Enhancement of university reform and quality change of education: The Current State of University Education Reform in Japan

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MEXT

I. Background to University Reform: The Current Situation and Issues Facing University Education in Japan

Major Social Changes and Universities

- Changes in population structure
- Globalization
- Increasing international competition
- Establishment of an advanced information society
- Changes in the structure of industry and employment
- Increase in number and severity of global issues
- Growing social and economic divides
- Changes in local communities

Achieving sustainable development and creating a vibrant and diverse society

Developing human resources with the required level of independence, collaborative abilities and creative talent to achieve that

Universities have an increasingly important role to play, as a focal point for knowledge-building and human resource development

The Need for University Reform in Japan

- Faced with a rapidly aging population and declining birth rate, dealing with major disasters and other such issues, Japan has become the world's first "advanced country with new issues".

  Strengthening industrial competitiveness is another key issue.

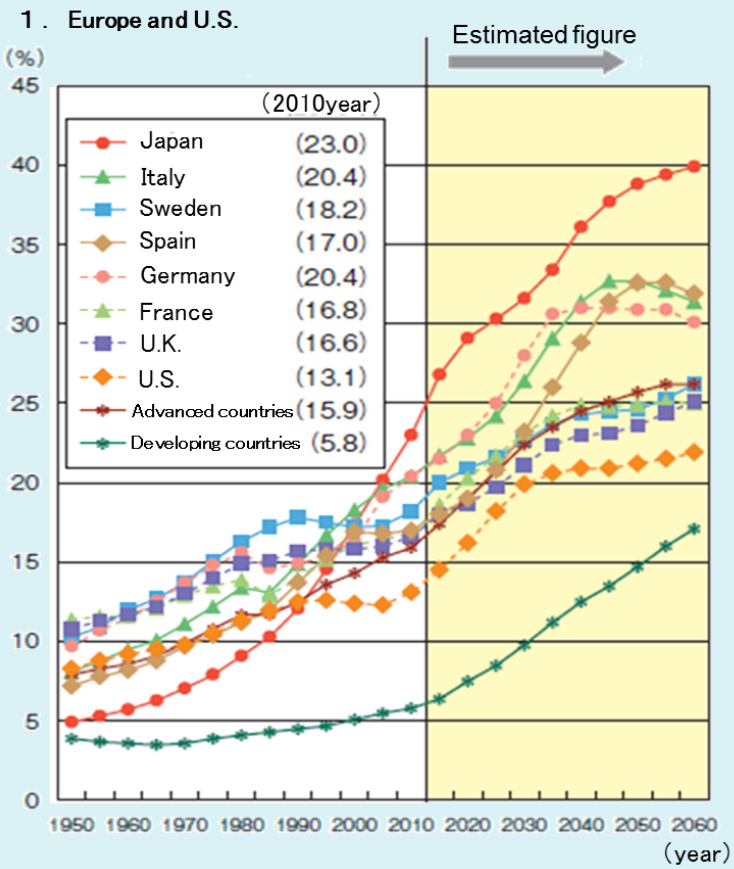
  → Universities are facing greater demands and expectations

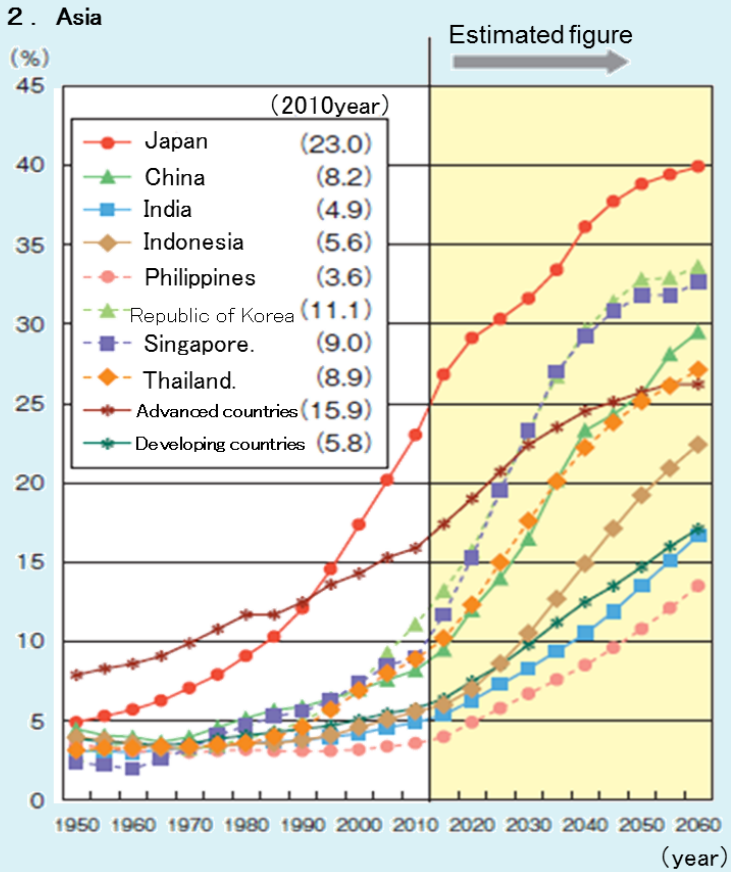
- At the same time however, Japan's universities are facing some serious problems, including delays in responding to globalization, a growing gap between society's needs and university education, insufficient lifelong learning capabilities, and issues with university governance and finances.

We need active university reform, to strengthen universities' capabilities in the face of a rapidly changing society.

Japan's Aging Rate is Amongst the Highest in the World

- Populations are rapidly aging throughout Asia (Japan, Korea, China)
- The world's attention is focused on Japan, as an advanced aging country (advanced country with new issues) and a model super-aged society
- Aging will continue to accelerate in the future, with 39.9% of the population aged 65 or over by 2060 (1 in 2.5 people)





- **Advanced countries** : North America, Japan, Europe, Australia and New Zealand
- **Developing countries** : Africa, Asia(except Japan), Latin America, Melanesia, Polynesia and FSM

◆Japan's aging rate

1970 Aging rate: 7%
("Aging society")

1994 Aging rate: 14%
("Aged society")

2013
Approx. 1 in 4 people

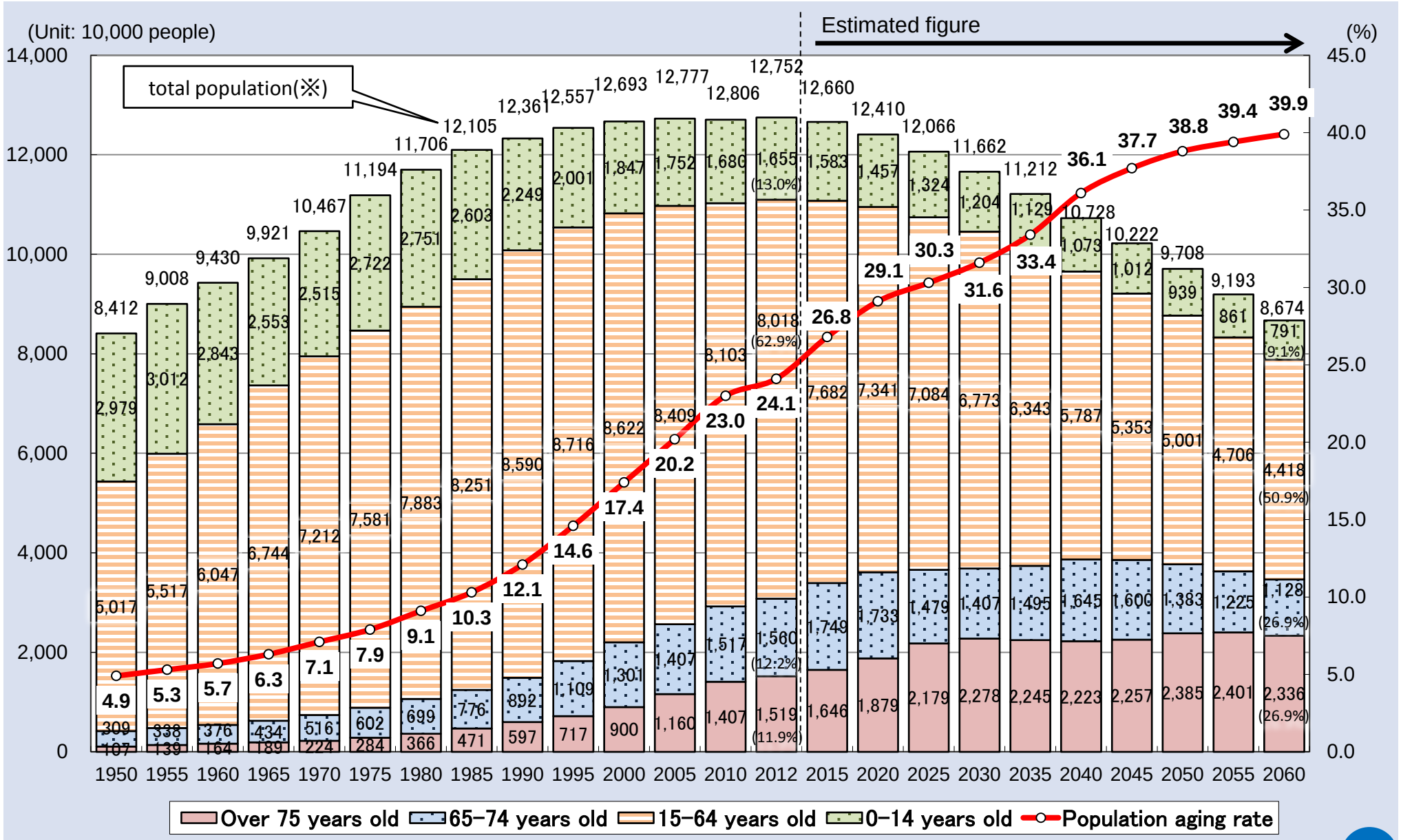
2060
Approx. 1 in 2.5 people

◆Years required for aging rate to increase from 7% to 14%

Japan → 24 years
France → 115 years
U.K. → 47 years

Source: "White Paper on the Aging Society" (2013 edition)

