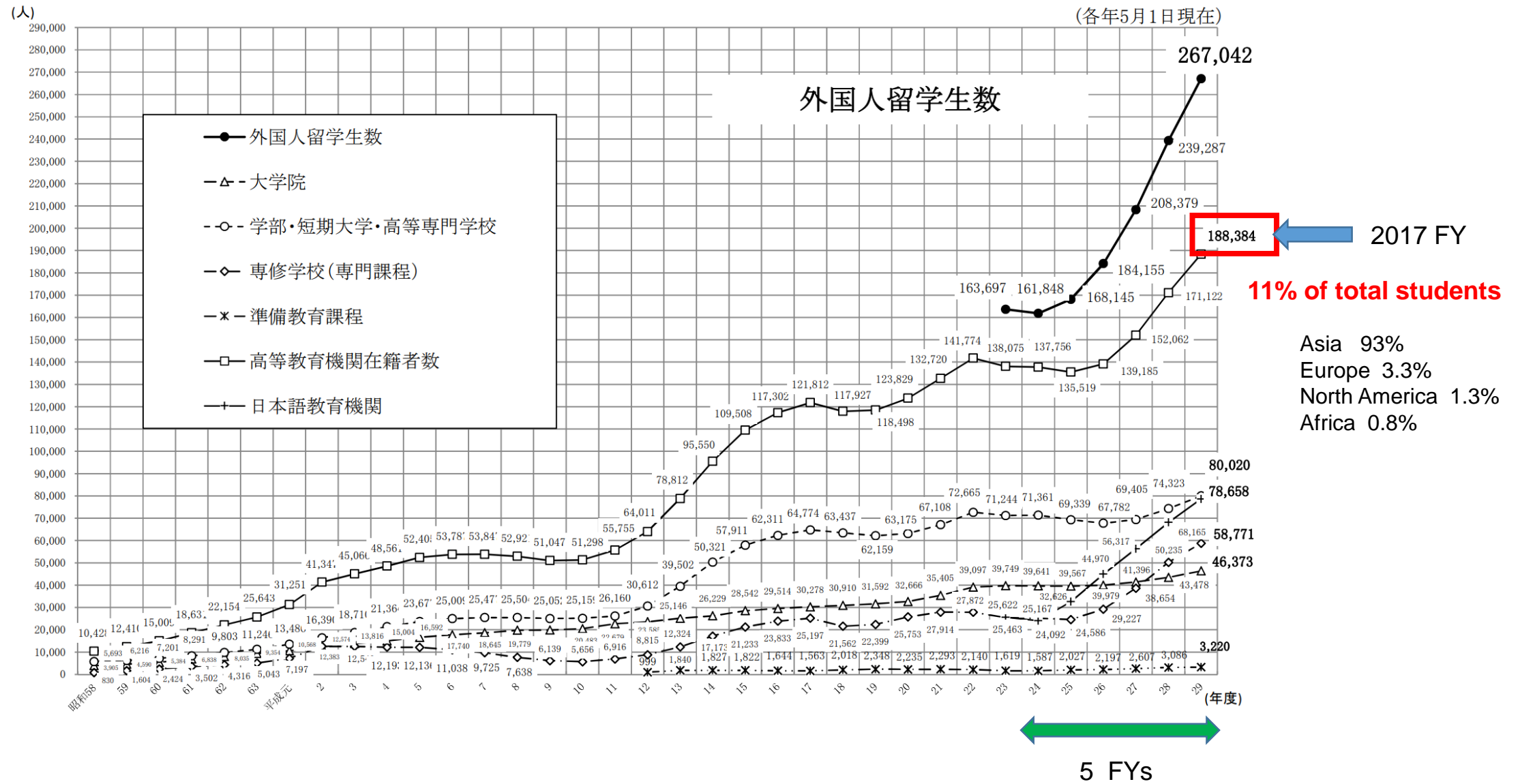
Major Factor	rate(%)
3 policy (AP, CP, DP)	44
career paths	39
department/division	35
education/teaching	35
difficulty level	32
notability	20
entrance exam. subjects	18
school expenses	15
research	14
school location	12
licence	7
school circumstance	6

difficulty level:

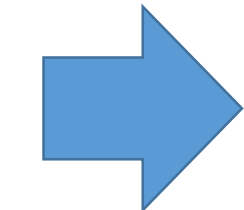
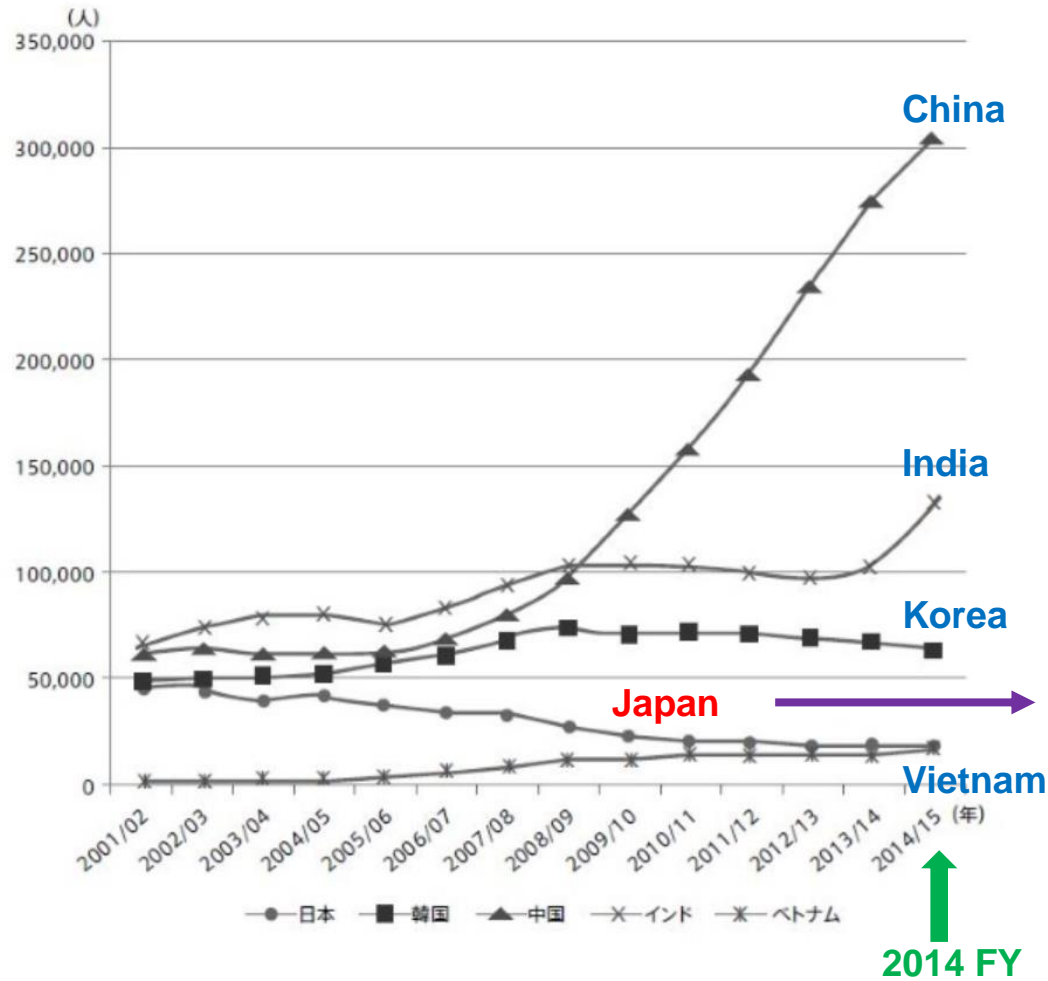
$$\text{Deviation Value} = \frac{50 + (\text{score} - \text{average})}{\text{S.D.}}$$

In Japan, since every school in universities is ranked by deviation value, high school teachers advise each student the selection of schools (universities) according to his (her) deviation value of several nationwide mock exams. .

