

**University Education and Global Human Resource Development
for the Future
(Third Proposal)
[Provisional translation]**

Introduction

The education rebuilding seeks the reform of the functions of education so that these functions can maximize the abilities of the individual and develop their self-realization, while fostering each individual's contributions and fulfilling responsibilities to society as a formative force of the nation and society, and provide the means for living a better life. To realize these aims, the role of universities, which are the culmination of educational achievement and have a direct link to society, is of decisive importance. In a knowledge-based society, where knowledge, information, and technology are the basis of activity in all areas of society, the role that universities must bear becomes all the greater, and the educational and research functions of universities need to be qualitatively and quantitatively enhanced.

While other countries place paramount importance on higher education and endeavor to expand its scope, in Japan, judged by international standards, partially because of the limited numbers of adult learners enrolling at universities and overseas students studying in Japan, the ratio of students going on to university is low, and opportunities for adult learners to continue their education are limited. Public spending for higher education, again compared to international standards, remains low, and the disparity in spending between national and private universities is large. Moreover, the delay in the globalization of Japanese universities is reaching a critical state. With the accumulation of knowledge as their foundation, universities are expected to be the nucleus for creating new knowledge by exploring uncharted territories and for transforming society. Rebuilding Japan's universities to a position where they can persistently pursue new challenges and create new knowledge is an important pillar for re-enhancing Japan's international competitiveness and "revitalizing Japan" so that it can regain its former brightness.

In the efforts for strengthening the functions of universities, of prime importance will be a national strategy based on mid- and long-term perspectives for developing human resources that possess their own identity as Japanese, have broad knowledge, and can venture out into the world and receive and interact with peoples in other countries. For this, consistent and coherent efforts from primary and secondary education up through higher education, the enhancement of liberal arts education, which combines education in the sciences and the humanities, and a deep understanding of Japanese culture are required. Moreover, these efforts need to be carried out based on the diverse natures of the universities and the special characteristics of each region, while making the optimum use of the strengths of each university for qualitatively and quantitatively enhancing university education, by developing “educational and research bases at an international level,” “national educational and research bases,” “core bases for regional invigoration,” and so on. At the same time, efforts by society as a whole, beginning with industry-academia-government collaboration and cooperation, are also necessary, and the national government and local governments should promote the making of human resources development platforms through this trilateral cooperation.

Based on this thinking, we are proposing the following measures, which should be addressed promptly as a national strategy. The government has designated the five-year period until 2017 as the “intensive period for the implementation of university reforms.” During this period, the government is expected to consider and implement promptly specific reform policies and achieve the accountability for the reforms and regularly verifying their progress. Moreover, Council for the implementation of Education Rebuilding (hereinafter, the Council) will assume the responsibility for confirming the progress of the reforms from the perspective of the education rebuilding and for ensuring that the recommendations are being definitely carried out. The Council will also continue to study other issues regarding university reform, such as the transition from high school to university, the university entrance examination system, and so on.

1. Making an educational environment for responding to globalization

With globalization progressing in so many facets of society, it is incumbent on universities to thoroughly internationalize the educational content of their programmes and educational environment, develop global leaders who can play active roles in the world, as well as foster human resources who can lead the revitalization of regional communities from a global perspective, based on the special characteristics and policies of each university and the diversity of the fields of education and research as well as their student bodies. In addition, universities are required to promote internationalization, enhance the educational and research capability of universities and promote Japanese academics and culture to the world by actively accepting excellent overseas students. Therefore, it will be important for the national government to support strategically the prioritization of regions and fields that will become the targets for international exchanges and the strengthening of efforts for disseminating information about Japanese culture to the world.

(1) Resolutely proceeding with internationalization and making educational environments at universities that can compete with the best in the world

- The Japanese government should prepare educational environments from both systemic and financial aspects that will enable universities to go beyond their current systems such as attracting complete educational units (educational programmes, faculty, etc.) from top-class universities overseas to jointly establish these units with undergraduate and graduate departments of Japanese universities and enable the granting of joint degrees¹, in order to ensure that students can receive an education of world-class standards in Japan and to enhance qualitatively and quantitatively opportunities for Japanese researchers to carry out joint international research with excellent researchers overseas.
- In order to enhance the mobility of faculty and increase the number of excellent foreign faculty members, universities are encouraged to introduce new salary systems, including an annual salary system that

¹ Single diploma jointly granted to a student who has completed a course of study jointly offered by multiple universities.

respond to the capabilities of faculty members. Moreover, universities are expected to increase the ratio of courses taught in English and improve the foreign language capability of Japanese faculty, particularly their ability to conduct classes and provide educational guidance in English. Universities should set up systems that provide total support for foreign faculty, such as the preparation of comfortable living environments (healthcare services in English, support for children's education, job assistance for spouses, etc.), internationalizing university administrative offices, and so on.