Japan's Aging Society and Declining Birth Rate: Concurrent Increases in Total Population and Aging Rate



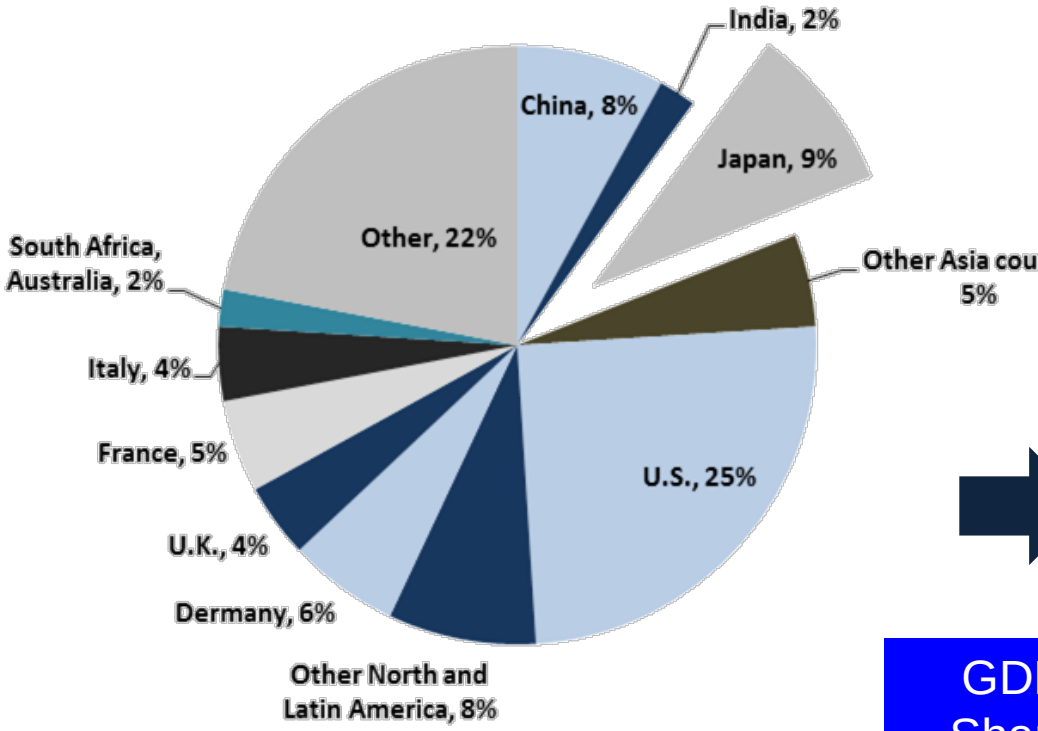
※ Total population : including uncertain age (1950-2010)

Source: White Paper on Aging Society 2012 Cabinet Office

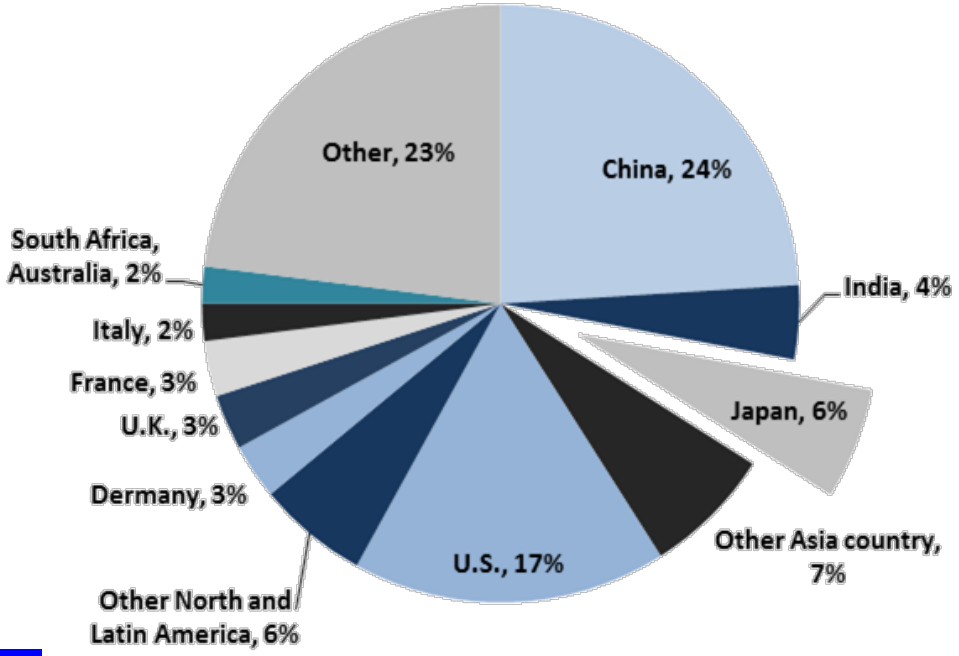
Share of GDP in 2030 (Estimated)

Japan's share of GDP is set to decline in line with its rapidly aging society and declining birth rate, and the growth of emerging economies.

Share of GDP (market base) in 2009
(total size of market: US$ 55.5 trillion)



Share of GDP (market base) in 2030
(total size of market: US$ 107.0 trillion)