Transition of the number of overseas students in Japanese universities



Transition of the number of overseas students in US universities



Present Efforts by Ministry of Education, Japan for Globalization Accelerates

- **Top Global University Project**
- Assign SSH (Top Scientific High Schools)
- Assign SGH (Top Global High Schools)
- Assign SPH (Top Professional High Schools)
- Scholarship of Tobitate!
(Leap for Tomorrow) Study Abroad Initiative

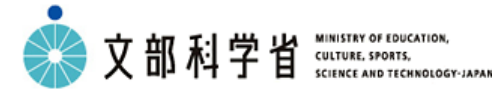
inward-looking tendency
(reluctance about being
dispatched to overseas)



Top Global University Project (2014-2024)



Aiming to enhance the international compatibility and competitiveness of higher education in Japan.

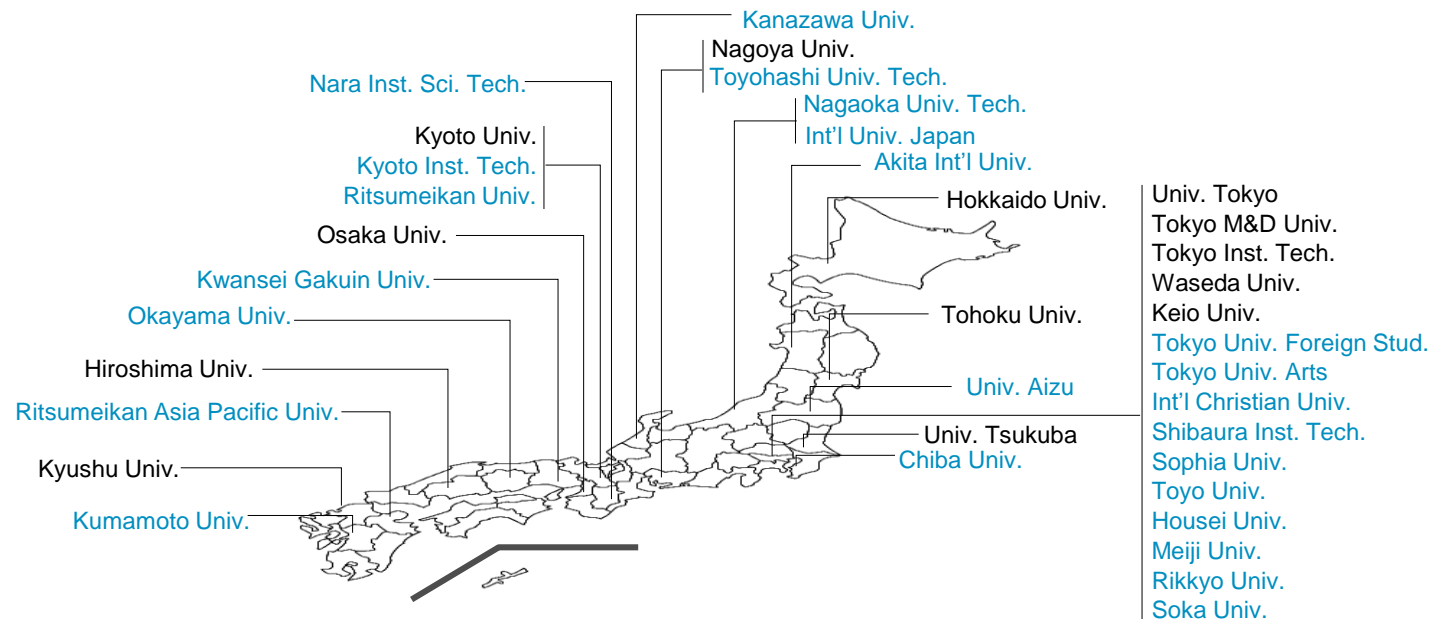


Type A (Top Type) 13 univs.

= The top type is for world-class universities that have the potential to be ranked in the world university rankings.

Type B (Global Traction Type) 24 univs.

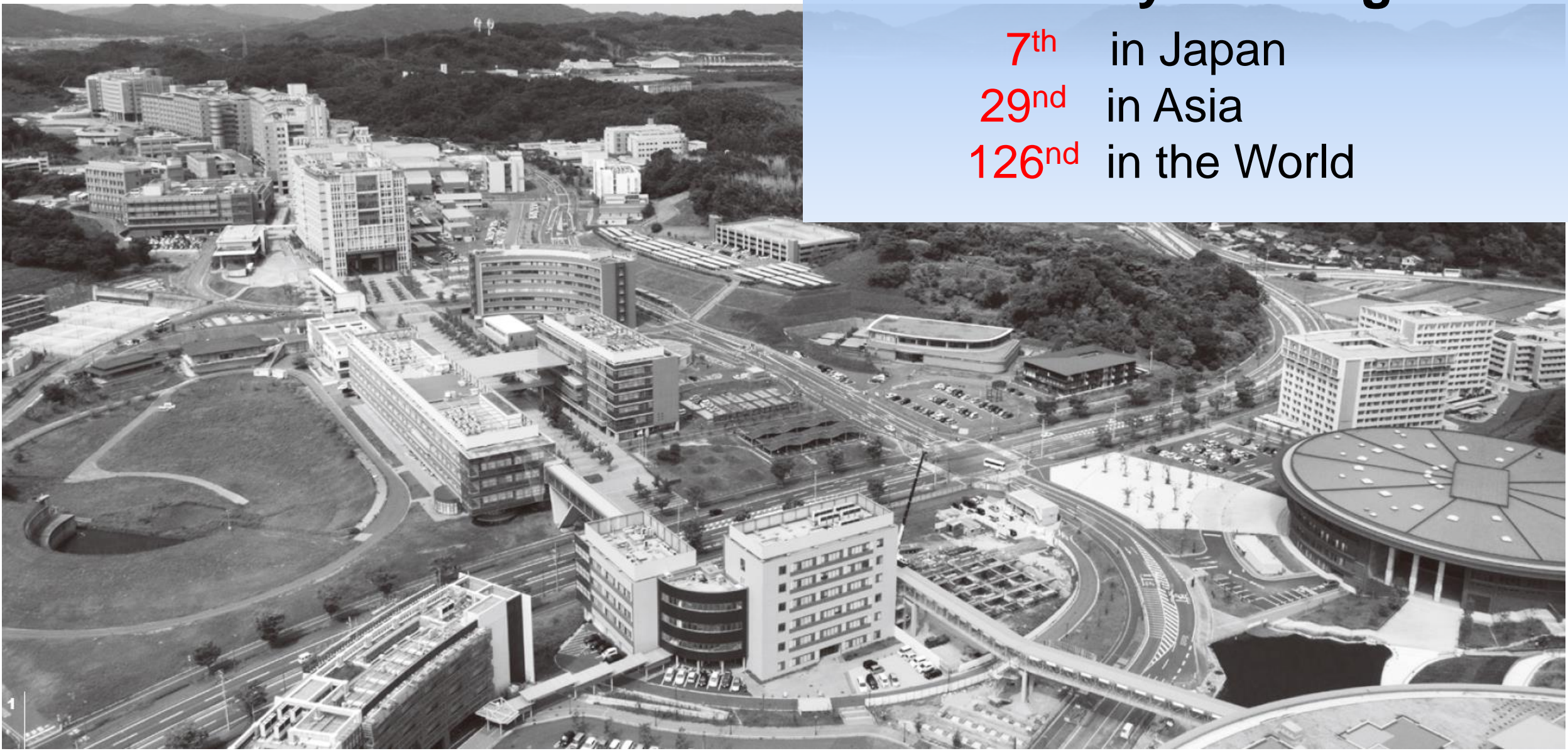
= The Global Traction Type is for innovative universities that lead the internationalization of Japanese society, based on continuous improvement of their current efforts.