- Establishment of overseas campuses and provision of attractive Japanese educational programs would be encouraged through collaboration with overseas universities, local enterprises and etc. The government should provide both systemic and financial support for Japanese universities and other higher education institutions to promote international collaboration through overseas expansion. Moreover, regarding competitive funds², the government should make efforts to support the overseas research activities of Japanese researchers by taking advantage of the special characteristics of the competitive funds.
- Based on the experience and knowledge gained from the on-going “Project for Establishing University Network for Internationalization (Global 30),” which has greatly advanced the globalization of Japanese universities, the government should strongly support universities which resolutely proceed with internationalization (“Japan’s Global Universities” [provisional name]), such as by actively employing foreign faculty members, expanding collaboration with overseas universities, increasing the number of degree courses that permit students to graduate by taking courses only in English, and so on. By expanding international joint research and other measures, the government and universities should heighten the international presence of Japanese universities, for example by seeking to place at least ten universities in the world rankings of the top 100 universities within the next ten years.

² Resource allocators for competitive funding seek proposals for a wide range of research and development issues. Allocators select subjects that they believe should be addressed from among those issues proposed based on evaluations by several persons, including experts in the field, centering on scientific and technological perspectives, and allocate research funds – competitive funding – to selected researchers.

- The government should support universities' positive efforts to formulate and announce educational policies for responding to globalization and to fulfill their role as intellectual hubs for supporting the development of regional societies from a global perspective.

(2) Providing opportunities for all students with the desire and capability to study abroad – Doubling the number of Japanese students studying abroad to 120,000 and increasing the number of overseas students in Japan to 300,000

- In conjunction with and as a condition for overseas study, universities are expected to ensure that students acquire practical competence in English by utilizing external language proficiency examinations, such as the TOEFL, for the university entrance examination and graduation requirement, as well as conducting educational programmes in English. External language proficiency examinations should be utilized in accordance with the diversity of universities and their students. Moreover, students with excellent capability in English should be encouraged to study other languages. For example, as a measure for responding to the globalization of East Asia, it will be beneficial for students to also learn practical Chinese.
- In order to advance their internationalization, universities are expected to make the academic calendar more flexible by introducing autumn admissions and a quarter system, as well as promoting credit transfers and overseas study exchanges. The government should support efforts enabling students to gain experience overseas by promoting overseas internship programmes at universities, recognizing credit transfers, and so on.
- Through cooperation with enterprises and private individuals, the government should establish new measures, including mechanisms for promoting donations, for supporting overseas study expenses including scholarships, and should drastically strengthen assistance for students' short- and long-term overseas study, including supporting overseas study and experiential activities by utilizing the "gap term" resulting from the greater flexibility of the academic calendar. In addition, local governments should prepare systems that will allow various types of

support to be received from enterprises and private individuals for assisting overseas study expenses.

- Industry and the national government should revise the periods for employment testing and qualifications examinations in light of autumn university admissions, as well as make positive efforts to employ students with overseas study experience as company employees and national civil servants. Moreover, they should promote the positive evaluation of overseas study experience so that those with the desire to study overseas can do so after their employment.
- In order to strategically increase the acceptance of excellent overseas students in Japan, the government, universities and other higher education institutions should establish overseas branches or offices to provide convenient “one-stop” services that will enable interested students to get information about studying in Japan, and should create mechanisms so that students can be admitted to Japanese universities and decisions can be made about the granting of scholarships in their home countries without needing to visit Japan. Universities are also encouraged to offer more courses in English, provide Japanese language instruction to overseas students, and enhance assistance for daily life, such as by arranging accommodations, and support for the employment of excellent foreign overseas students at Japanese companies. The government should set priority regions and disciplines and take other measures to drastically revise the government-sponsored scholarship system for overseas students and to strengthen such assistance. Private enterprises should also take active steps for employing excellent overseas students when they graduate.

(3) Enhancing education from the primary and secondary school levels to respond to globalization

- The government should consider the drastically expanding English education in elementary schools (starting English instruction from an earlier grade, increasing classroom hours for English, making English an official subject, assigning English teachers to elementary schools, etc.), the conducting of English classes at the junior high school-level in English, and, regarding the development of systematic English

instruction throughout primary and secondary education, the revision of the school curriculum, referencing examples of English education in other countries. The national government and local governments should strengthen the system for small-group instruction and increase the number of native speakers of English through an expansion of the JET programme, and increase opportunities for students to come into contact with English through the holding of “English camps” and so on.