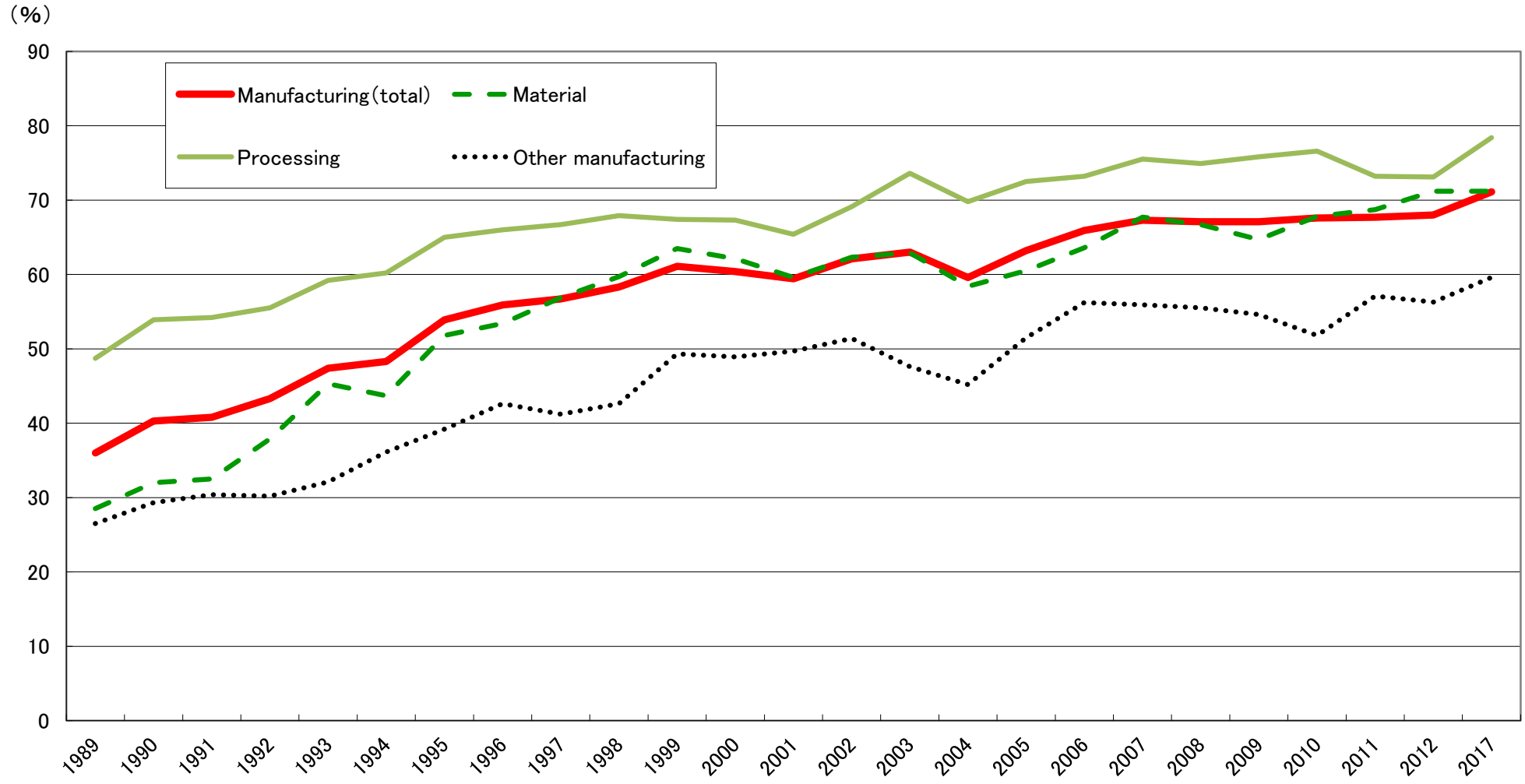
GDP Share

***Note*:** Other Asia includes Indonesia, Malaysia, Philippines, Thailand, Singapore, Hong Kong, Republic of Korea and Taiwan
***Source*:** Survey on world economic trends, 2010, Cabinet Office

Percentage of Japanese Companies Engaging in Overseas Production (Manufacturing Industry)

The percentage of Japanese manufacturing companies engaging in overseas production continues to increase every year.

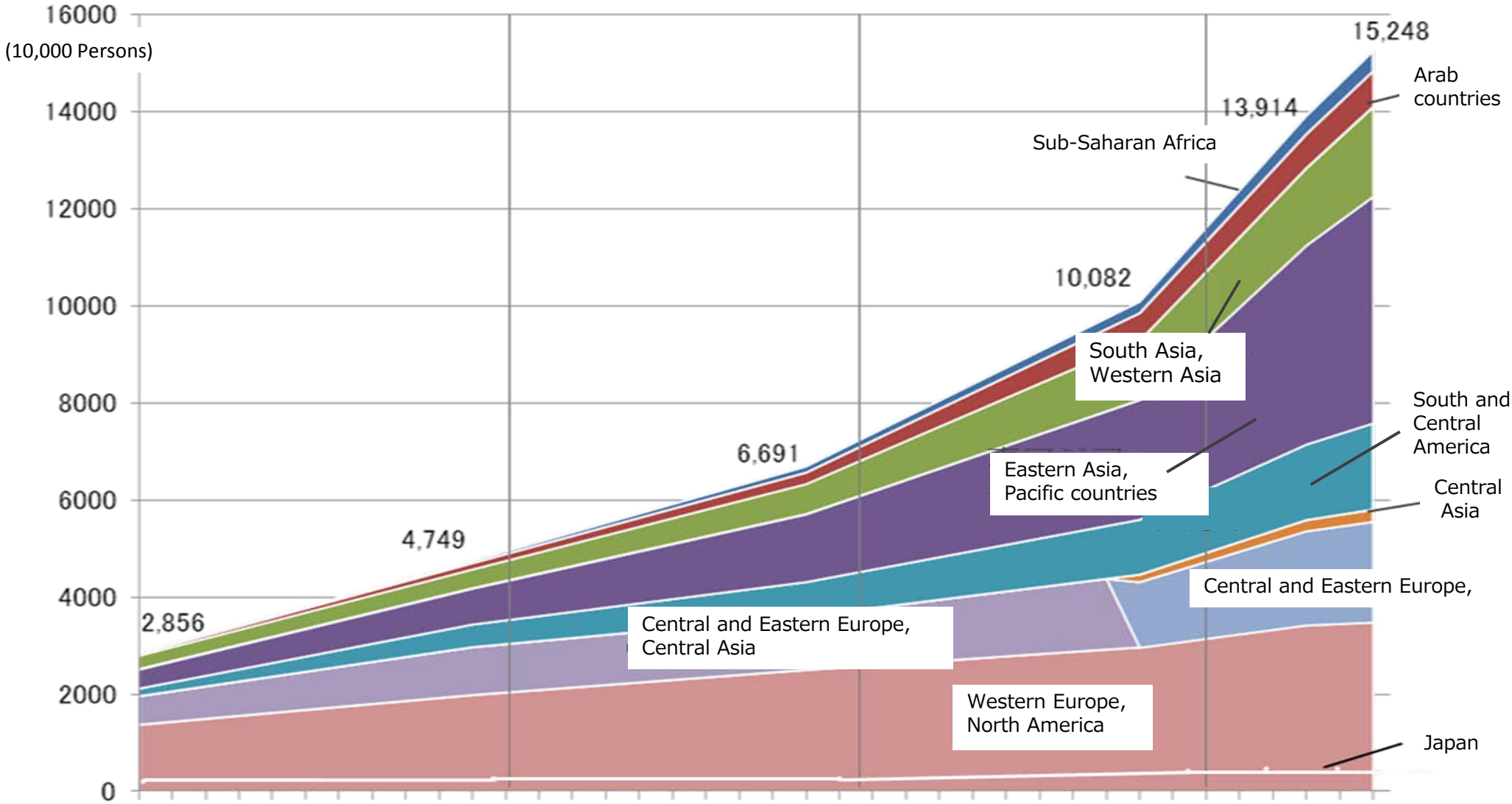
*Overseas production: Companies establishing and carrying out production activities at overseas production facilities



Source: Manufacturing Survey2012, Cabinet Office

Quantitative Growth of Higher Education Worldwide

Number of students in institutions of higher education has nearly doubled over the past decade.

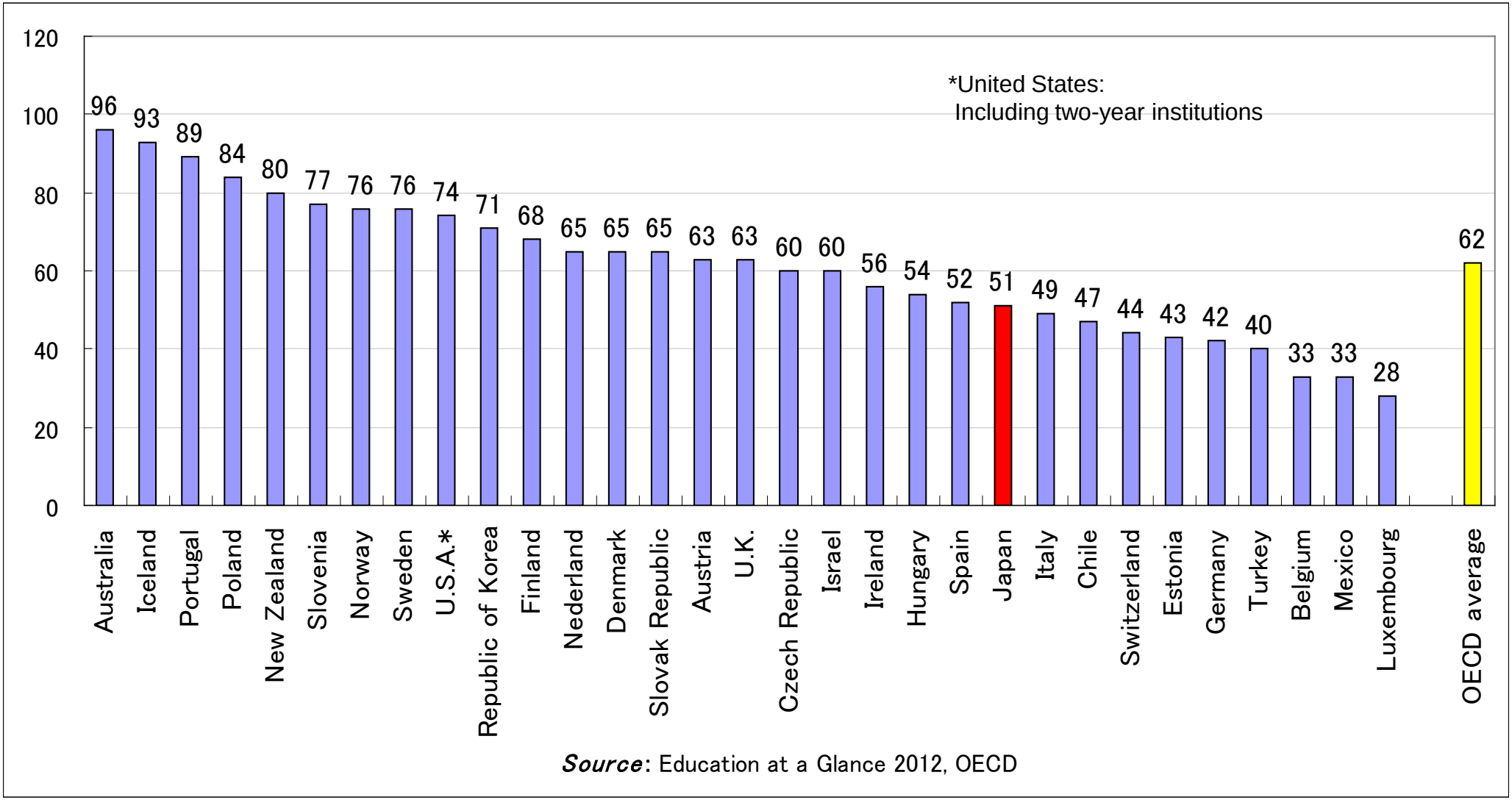


cf : Number of students in higher education (Cases:10000)