Kyushu University, Fukuoka, Japan

QS University Rankings 2019

7th in Japan
29nd in Asia
126nd in the World



Main Campus in Kyushu University
Strategic Hub Area for top global Research
and Education, Kyushu University (SHARE-Q)



Activities

Housing Share

Mixed lodgings



Education Share

Shared classes with top world universities



Class Share

Establishment of a new international undergraduate school



Supervisor Share

Invitation of world's leading researchers; internationalization of multiple supervisory system



Project Share

Research exchange programs at the international research hubs; overseas training for young generations

Student Share

Overseas exchange programs with partner institutions



Career Design Share

Tailor-made career support

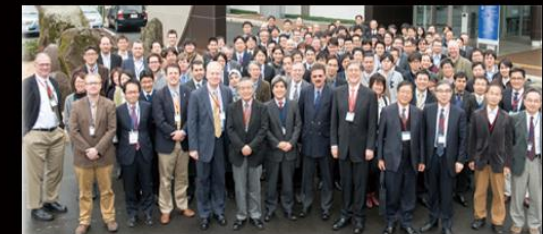


Review Share

Internationalization of external evaluation committees

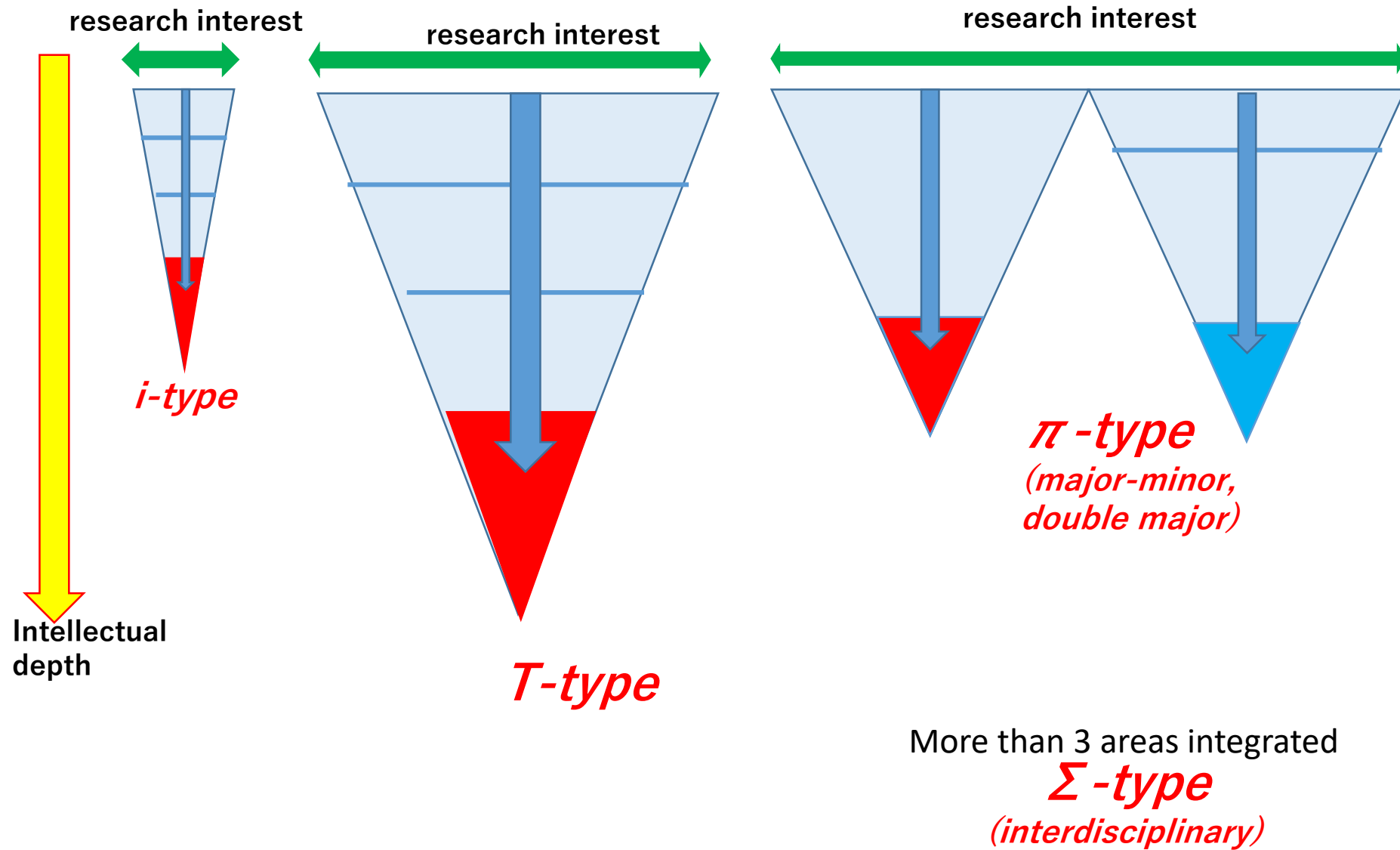
Symposium Share

International symposia bringing together world-leading researchers



Top Global Hub
Campus

Discipline-Based Learning



What attracts high school students ?

(Background)

- The most of the high school students in Japan have to **decide the course selection at admission to one year after, either Natural Sciences or Social Sciences followed by the curriculum selection and school selection at second grade according to their deviation score of exams.**
- Many of the high school students cannot decide strictly what school they want to go during their high school days; they **need to “late specialization system”** during their undergraduate school days.
- Most of the schools (undergraduate schools) in Japan have **first 1.5 years for learning liberal arts and sciences** followed by the **study of special research curriculums in latter 2.5 years.**; short periods for studying liberal arts and sciences.
- The objective of **conventional education at the university in Japan is to study and to investigate the principles in the each major research area.**



After the students had graduated university, many of them have to confront with difficult problems which can not be solved only by the knowledge and technics in one special research area.

What kinds of problems in the world ?



**National
particularism**

**Ethnic / Religious
conflict**

Immigrations

**Depletion of food
supply and energy
resources**

Terrorism

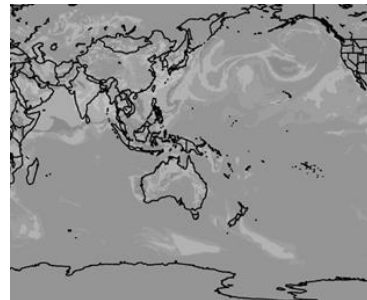


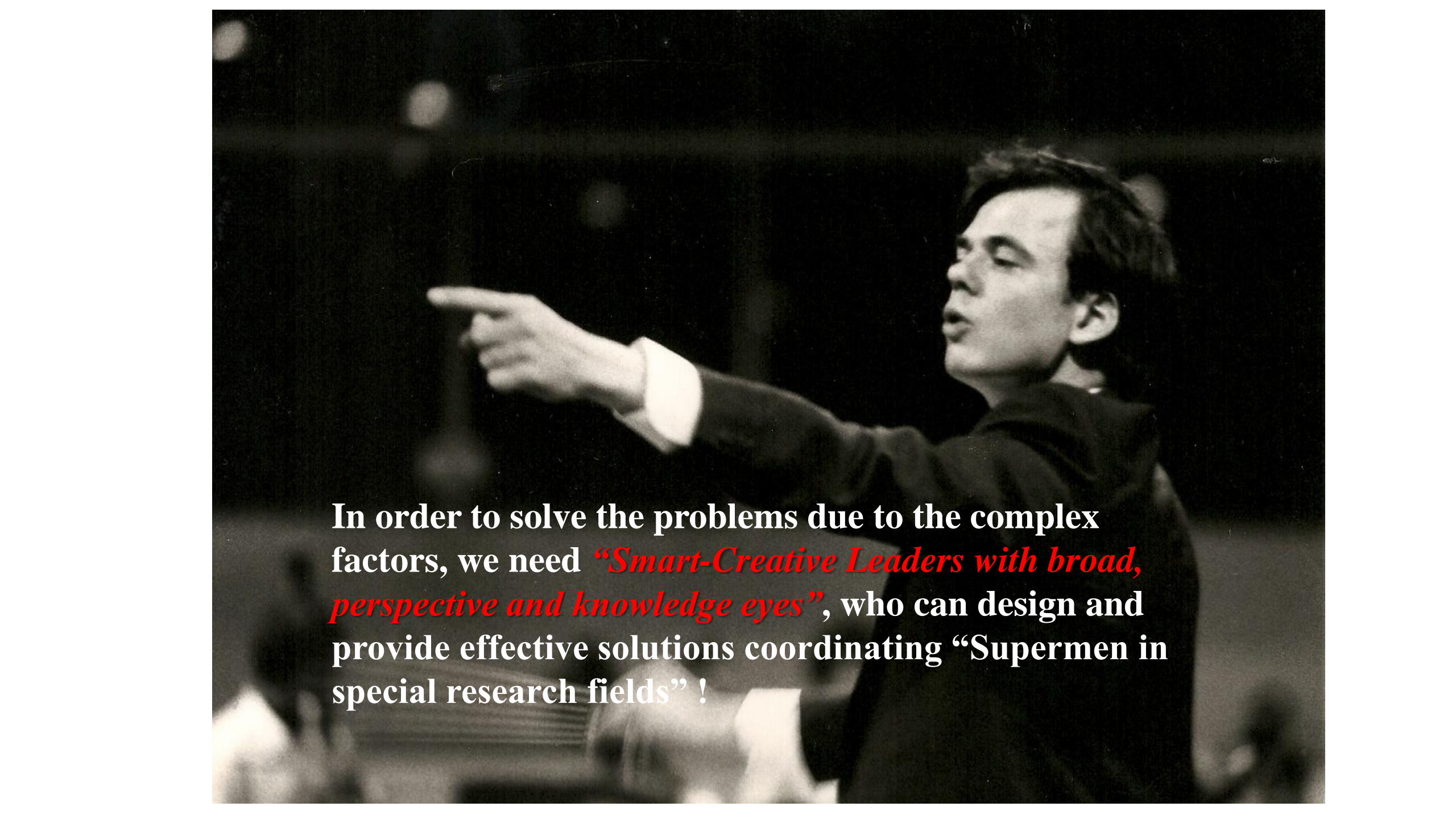
Most of our problems we are facing today are global scale, and are due to complex factors!

