

# Civil Engineering Education Reform

## - Challenge of Kansai University -

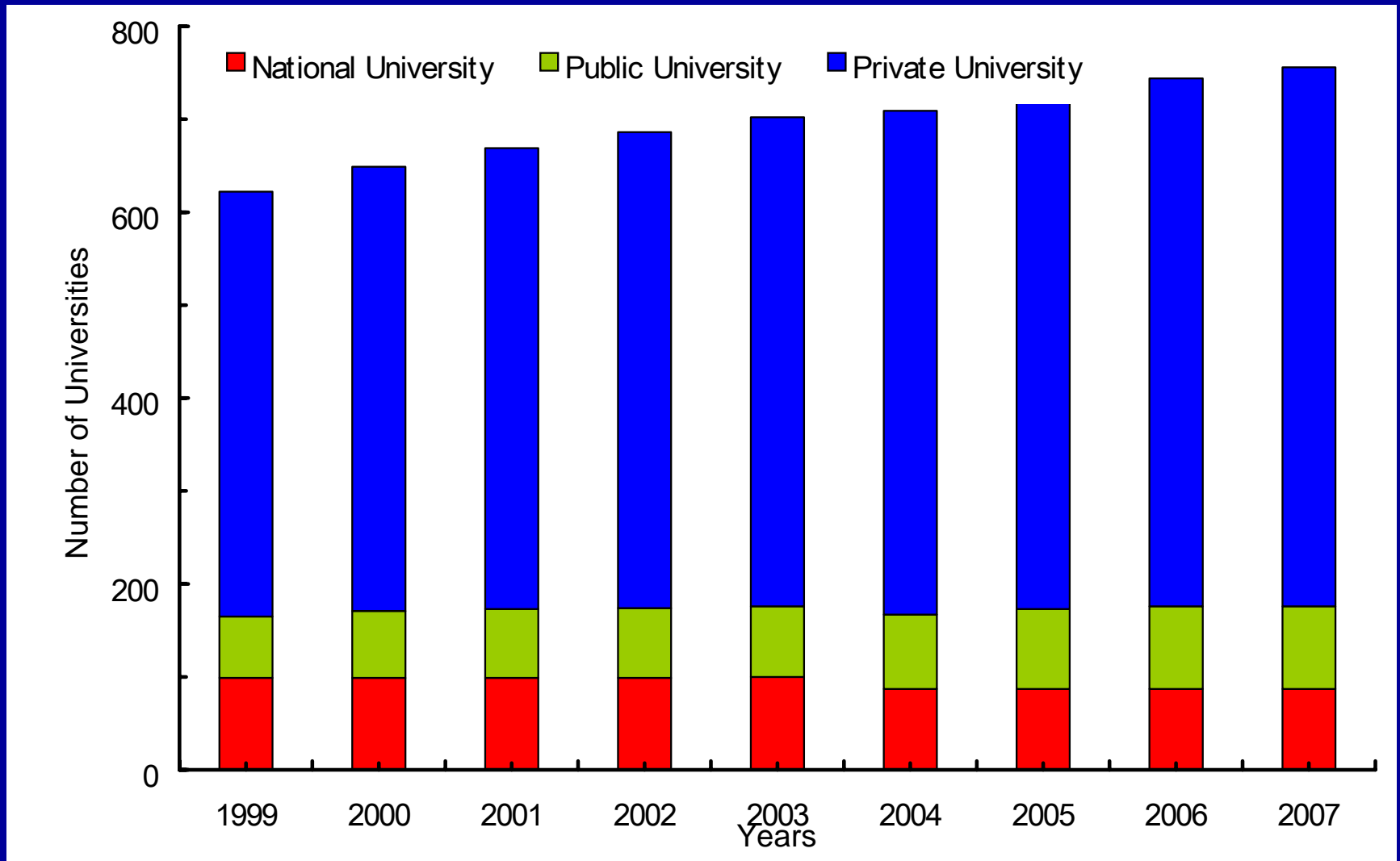
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# Transition of number of universities in Japan



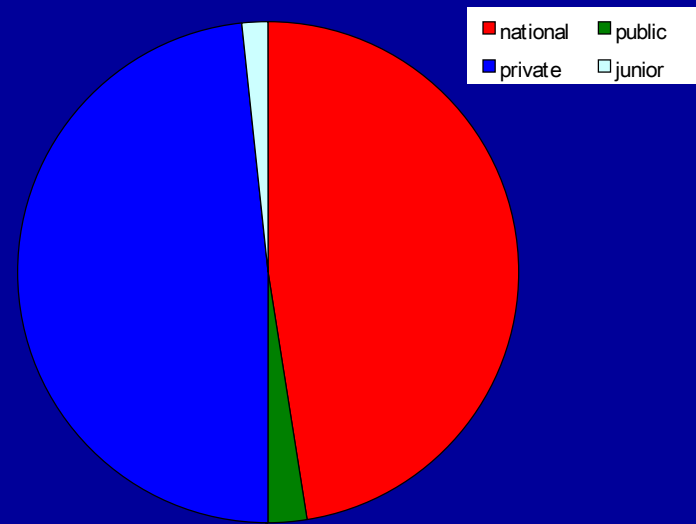
# State of University in Japan

- In the present, there are more than 750 universities in Japan.
- Over 15 years ago, number of universities are less than 500.
- During this 15 years, universities increase gradually.
- About 80% of such universities are private.
- On the other hand, a number of peoples, who are enable to learn there, are about 1.3 million. These is the half, comparing with those 10 years before.

- As the result of examination at last spring, quarter of entire universities could not get full students.
- So, universities have been put in a difficult situation.
- They have been competing to get full students.