1970	1980	1990	2000	2005	2007
180	240	270	400	400	400

International Comparison of University Enrollment Rate

The percentage of students advancing to university in Japan does not compare favorably with the OECD average

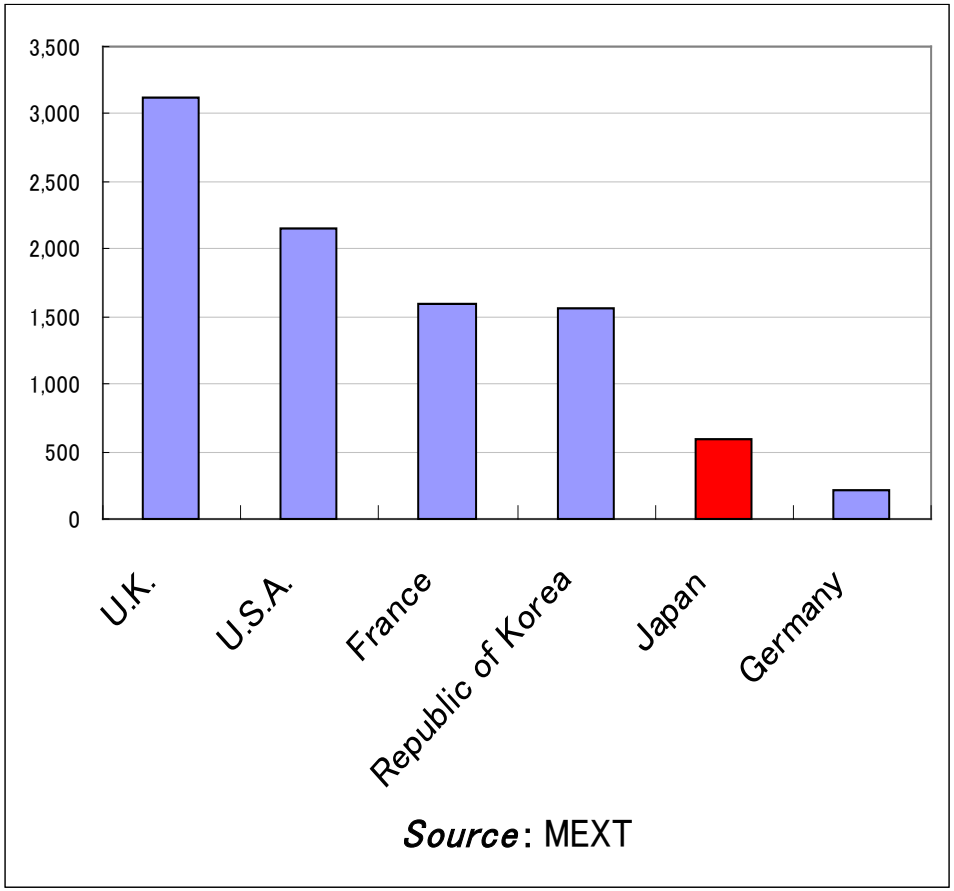


Source: Education at a Glance 2012, OECD

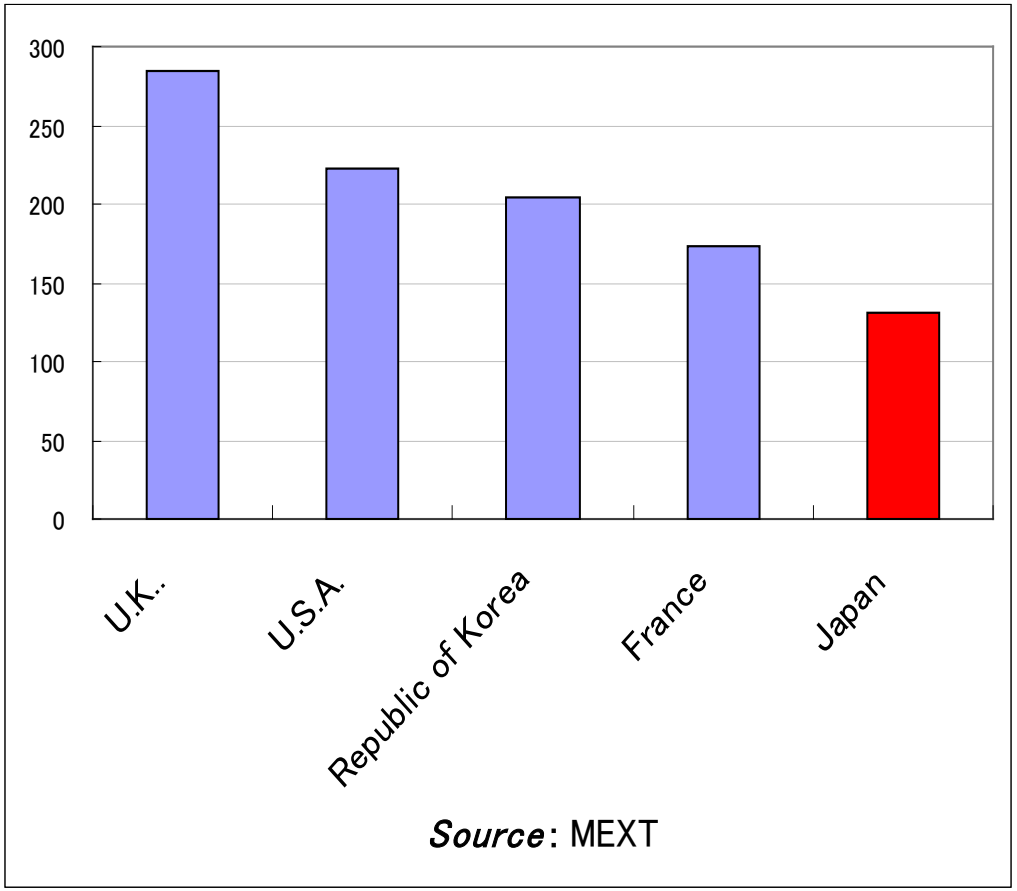
International Comparison of Master's Degrees and PhDs

Japan has fewer human resources with master's degrees and PhDs compared to other countries

Number of people per million with master's degrees (2008)