Finding solutions through a single academic discipline is impossible!

No simple solution ! There are so many problem solutions!

What should be the role of universities in the present era?





In order to solve the problems due to the complex factors, we need *“Smart-Creative Leaders with broad, perspective and knowledge eyes”*, who can design and provide effective solutions coordinating “Supermen in special research fields” !



School of
**Interdisciplinary Science
and Innovation**

Innovating Together for Today and Tomorrow



The purpose of Kyushu University's School of Interdisciplinary Science and Innovation is not to train personnel in conventional academic methodologies. Rather, the aim is to cultivate highly talented professionals who can solve the global issues facing humankind. We welcome students with a clear awareness toward problems who are willing to strive to tackle challenges facing the world.

The School of Interdisciplinary Science and Innovation is a completely new type of undergraduate school in Japan. Our students are expected to challenge themselves to make the school an inspiring place, together with faculty members. We hope that you will join us in the School of Interdisciplinary Science and Innovation to acquire advanced expertise and sophisticated communication skills, and to gain the ability to collaborate with a variety of people. Let's build a better future world together.

[kyo so]

共創



Co-creation

[gakubu]

学部



School

Creative task-framing skills

The ability to frame tasks appropriately to address issues and explore solutions by combining a range of existing knowledge.

Practical teamwork skills

The ability to discuss solutions one has devised and combine one's ideas with the knowledge and skills of others, working together to create an achievable solution.

International communication skills

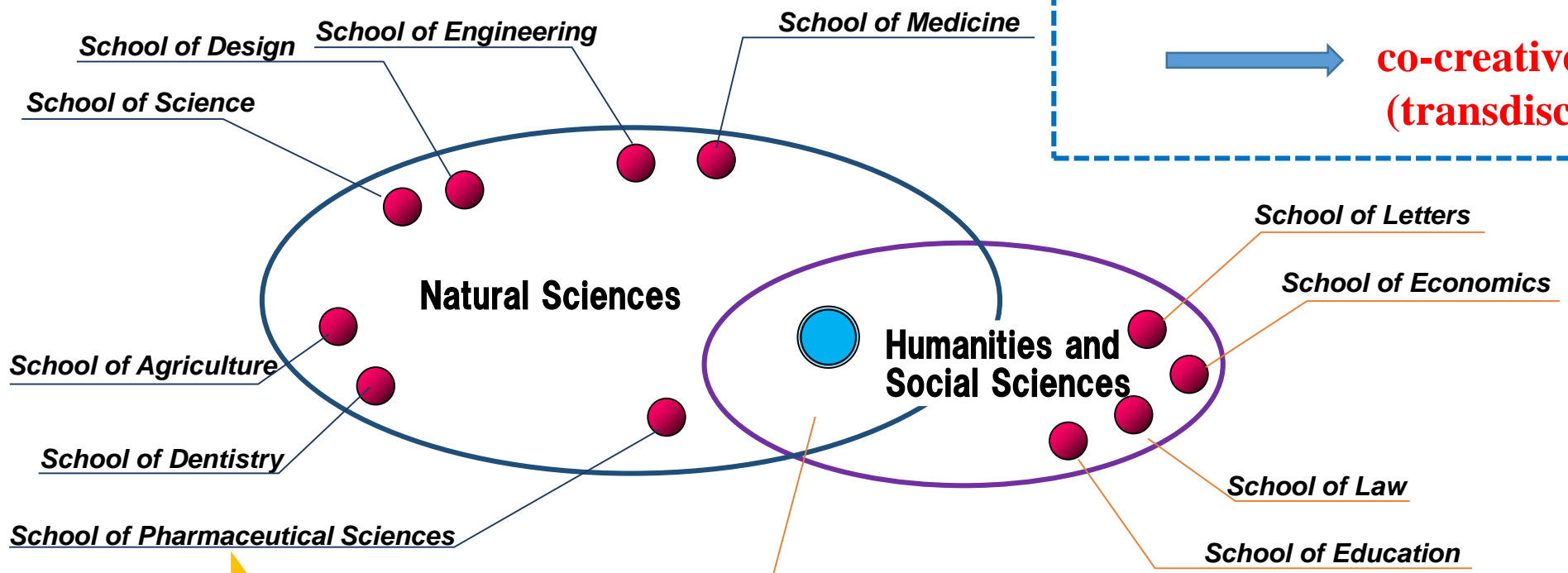
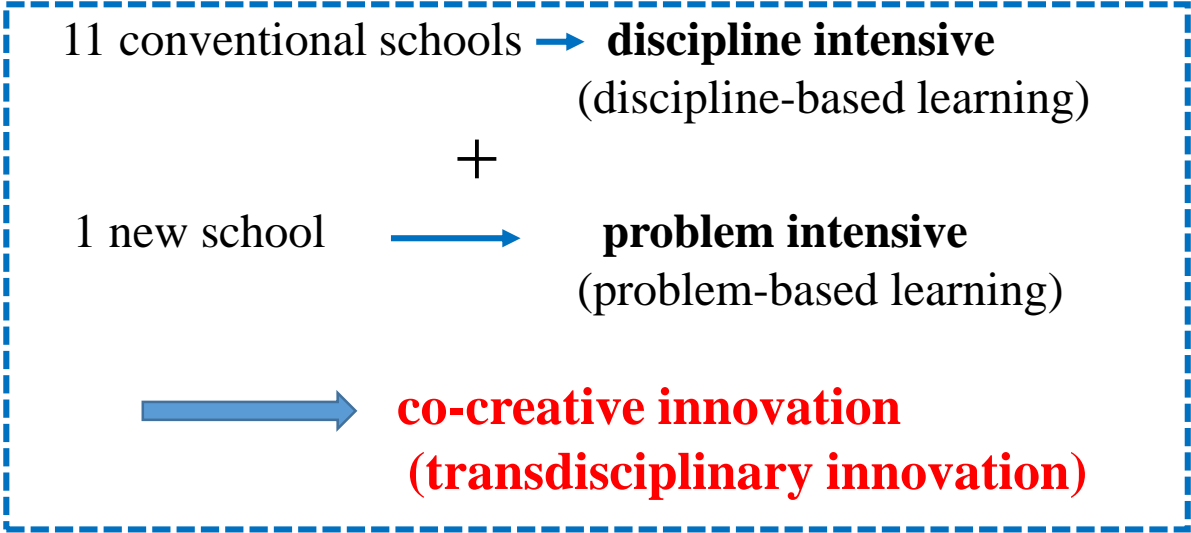
The ability to explain solutions clearly to a wide range of people at the site where a problem occurs, and to gain cooperation to ensure that the solutions are implemented.

Interdisciplinary problem-solving skills

The ability to work on actual solutions, drawing upon the four skills required to achieve the interdisciplinary ethos, namely active learning skills, creative task-framing skills, practical teamwork skills, and international communication skills.