- The government should encourage students who aim to be English teachers to take English courses taught by native speakers. The national government and local governments should promote the utilization of external language proficiency examinations for employment tests for teachers, as well as expand and strengthen English language training, including overseas training for currently employed teachers, with the aim of ensuring that English teachers have obtained a definite threshold score in an external language proficiency examination such as TOEFL (at least a TOEFL iBT score of 80).
- The government should designate “Japan’s Global High Schools” (provisional name), advanced high schools that will foster future global leaders, and expand opportunities for using foreign languages, especially English, and support the development of international education, such as broad knowledge and problem solving skills. Concerning the accreditation of International Baccalaureate schools³, the government should develop and introduce a diploma programme⁴ in Japanese for some of the subjects, and thereby greatly increase the number of accredited schools (from 16 to 200 schools). The government and local governments should also positively assist

³ Schools that have received authorization as an educational institution to offer educational programmes established by the International Baccalaureate (IB) organization. (An educational foundation founded in 1968 and headquartered in Geneva, Switzerland, the IB aims at providing internationally recognized university admissions qualification to students, and contributing to the promotion of education for international understanding.)

⁴ Diploma programme that provides a university admissions qualification that is widely recognized by universities around the world to students who successfully complete a two-year study programme and pass final examinations. At present, the programme is offered in English, French, and Spanish, with parts of the programme and examinations offered in German and Chinese.

Japanese high school students in participating in overseas exchange programmes and short-term overseas study programmes. The government should also make active efforts for the acceptance of local children at Japanese schools in foreign countries and the promotion of Japanese language education and the understanding of Japanese culture.

(4) Cultivating identity as a Japanese and spreading Japanese culture to the world

- In order to deal with globalization with a conscious awareness of cultivating identity as a Japanese and spreading Japanese culture to the world, the national government and local governments should enhance Japanese language education and promoting understanding of Japanese tradition and culture through elementary, secondary and higher education. The national government should strategically encourage foreign universities to promote studying Japanese language and culture in overseas. Moreover, the national government should promote the fostering of human resources and programme developments to teach or introduce Japanese culture.

(5) Utilizing a special zone system to respond effectively to globalization

- In the case positive effects can be expected for the preparation of educational environments recommended in this proposal, which respond to globalization efforts by universities and other educational institutions and local governments, the government should undertake necessary deregulation and develop required support measures to facilitate these efforts. The government will consider supporting the efforts by utilizing the scheme of the “National Strategy Zones” (provisional name), which is being discussed in the Council for Industrial Competitiveness.

2. Building educational and research environments for the creation of society-leading innovation

For creating innovation, it is essential to develop human resources who can create new added-value ideas by preparing them to possess a complex array

of competencies, including creativity and management skills, in addition to high technical capabilities. In this process, strengthening more than ever science and engineering fields, including the life sciences, is vital. Universities are expected to play an important role for leading Japan's growth through the development of these human resources and creating continuous innovation through academia-industry collaboration. For this, the necessary environments, including the regulatory reforms, is needed for the development of those fields requiring the priority development of human resources.

- In order to develop human resources who have a strong overall grasp of technology and management, the government should assist universities in developing interdisciplinary programmes that link the sciences and humanities, and promote efforts so that all university students acquire fundamental knowledge covering the humanities and sciences. The government should also work to enhance liberal arts education in order to ensure students acquire a basic grounding in the natural sciences and the humanities and social sciences, develop other wide-ranging competencies such as the ability to think and express them logically and clearly, and cultivate cultural affinities for the arts.
- From the viewpoint of effectively fostering human resources who can create innovation, the government should formulate a “Strategy for Developing Human Resources in Science and Engineering” (provisional name), in order to develop a strategic plan for education based on the respective responsibilities and roles shared by universities, industries, and the government regarding the fields, areas and capabilities that will become requisite for human resources in science and technology in the coming 10 to 20 years. In addition, this strategy should be promoted at the “Industry-Academia-Government Roundtable Council” (provisional name), which the national government and local governments should establish.
- In order to further strengthen science and engineering, which are the nucleus of innovation, the government should support the reorganization and transformation of educational and research organizations, based on the strengths and special characteristics of each university and the “Strategy for Developing Human Resources in Science and Engineering” (provisional name). The government should

also enhance its support for diverse and advanced basic research.