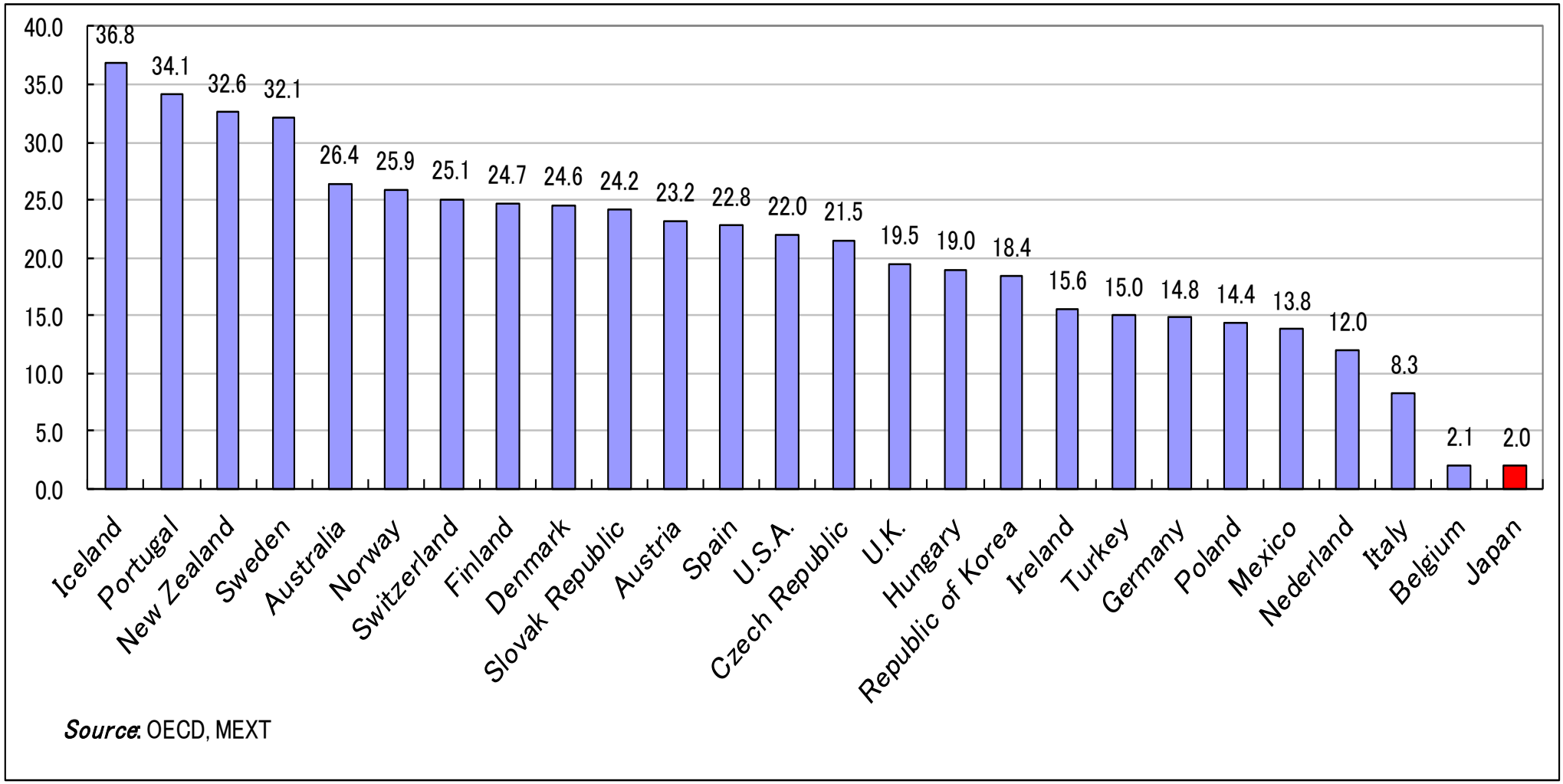


Number of people per million with PhDs (2008)



Percentage of Over-25s Advancing to Higher Education Institutions (International Comparison)

University-level higher education institutions: The percentage of students aged 25 or older in Japan (2%) is considerably lower than the average in other countries (approx. 20%)



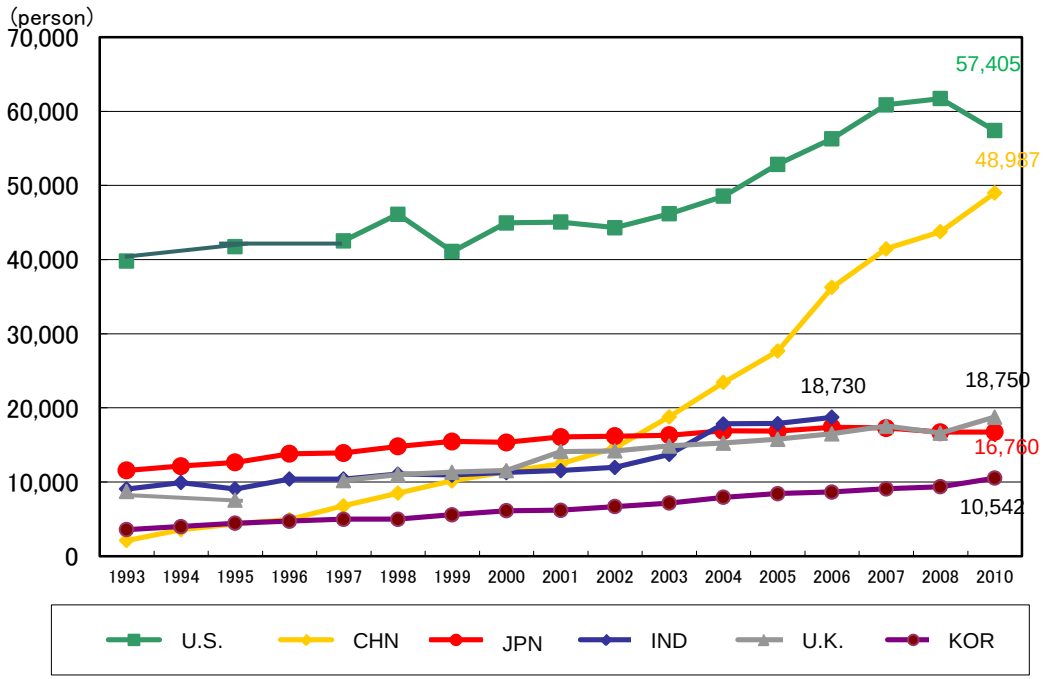
Source: OECD

International Comparison of PhDs and Graduate School Attendance Rates According to Age Group

Countries all over the world, particularly the likes of China and the US, are stepping up training for PhD human resources with with outstanding qualifications and abilities, in order to strengthen international competitiveness.

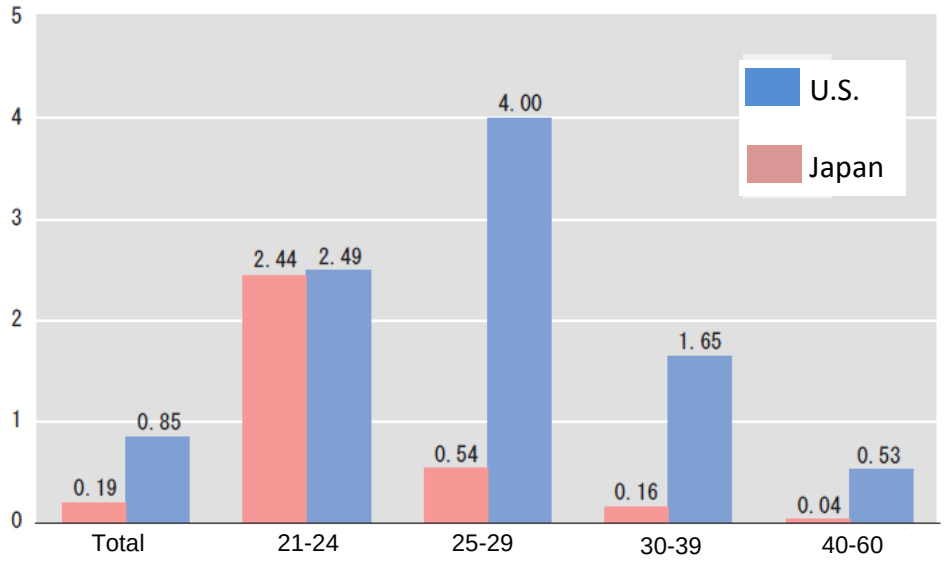
Although there is hardly any gap between graduate attendance rates in Japan and the US in the 21-24 age group, there is a substantial gap in the 25-29 and 30-39 age groups.

Number of people with PhDs in major countries



Source:**NSF science and engineering indicators2014, 2012,2010,2008**

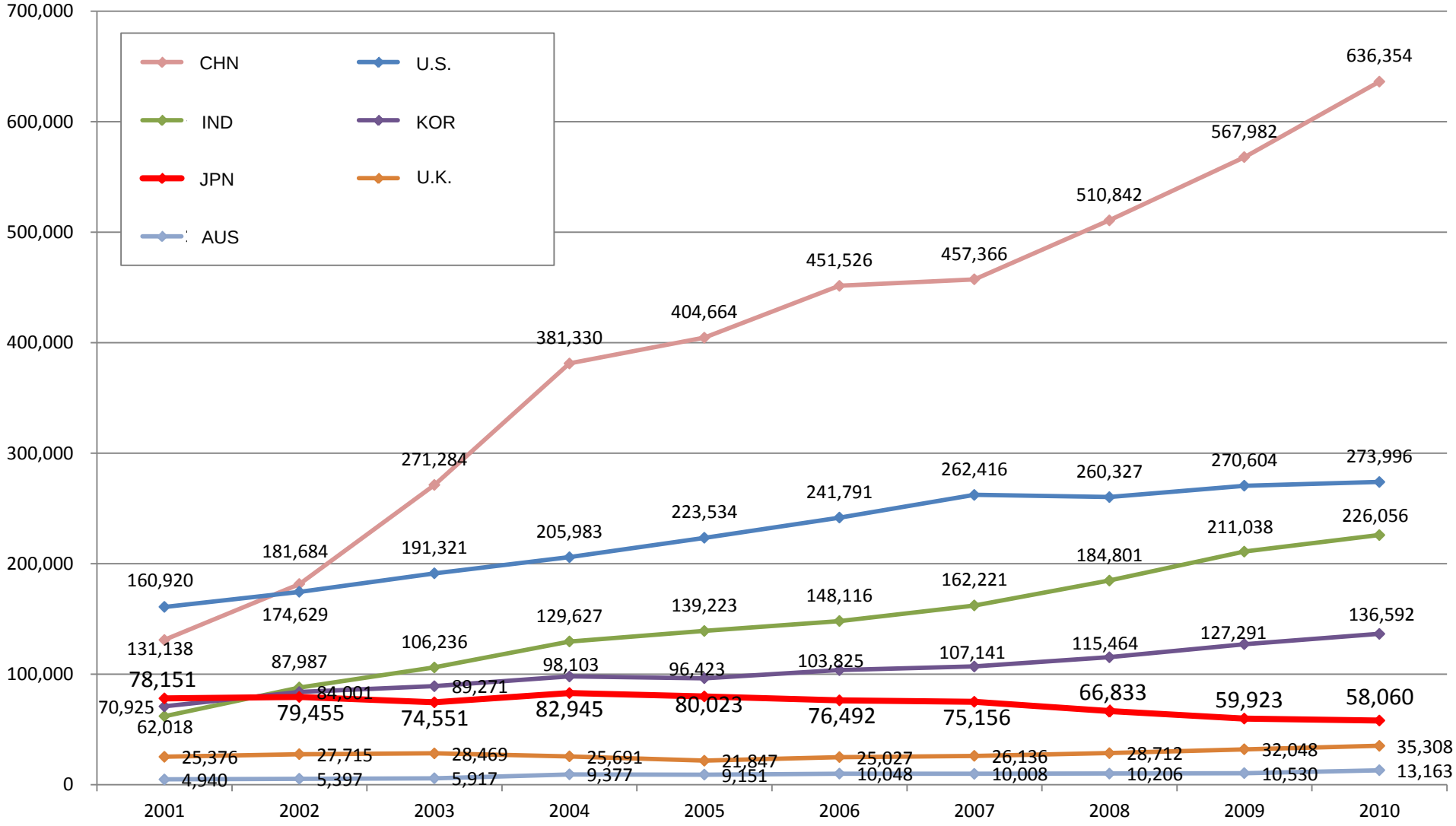
Graduate school attendance rate according to age group in Japan and the USA