Kyushu University

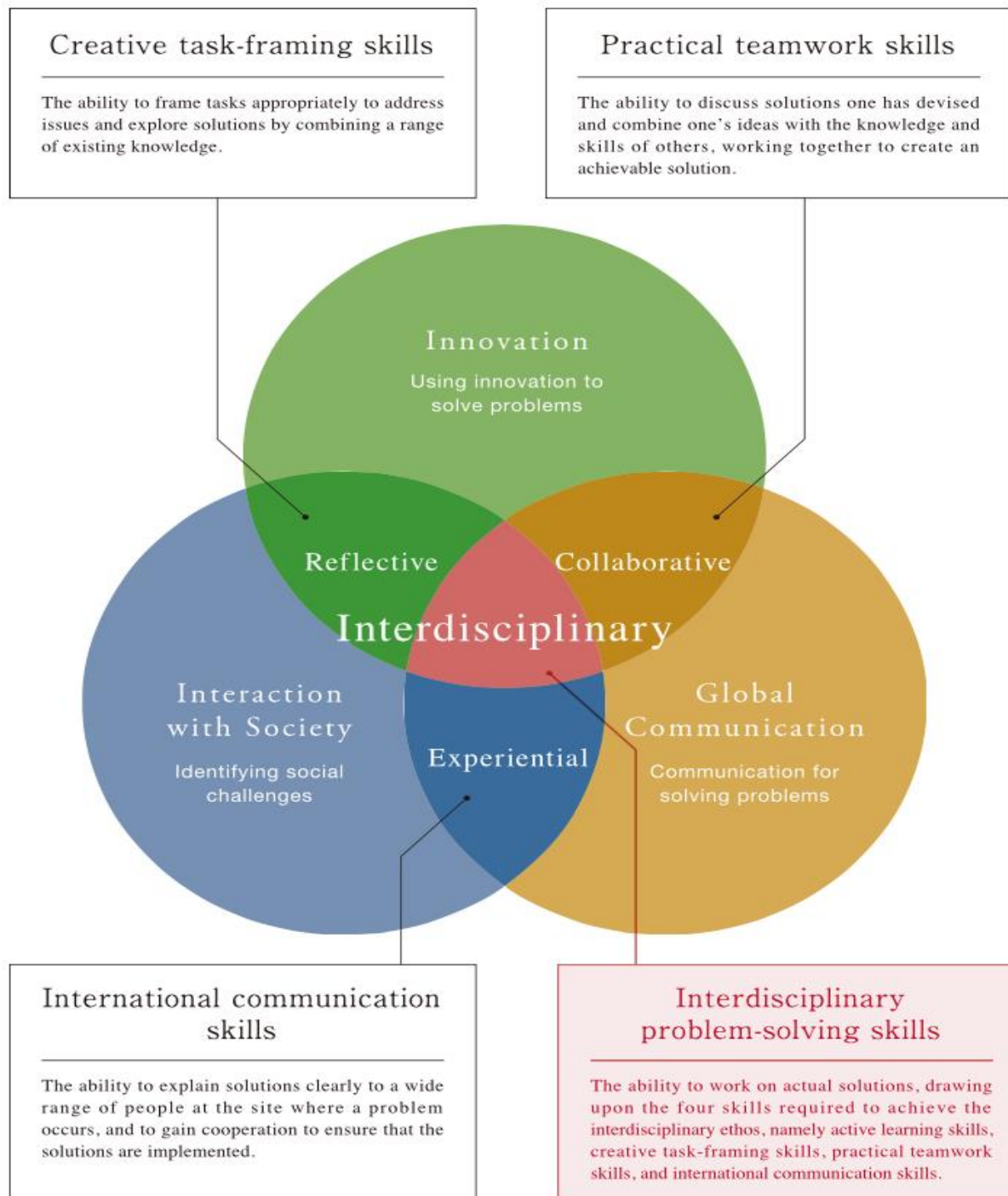
Faculties: 16
Undergraduate Schools: 12
Graduate Schools: 18



New Opened at
April 2018

**School of
Interdisciplinary Science
and Innovation**

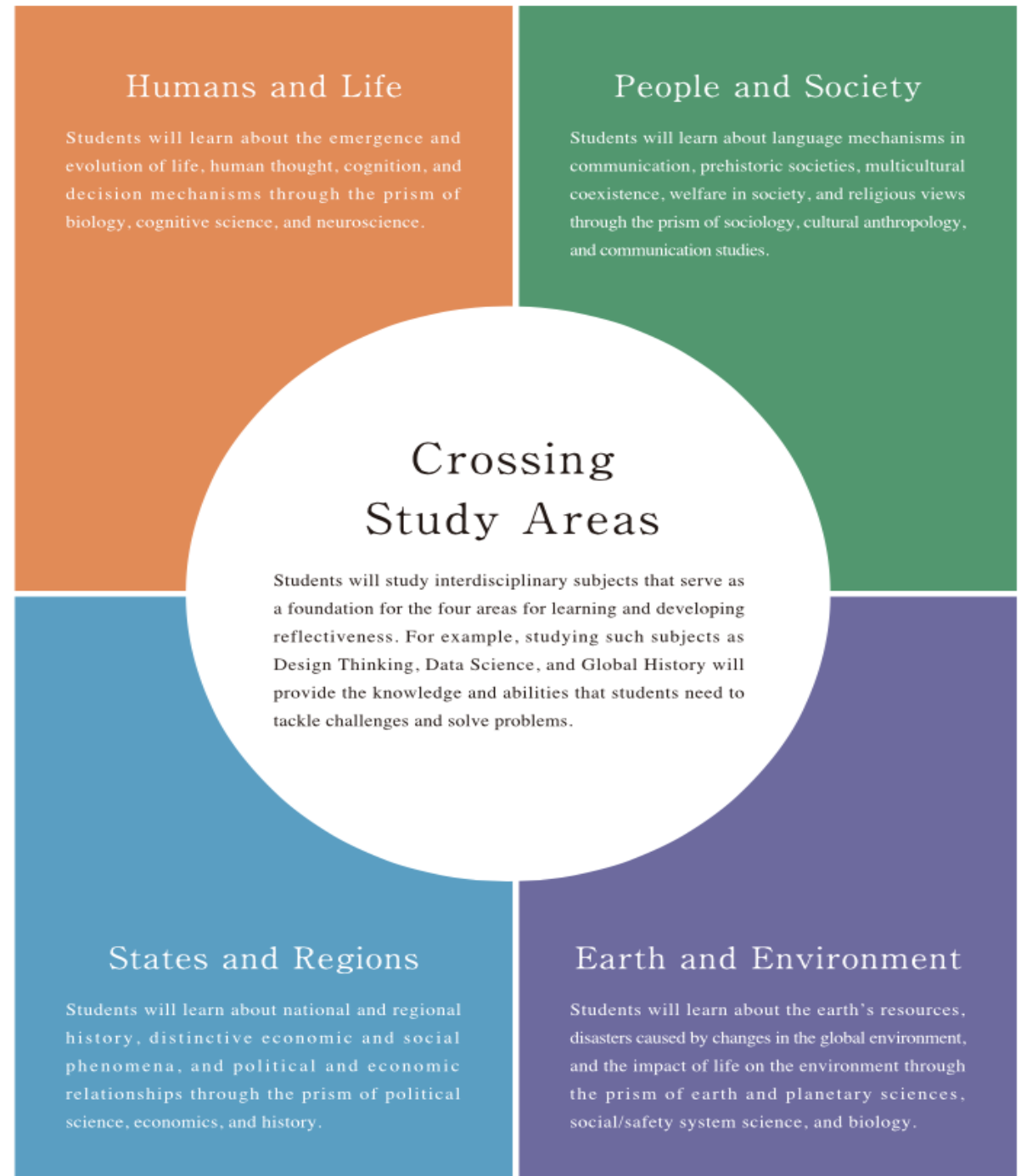
Concept of School of Interdisciplinary Science and Innovation



Areas: New Forums for Learning

Target	Surroundings Environment
Human	Life
People	Society
States	Regions
Earth	Environment

Serious problems should come arise only in the case of the worse interactions between the target and the surrounding environment.