# Number of Universities setting up Civil Eng. Dept.

- National university corporations 59
- Public universities, Institutes Colleges 3
- Private universities, Institutes & Colleges 60
- Junior Colleges 2



- Since 1990 to 2005, Japanese economy has put in a bat condition, major banks were deep in debt.
- Especially, the construction working field was much bat.
- The budget for infrastructures decreases gradually year by year.
- Now, the half has spent for the management of infrastructures in comparison with that before 10 years ago.
- Companies like contractors, consultants, and fabricators had not employed much new faces.
- Students put in a severe condition that students did not get good job if they would work in site of construction.

- Therefore, universities had to change and reform their education system so as to keep good position.
- Such situation was same for our department.
- So, at the last spring, i.e., academic year, our dept. and also faculty reformed.

# Reform of Civil Eng. Dept.

- 1967.4 : established

The dept. name is Civil Engineering Dept., i.e., Doboku-Kogakka (土木工学科) .

- 1992.4 : introduce 2 courses so as to clear the education

Planning & Environmental course

Design & Construction course

- 2003.4 : rename as Civil and Environmental Eng. Dept.

At that time, many universities also renamed.



## 2007.4 : Renewal of both Faculty & Department

### Faculty of Engineering Science

Dept. of Mathematics

Dept. of Pure and Applied Physics

Dept. of Mechanical Eng.

Dept. of Electrical and Electronic Eng.

### Faculty of Environmental and Urban Engineering

Dept. of Architecture

Dept. of Civil, Environmental and Applied System Eng.

Dept. of Chemical, Energy and Environmental Eng.

### Faculty of Chemistry, Materials and Bioengineering.

Dept. of Chemistry and Materials Eng.

Dept. of Life Science and Biotechnology

# Principal concept of undergraduate engineering curriculum

- to provide the opportunities for personal maturity and intellectual growth, for the attainment of professional competence, and for the development of a strong sense of social responsibility.

# Education program of new dept.

1999.4-2007.3

- Construction & Design Course
- Planning & Environmental Course

2007.4-

- Design course
- Planning course
- Information course

# Mission of Civil Eng. Education Programs

- **Design Course :**  
to introduce and advance various techniques to create comprehensive cities and regions.
- **Planning Course :**  
to establish the methods and concepts to design cities and their surroundings to be environmentally sound and comfortable.
- **Information System Course :**  
to aim at improving computer and communication technology to implement information systems for operating and managing lifelines, factories and so on.

# Some features of the Faculty

- (1) The Faculty takes as its goal the integration of fundamental and technical education.
- (2) Some subjects are taught by using the e-learning system (CEAS) developed by our university.
- (3) Required research tasks in specialized fields are provided for fourth-year students.

# Japan Accreditation Board for Engineering Education (JABEE) course

- Design & Planning courses :  
be approved by the Japan Accreditation Board for Engineering Education (JABEE) on April 2005.
- JABEE : a participant in the Washington Accord (WAT).

# Staffs and students of Civil Eng. Dept.

**1967.4    2007.4**

## – **Faculty members :**

• Professor	: 4	8
• Associate Professor	: 2	7
• Lecturer	: 2	1
• Research Associate	: 7	4
•		2
• Technician	: 2	2

## – **Number of students (per each year) :**

**80                      120**

# Education & Research Sec. of New Dept.

## -2007.3

- **Earth & Environmental Section**
  - Environmental Eng. Group 2
  - Hydraulic Eng. Group 2
  - Geotechnical Eng. Group 2
- **Design & Construction Section**
  - Structural Eng. Group 3
  - Construction Materials Group 2
- **Planning & Management Section**
  - Infrastructure Planning Group 3

## 2007.4-

- **Earth & Environmental Section**
  - Environmental Eng. Group 2
  - Hydraulic Eng. Group 2
  - Geotechnical Eng. Group 2
- **Design & Construction Section**
  - Structural Eng. Group 2
  - Construction Materials Group 2
  - Construction Management Group 1
- **Planning & Management Section**
  - Urban Planning Group 1
  - Infrastructure Planning Group 2
  - Mathematical Principle Planning Group 2
- **Information System Section**
  - Simulation Group 1
  - Information Technology Group 4
  - System Development Group 1



# Unique Education Program for Undergraduate Students in Japan

- Selected into the unique education program for undergraduate students, 2007

## Creative Good Practice (Gendai GP) :

- Create of hometown through the exchange with peoples living at farming and mountain villages
- during 3 years (2007.4 – 2010.3)
- Joint project with Architecture Dept.

Ministry of Education, Culture, Sports, Science and Technology  
(Monbusho)

# Next Challenge

- To propose the global COE (Center of Excellence) 2008.

Graduate Education Program :

Education & Research Center for Reforming and  
Recreating Existing Urban and Regional Area

Needs to collaborate foreign universities with exchange  
program of education and research for graduate  
students

Ministry of Education, Culture, Sports, Science and Technology  
(Monbusho)



# History of our Civil Eng. Dept.

- **University** : established in Nov. 1886.
- **Faculty of Engineering** : established in April 1958.  
Mechanical Eng., Electric Eng., Chemical Eng.  
& Material Eng.
- **Dept. of Civil Engineering** : established in April  
1967  
with Electronic Eng. & Architecture

# Education & Research Sec.

1967.4

- **Earth & Environmental Section**
  - Environmental Eng. Group 1
  - Hydraulic Eng. Group 2
  - Geotechnical Eng. Group 4
- **Design & Construction Section**
  - Structural Eng. Group 6
  - Construction Materials Group
  - Construction Management Group
- **Planning & Management Section**
  - Urban Planning Group
  - Infrastructure Planning Group
  - Transportation Eng. Group 2