※U.S.:40－64years old

Source: KANEKO Motohisa: College Manaement, Vol. 151, page 6, Jul. 2008 [2008]

Overseas Study in Different Countries

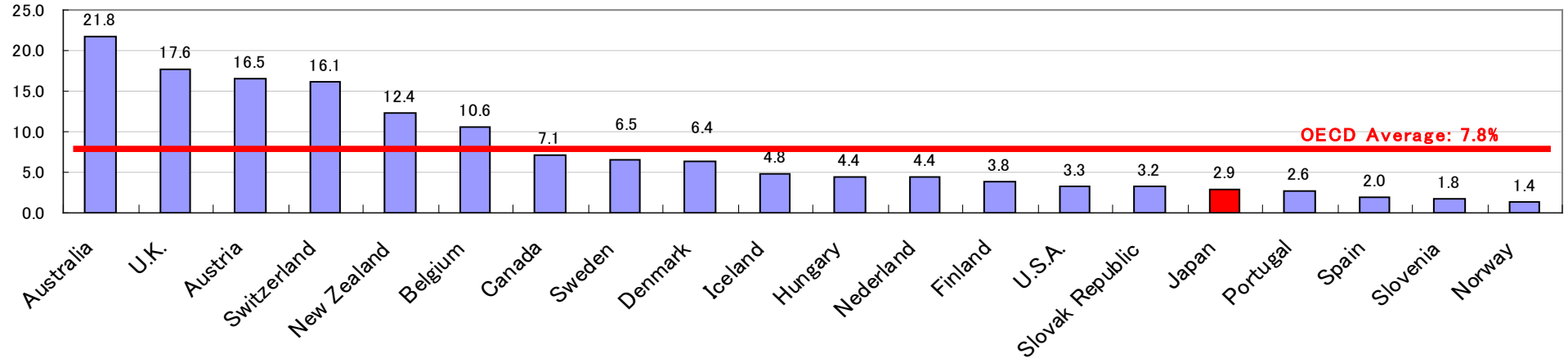


Source: U.S.A.= Open Doors, ohters= Education at a Glance, Institute for Statistics, UNESCO

Percentage of Foreign Students According to Country

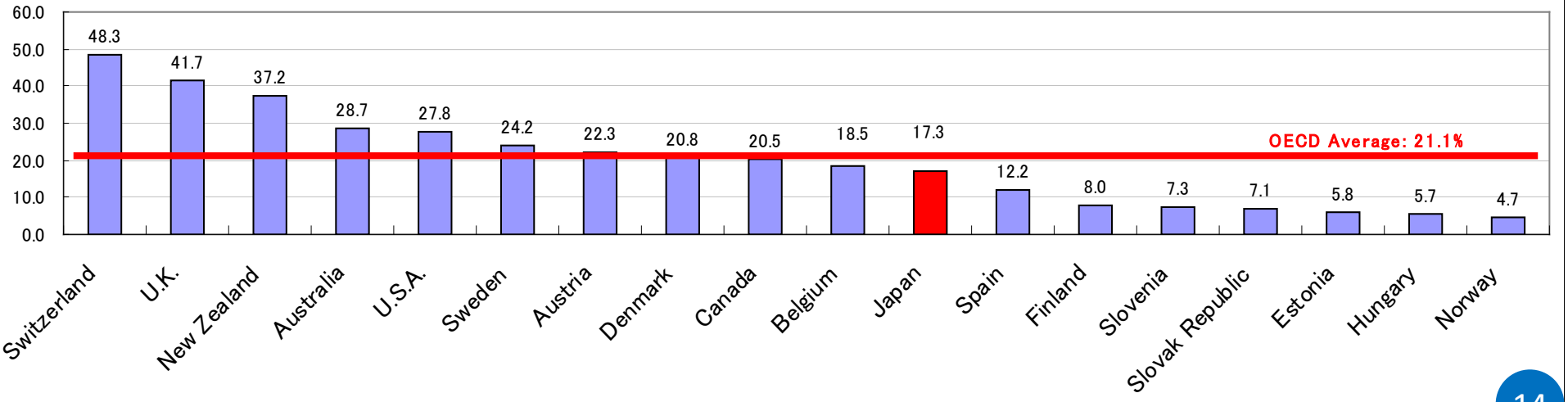
The percentage of overseas students in Japan is lower than the OECD average.

Higher Education in University (mainly B.A. and M.A.)



Source: Education at a Glance 2012, OECD

Higher Degrees (mainly Coctoral Degree)