Human and Life

Learn about the **emergence and evolution of life, human through the prism of biology, cognitive science, and neuroscience.**

People and Society

Learn about the **language mechanism in communication, prehistoric sciences, multicultural coexistence, welfare in society, and religious views through the prism of sociology, cultural anthropology, and communication studies..**

States and Regions

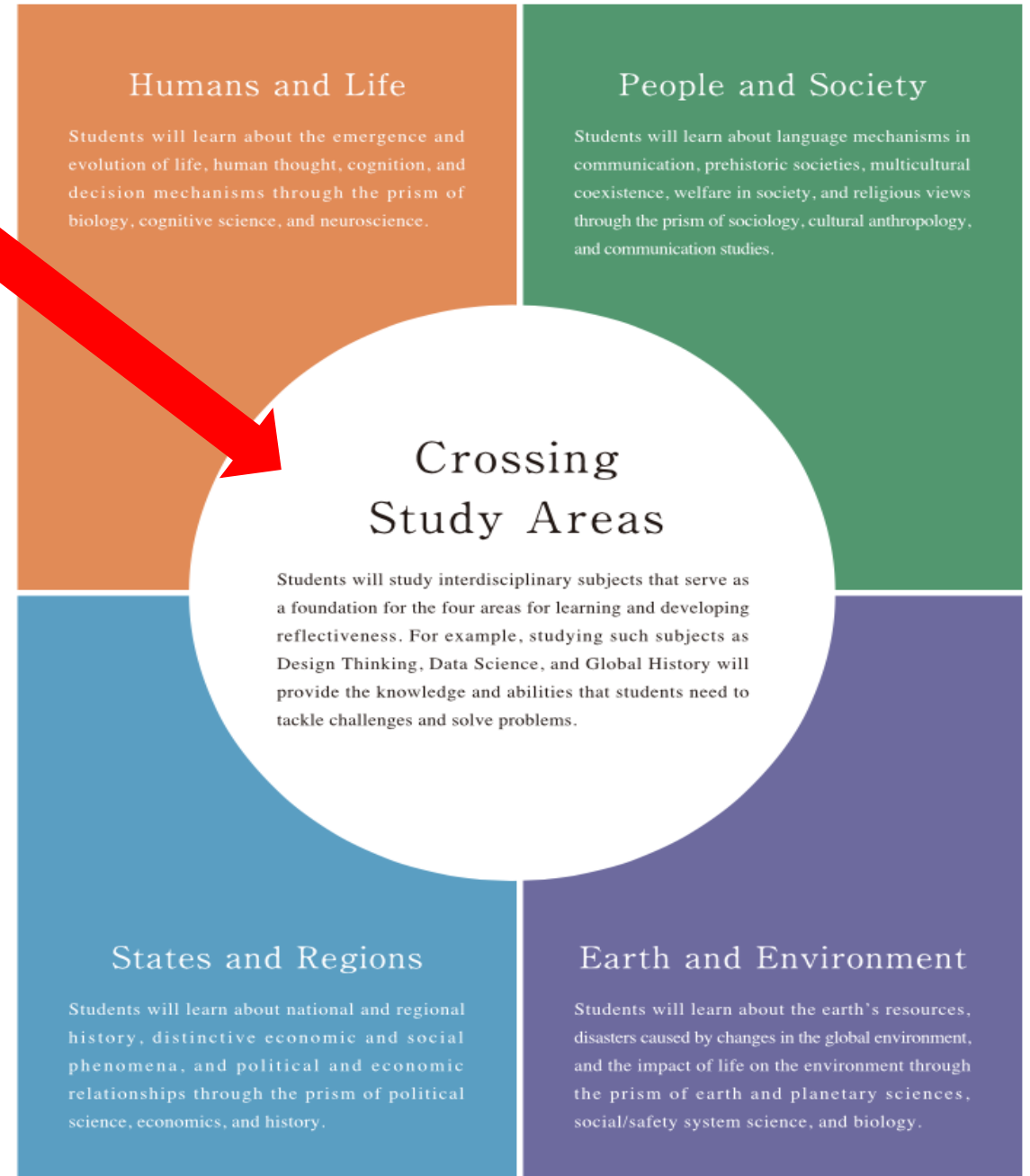
Learn about **national and regional history, distinctive economic and social phenomena, and political and economic relationships through the prism of political science, economics, and history.**

Earth and Environment

Learn about **the earth resources, disasters caused by changes in the global environment, and impact of life on the environment through the prism of earth and planetary sciences, social/safety system science, and biology, .**

Crossing Study Areas

Study **interdisciplinary subjects that serve as a foundation for the four areas for learning and developing reflectiveness**. For example, studying such subjects as **Design Thinking, Data Science, Global Ethics, Global History, and Field Research** will provide the knowledge and abilities that students need to tackle challenges and solve problems.



Educational features

Collaborative Studies

**PBL (Problem based learning,
Project based learning)**

TBL (Team based learning)

4th
Year

3rd
Year

2nd
Year

1st
Year

IX
KIKAN Education subjects
for students in the second year and above

Interdisciplinary Science & Innovation Subjects

Based on what they have learned, students will decide the issues they should address by themselves, choosing class subjects that will provide a more in-depth understanding of the requisite knowledge, working to create new knowledge and value needed for solving those problems.

Reflective Subjects

Students will gain advanced knowledge and skills in the four areas covered by the school and work to achieve further improvements, learning diverse academic approaches and ways of finding solutions.

Collaborative Subjects

Students will learn how to participate in group debates about specific issues and how to tackle challenges as a team, generating a cycle of reflective, collaborative, and experiential learning processes.

Experiential Subjects

Periods of study abroad at overseas universities and internships within Japan will improve students' language ability and communication skills, as well as providing them with a deeper understanding of other cultures.

Common Basic Subjects

Students will learn the basic knowledge and skills required to address problems faced by our society, setting tasks for themselves and devising approaches to solving them, as well as developing the skills needed to collaborate with individuals with different backgrounds and expertise.

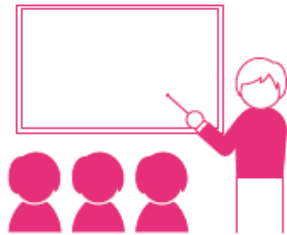
KIKAN Education

The KIKAN Education subjects taken by all undergraduate students at Kyushu University are divided into categories I-IX. These subjects teach students ways thinking and learning about issues, instilling in them the knowledge and skills that will help them to develop a high level of expertise and a well-rounded education. The Subjects for Languages and Cultures provide students at the School of Interdisciplinary Science and Innovation with unique opportunities to learn languages, including Japanese and English.

I KIKAN Education Seminar II Interdisciplinary Collaborative Learning of Social Issues III Subjects for Languages and Cultures
IV Subjects in Humanities and Social Sciences V Subjects in Science VI Subjects for Cybersecurity
VII Subjects on Health and Sports VIII General Subjects

Remarkable education-points of the school

01 *Classes in English and Japanese*

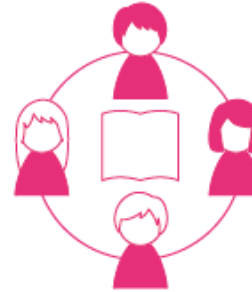


02 *Blending the Humanities with Science*



03 *Collaborative learning (PBL/TBL)*

Compulsory subject



04 *Learning beyond the Classroom (education abroad, internship)*



Compulsory subject

05 *Sharing Classes with local and overseas students*



New type of study of liberal arts and sciences according to Problem-Based Learning

Social Problem 1



Social Problem 2

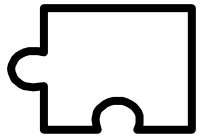
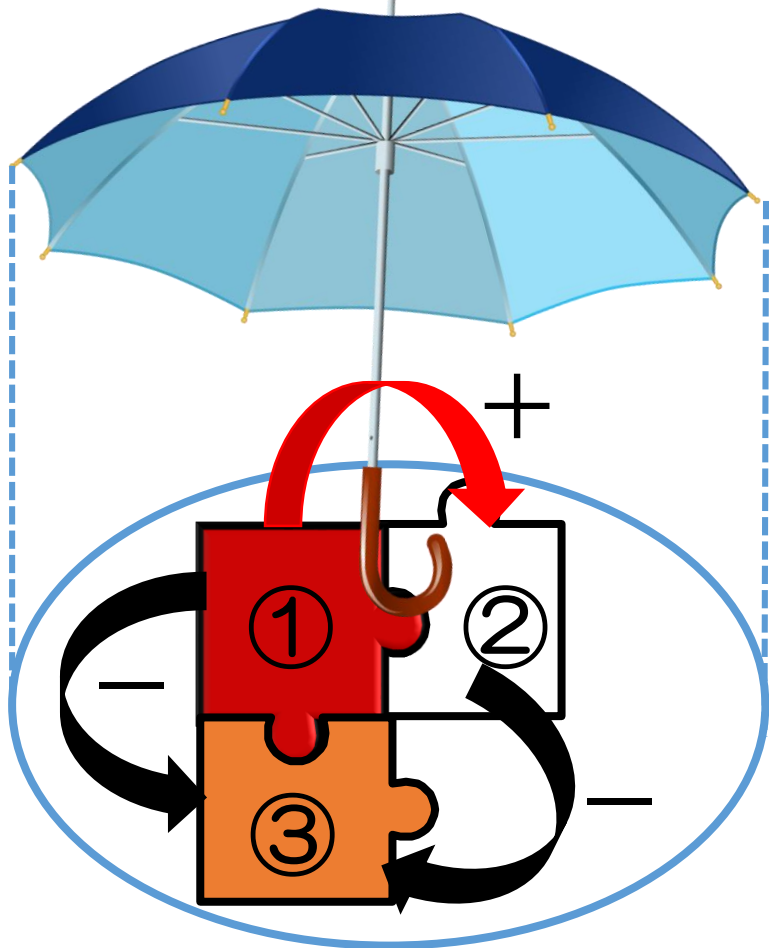


○ corresponding special research subject (factor) related to the problem

What is the *System*?

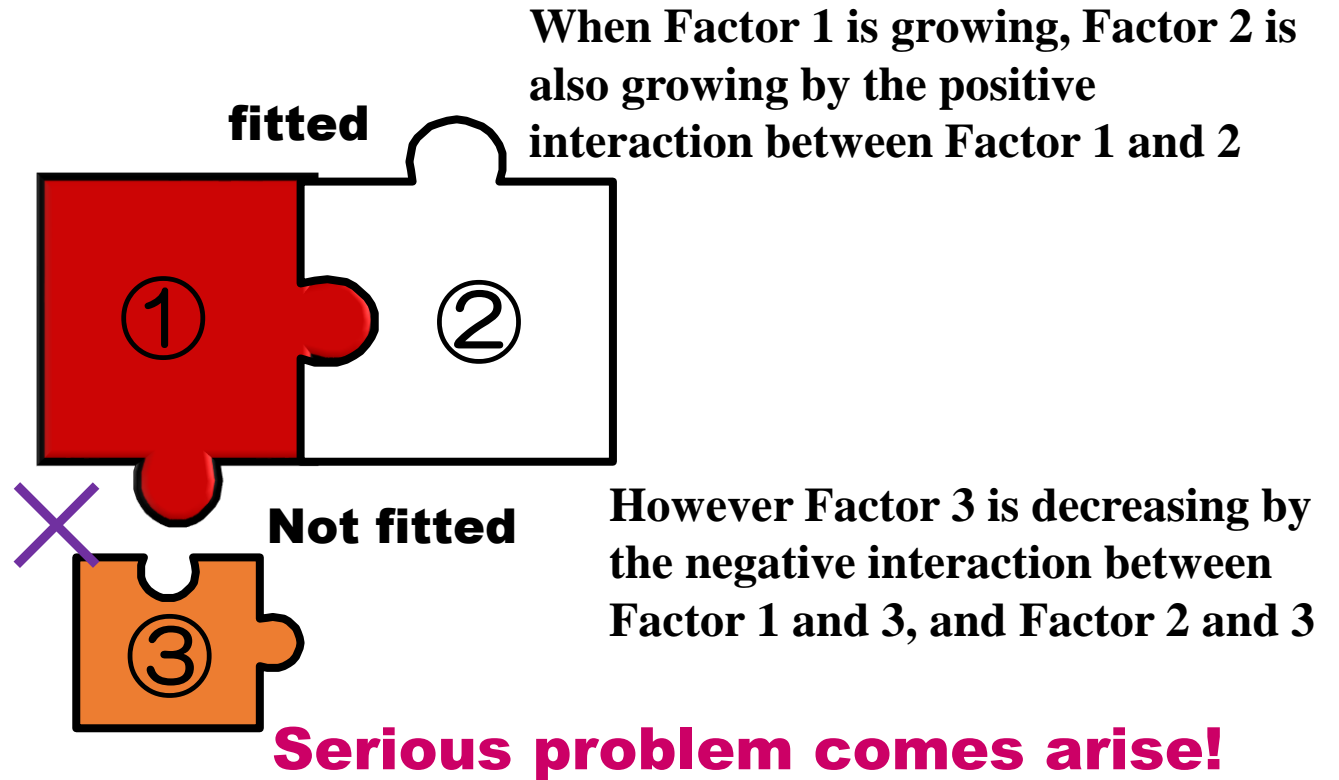
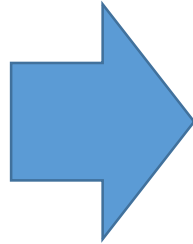
- Involves **more than two** components
- Each component has **a unique function**
- Each component shows **time-variant behavior**
- Integrated such components (named System), it has **a different function which mainly comes from an interplay of components**

Social Problem (complex system)



Interrelated factor to the problem

- + positive interaction
- negative interaction



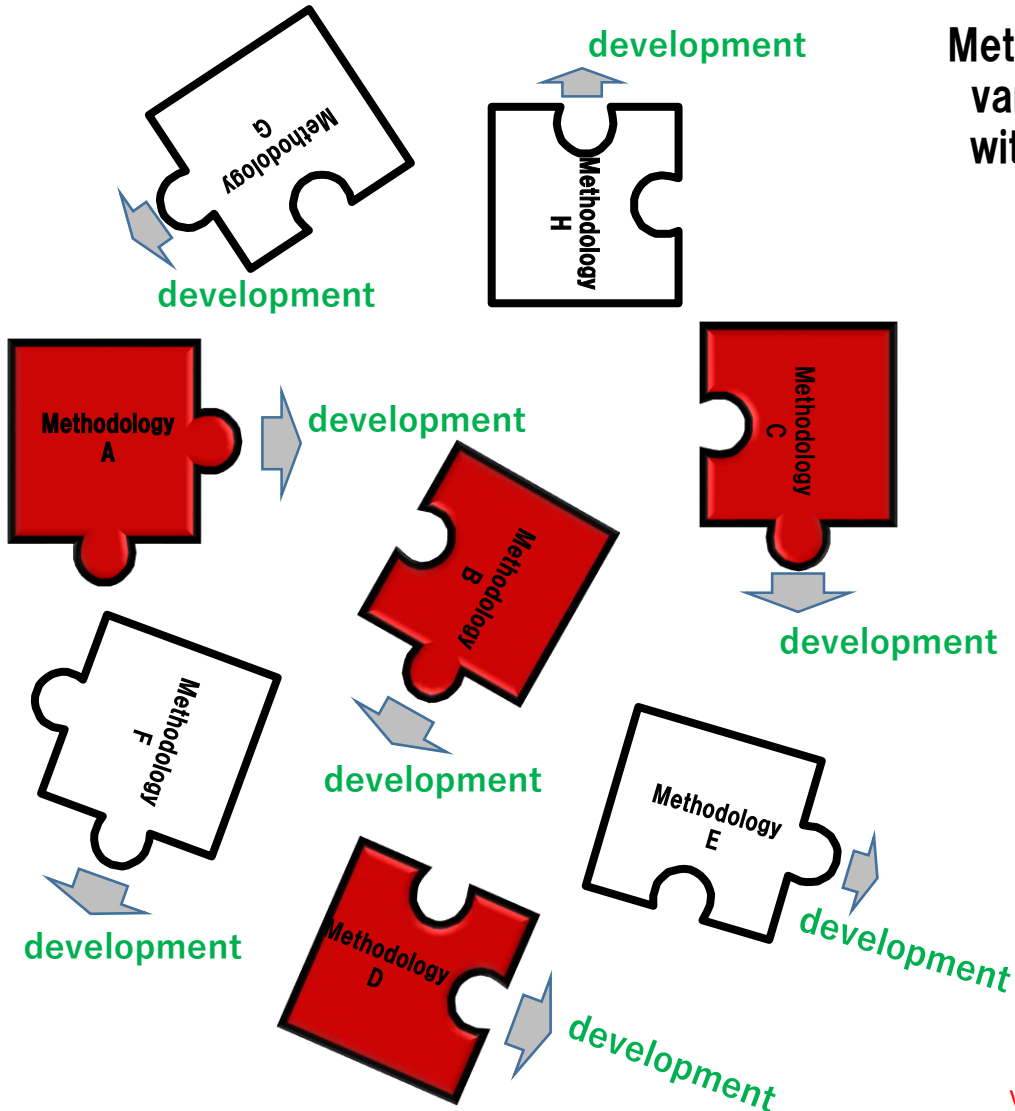
Problem is equivalent to a **“complex system”** composed of interrelated factors.