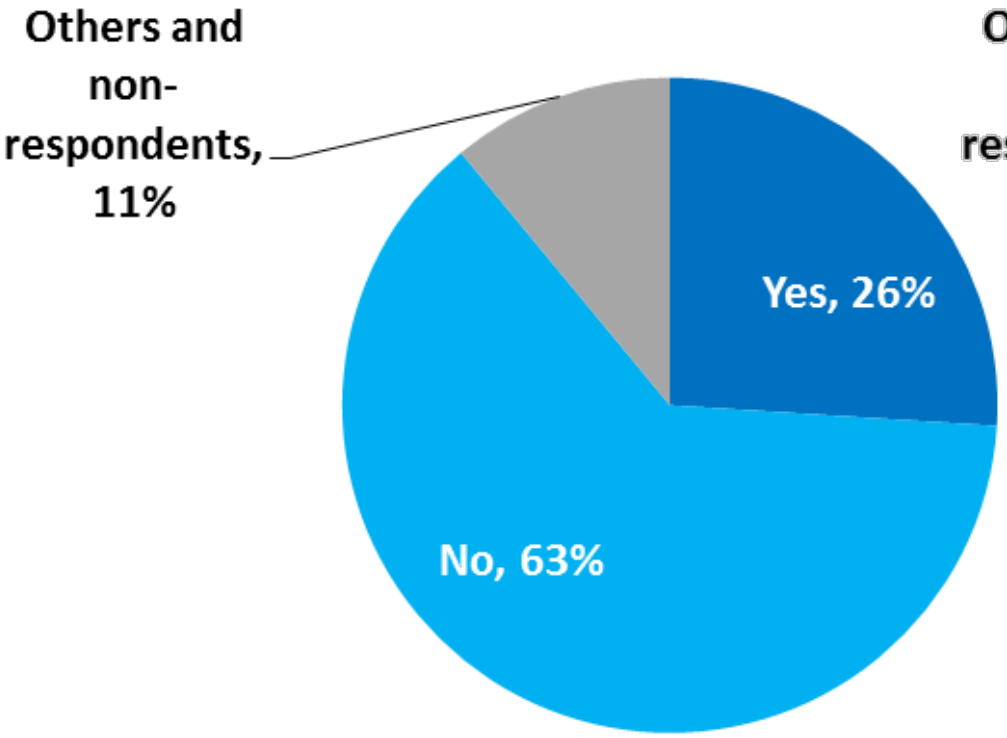


Source: Education at a Glance 2012, OECD

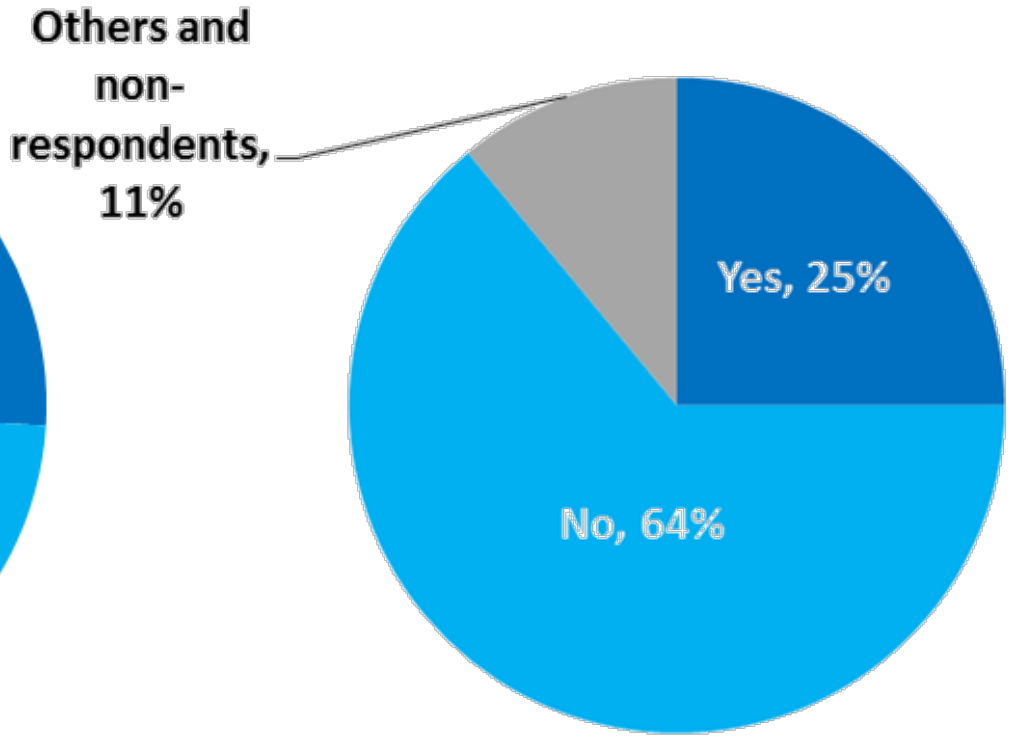
The Japanese People are not Satisfied with University Education at Present

When asked by a newspaper opinion poll if Japanese universities were capable of producing globally competitive human resources, or the sort of human resources required by companies and society, over 60% of the Japanese people responded negatively.

○ Do you think that Japanese universities are capable of producing globally competitive human resources?



○ Do you think that Japanese universities are capable of producing the sort of human resources required companies and society?



Source: Survey on Education, Asahi Shimbun. January 2011 [2011]

Difference Between Companies' Expectations for Human Resource Development and Actual Activities at Universities and Graduate Schools (Sciences)

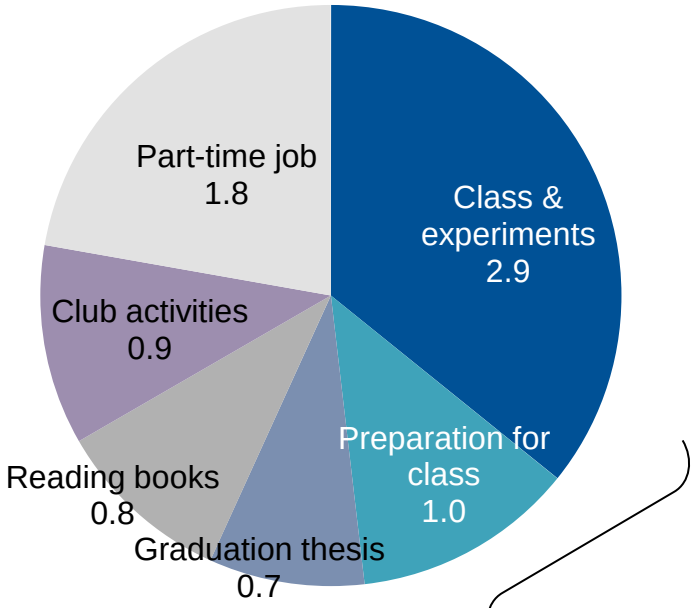
	Companies' expectations	Focus at university
①Comprehensive acquisition of knowledge in specialist field	65%	**85%**
②Training students to gather knowledge and information and think for themselves	55%	50%
③Acquisition of basic knowledge in other fields related to specialty	34%	**59%**
④Education with an emphasis on real-world implications in addition to theory	**31%**	16%
⑤Experience tackling specific challenges as part of a team	23%	17%
⑥Improved abilities in terms of international communication and cross-cultural understanding		
⑦Spreading knowledge around the world through general education	11%	14%
⑧Useful education with an emphasis on practical considerations	11%	3%
⑨Practice in debating and presentation skills	10%	**25%**

***Source*:** "Survey Results on Corporate Requirements for Human Resources" Keidanren (2004) (520 companies were asked what they expect from universities and graduate schools, from the standpoint of recruiting technical human resources, and told to select up to three criteria. 16 university science departments and graduate schools were then asked which criteria they particularly focus on, and told to select up to three.)

Study Load of University Students

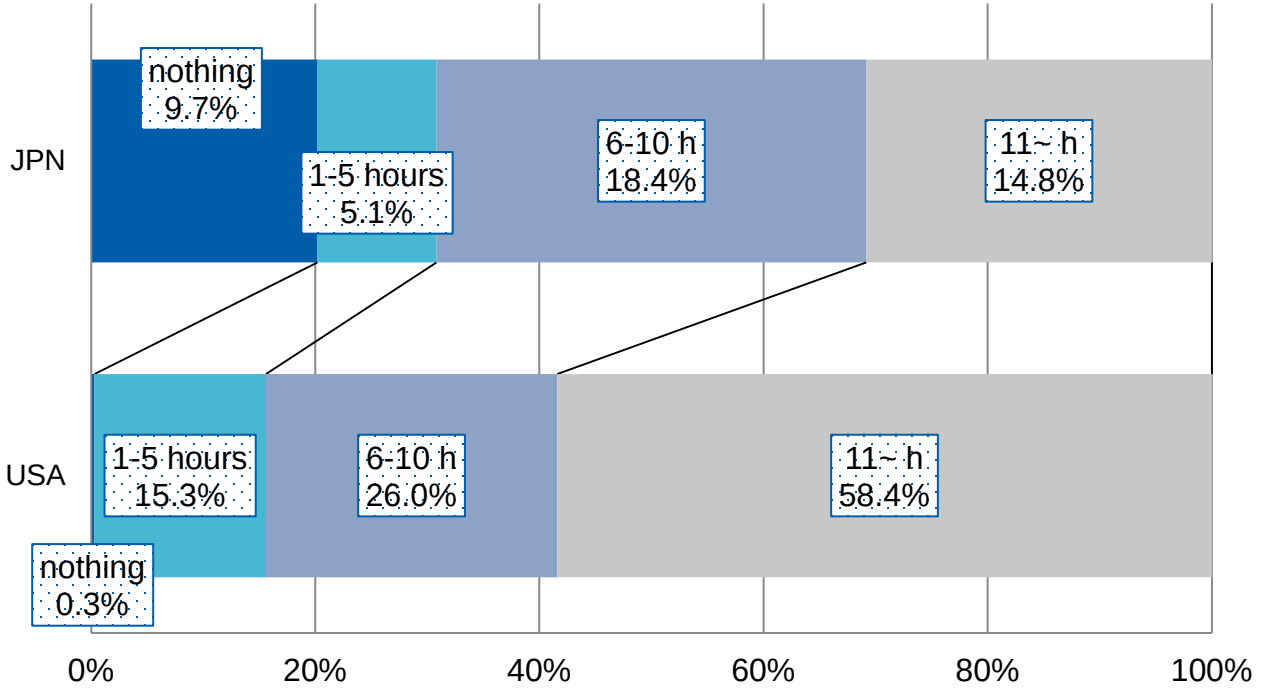
Average study load of Japanese students 4.6 hours/day; less than that for American students.

Students' Activities for 1 day in Japan
(Total: 8.2 hours)



Tuition
Tuition-related study
Thesis
4.6 hours

Study Time for Classes (per 1 week)
University Freshmen (United States and Japan)



Source :
- The University of Tokyo Center for Research on University Management and Policy (CRUMP) "Japanese University Students Survey 2007" (全国大学生調査2007年) Number of Samples: 44,905 students http://ump.p.u-tokyo.ac.jp/crump/
- NSSE (The National Survey of Student Engagement)

II. Developing Human Resources for a Changing Era and University Education Reform

Trends in University Reform in Japan

- On the subject of university education in a changing era, MEXT's Central Council for Education has published a policy report calling for a qualitative turning point in higher education, with the aim of empowering people to continue lifelong learning and think independently (2012).

  MEXT has formulated a "Plan for Implementing University Reforms", one of the top priorities of which is to reach a qualitative turning point in higher education (2012).