Complex system analysis can be applicable to propose a solution of problem.

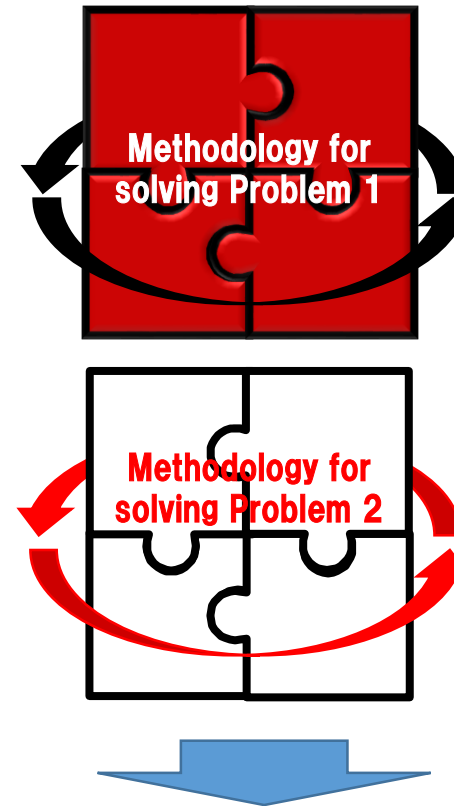
PBL with Jigsaw type of collaborative learning

<Discipline-Based Learning Methodology>



<Problem-Based Learning Methodology>

Methodologies of finding effective solutions of various kinds of open problems in the world with integrating methodologies developed in each special research field



**Design Thinking,
Data Science,
Global Ethics,
Global History,
Field Research etc**

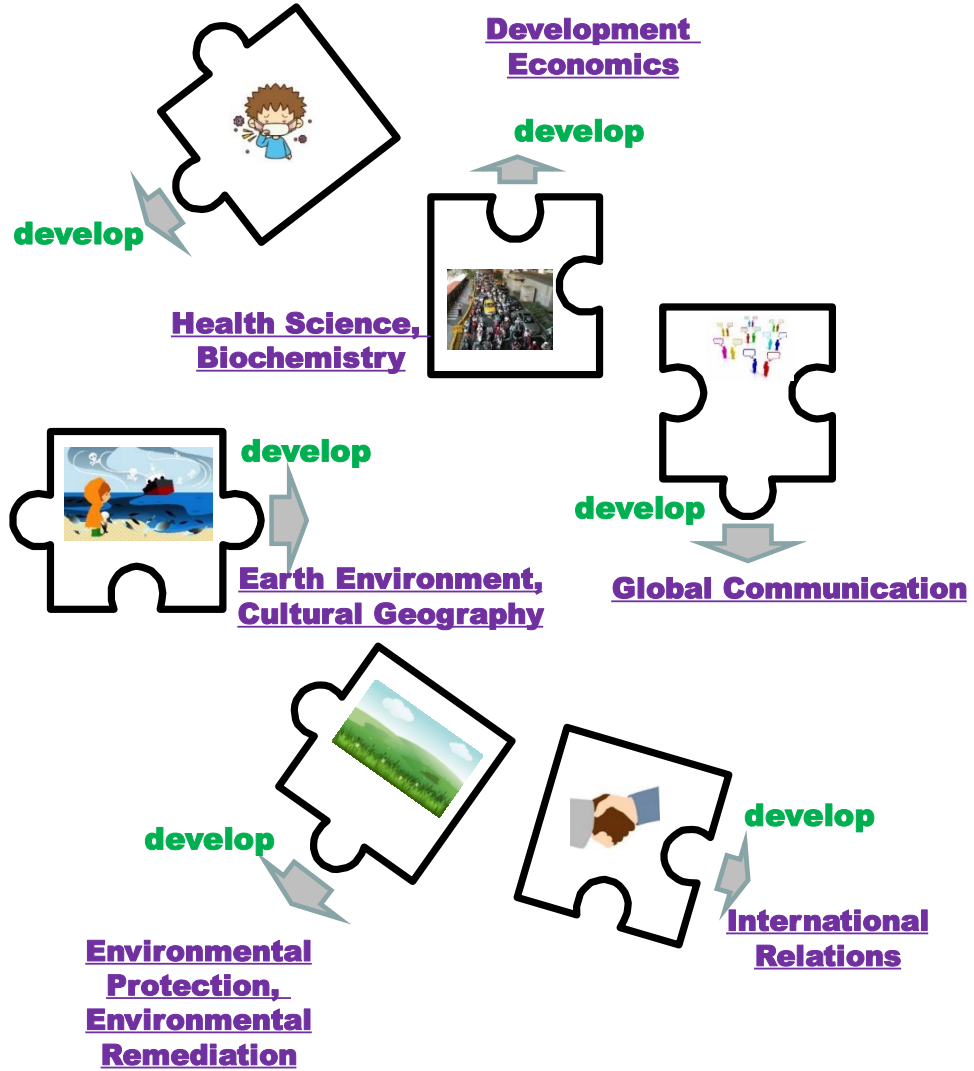
Problems can be solved only by integrating various kinds of special research fields related to the problem !!

Problem: **Transboundary Environmental Pollutions**



System components

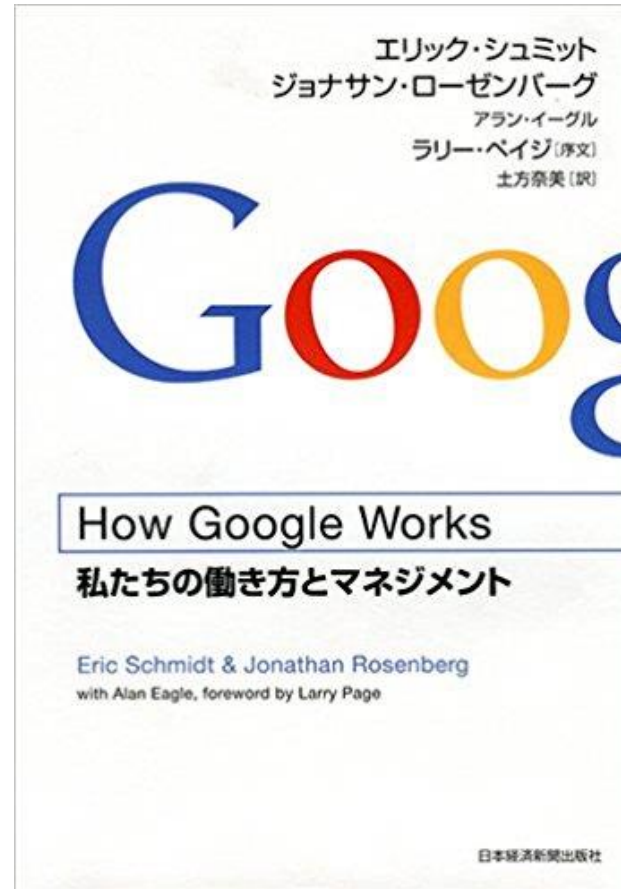
< corresponding research subjects related to the problem >



< PBL with Jigsaw method, Complex System Analysis >



Google develops **“Smart Creative”**
human resources for solving various
open problems in the global society



**Design business model
targeting social complex
problems**

Summary: What attracts high school students ?

- The most of the high school students in Japan have to **decide the course selection at admission to one year after, either Natural Sciences or Social Sciences followed by the curriculum selection and school selection at second grade according to their deviation score of exams.**
- Many of the high school students cannot decide strictly what school they want to go during their high school days; they **need to “late specialization system”** during their undergraduate school days.
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- The objective of **conventional education at the university in Japan is to study and to investigate the principles in the each major research area.**



Additional to the schools studying conventional academic methodologies, school the purpose of which problem-based learning with Jigsaw type of collaborative learning facing social problems should be attractive to high school students in Japan.