- The Abe administration meanwhile has made rebuilding education a key policy priority. The Cabinet "Council for the Implementation of Education Rebuilding" has made a series of recommendations, to promote university reform and education in line with globalization, and to reform university entrance examinations (2013).

  Human resource development is also a key component of the government's economic growth strategy, prompting calls for university reform and the development of global human resources.

Vision for society and required capabilities

Vision for society

A mature society that actively draws on outstanding knowledge and ideas to develop, and that continues to maintain fair and stable growth

→ "A model of independence, collaboration and creativity underpinned by knowledge"

Required capabilities

- Cognitive capabilities, including critical and rational thinking, to identify solutions to "unsolvable" issues
- Ethical and social capabilities, to perform duties, demonstrate teamwork and leadership,and fulfill social responsibilities
- Creative and conceptual capabilities based on extensive and ongoing academic experience
- "Gakushiryoku"(the ability reguired for university graduates → see slide ㉑) for an unpredictable era, including the education, knowledge and experience to make correct decisions in the face of unexpected difficulties

“Gakushiryoku”

(2009 Central Council for Education Policy Report “Establishing Curriculum-Based Education for Bachelor’s Degrees”)

The ability to cultivate oneself and act as a good citizen, something that all bachelor’s students should learn irrespective of their major.

○ Knowledge/understanding

・Multicultural and cross-cultural knowledge and understanding

・Knowledge and understanding relating to culture, society and nature

○ Versatile skills

・Communication skills　・Numeracy skills

・IT literacy　・Logical thinking　・Problem solving

○ Attitude/direction

・Self-management　・Teamwork, leadership

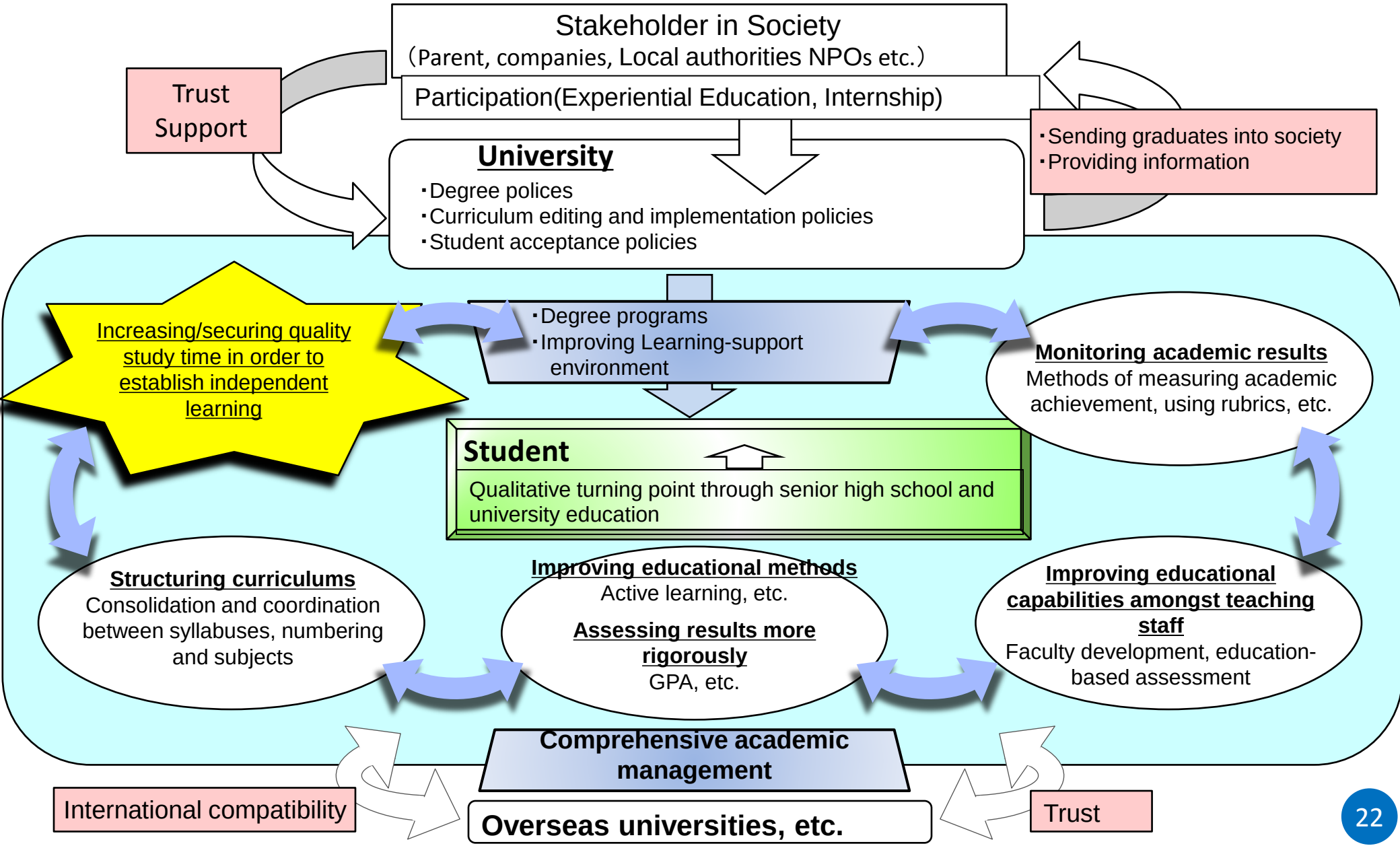
・Ethics　・Social responsibility as a good citizen

・Lifelong learning

○ Extensive academic experience and creative thinking

The ability to effectively use acquired knowledge and skills, and to apply them to resolving issues independently

Establishing a Positive Cycle Towards a Qualitative Turning Point in Curriculum-Based Education for Bachelor' Degrees



Urgent priorities for universities in order to reach a qualitative turning point in higher education

- Presidents, deans, specialists and other members of staff need to work as a team to establish a “reform cycle”, with the aim of reaching a qualitative turning point based on each university’s degree policy.
  - → Structuring curriculums (P)
  - → Dividing roles between teaching staff and providing organized education through cooperation (D)
  - → Evaluating academic results based on assessment tests, and assessing teaching staff based on educational activities and curriculums (C)
  - → Improving curriculums and educational methods even further (A)

- Establishing a basic shared awareness of the need for “curriculum-based education programs for bachelor’s degrees”, implementing extensive FD to help improve educational methods, training specialist staff, etc.

Plan for Implementing University Reforms: Establishing Universities as the Engines of Social Reform

(June 2012)

I. Reestablishing universities' functions in a rapidly changing society
   (1) Reaching a qualitative turning point in higher education and reforming university entrance exams
      - Transforming university and graduate school education in order to develop human resources capable of learning, thinking and acting independently
      - Encouraging relearning amongst adults, in line with changes in industrial structure and new academic needs
   (2) Developing human resources in line with globalization
   (3) Establishing universities at the heart of local regeneration – COC (Center of Community) concept
   (4) Improving research capabilities: Producing world-leading research results and innovations

II. Improving and strengthening university governance in order to reestablish universities' functions
   (5) Reforming national universities
   (6) Establishing systems and foundations to facilitate university reform
   (7) Establishing financial foundations and allocating funding evenly
   (8) Rigorously implementing university quality assurance

Third Proposal of the Council for the Implementation of Education Rebuilding: "University Education and Global Human Resource Development for the Future" (May 2013)

As universities are set to play an even greater role in creating a society based on knowledge, they need to improve educational and research capabilities in terms of both quality and quantity.

1. Creating an educational environment in line with globalization
   - Forging ahead with internationalization and creating an educational environment based around globally competitive universities (Ten universities in the world top 100 within the next ten years)
   - Doubling the number of Japanese people studying overseas to 120,000 and increasing foreign students in Japan to 300,000, to enable all enthusiastic and talented students to study overseas
   - Improving education in line with globalization, from elementary and secondary education onwards
2. Creating educational and research environments to encourage innovation as a driving force in society
   - Formulating a "Strategy for Developing Human Resources in Science and Engineering" with sights set on the next 10-20 years
   - Improving graduate school education, by establishing structured curriculum-based education for PhD degrees, extending beyond the confines of specialist fields
   - Reinforcing science and mathematics education at the elementary and secondary education stages

3. Strengthening educational capabilities to produce accomplished students who will benefit society
   - Improving academic management, by reaching a qualitative turning point in educational methods (tuition incorporating practical activities, etc.), increasing the amount of time students spend studying, and establishing organized education
   - Reinforcing education with an emphasis on interacting with the society, by improving career-based education, medium- to long-term internships and other experience-based tuition
   - Providing practical educational programs based on local human resource development needs
4. Improving relearning options for adults
   - Developing and implementing tailor-made educational programs, to enable acquisition of advanced vocational knowledge, essential knowledge for switching careers into new growth areas, etc.
   - Providing support for adults, with the aim of doubling numbers in adult education at universities and professional training colleges in the next five years
5. Reforming university governance and establishing solid financial foundations in order to reinforce management