- The government should promote the strengthening of the educational functions of undergraduate and graduate schools and the bold transformation of their curricula centering on economics and management, in order to develop Japanese businesspersons who can play active international roles as well as foster young people's entrepreneurial spirit.
- Universities should enhance their graduate school education, including the establishment of systematic doctoral courses that go beyond the frameworks of specialized fields, as well as revise their thinking regarding graduate school admissions so that innovation can be created by new ideas generated through contacts and exchanges with a wide range of people. In addition, universities should prepare research environments for young researchers by establishing and disseminating the tenure track system⁵ and securing adequate funds and space for research. Moreover, through the strengthening of academia-industry-government collaboration, private industry and the government should make active efforts to employ graduates of doctoral degree courses and provide opportunities for their activities. Universities should also open up and develop diverse career paths, and provide graduate school education that matches the needs of the actual society. Each stakeholder should thus fulfill its own respective responsibilities.
- In order for industry and academia to collaborate in the creation of new industries, the government should prepare an institutional framework that will allow investment by national universities in investment companies and university-launched venture support funds, etc. with the purpose of the commercialization of research and development. Moreover, through personnel exchanges with the technology developments of private enterprises and the return for study by company employees at universities, universities should foster human resources who can manage the commercialization of projects through the collaboration between enterprises and researchers. Particularly in

⁵ System that allows young researchers to receive fixed-term employment so that they can gain research experience independently before receiving tenure by passing a screening process.

regional areas, universities should strengthen their functions as bases for research and development.

- In order to strengthen science and mathematics education at primary and secondary schools, the government and local governments should allot instructors for specialized course instruction, small-group instruction and achievement-based instruction, and improve facilities as well as promote comprehensive efforts such as “Super Science High Schools,” science competitions, and so on. The government should also conduct regular science surveys to ascertain the National assessment of academic ability.

3. Strengthening educational functions for training students and sending them into society

With the growing societal demands for human resources with advanced and diverse skills and capabilities, it is essential for universities to enhance the contents of their education and prepare an environment that will enable students to learn effectively and thoroughly their subjects. Private industry has made efforts recently to delay the period for employment-seeking activities, and it is expected that this pushing back of the employment period will become established practice. With a longer period now secured for students to devote themselves to their studies, universities should now urgently tackle reforms, develop young people’s capabilities to their full potential, and respond to the expectations of society.

- Universities should make qualitative changes in pedagogical methods, such as the development of learning and teaching methods that incorporate students’ active participation (“active learning”) and interactive class instruction, in order to develop human resources who have the necessary skills and capabilities requisite to function as active members of society, such as “basic employability skills” and “basic general skills” like the ability to identify and pursue problems and to get things done. Moreover, they should improve the teaching and educational management university-wide, for example, securing and increasing learning time of students, including class preparation and after-class follow-up, visualization of learning results, systematizing curricula, providing organized education, and so on, as well as ensure

the rigorous assessment of results. The government should give priority assistance to universities making these efforts, and should promote the active disclosure of information. Enterprises and the government should evaluate the diversity of students' learning and experience when making hiring decisions.

- Rather than focusing only on educational activities that take place within the confines of the campus, universities should enhance education that increases understanding of the connection between the university and society by providing more experiential instruction, such as career-oriented education, longer-term internship programmes and field work in regions including farming and fishing villages,. For this, it seems feasible to promote through academia-industry collaboration longer-term paid internships that encourage students to realize self-growth with the aim of pursuing a career. In addition, the government should take the lead in accepting students for mid- and long-term internships at government organizations, and request the National Personnel Authority to take necessary measures regarding the national civil service examination based on the moving back by private-sector companies of the period for job-seeking and recruitment activities.
- So that universities, professional training colleges and other higher education institutions can respond to regional human resources development needs and contribute to local communities, the government should support collaboration and cooperation with local governments and regional industries and efforts to provide practical educational programmes. Moreover, the government should also support the training of craftsmen and artisans who will carry on Japan's traditional industries and superior technologies.
- In order to improve the quality of primary and secondary school teachers, teachers' colleges and university education departments should increase their numbers of faculty members who have actual teaching experience at schools, turn to more practice-based curricula, and strongly promote the drastic revision and strengthening of their systems and organizations, based on the actual situation of each institution, from the viewpoint of moving from the quantitative preparation of the institutions and teaching staff to the qualitative

enhancement of the education. In addition, they should strengthen the linkage between the universities and schools by encouraging students' volunteer activities at schools and so on.

4. Strengthening universities and professional training colleges' continuing education functions

In a knowledge-based society, it is important for people to continue to have the desire to learn after they become adults. Moreover, continuous learning enables people to extend their range of skills and enjoy a richer life, while contributing to advanced human resources development, which supports economic growth. It will be important to break the typical Japanese model of "entry into university at 18." Universities, professional training colleges and other higher education institutions must enhance their functions qualitatively and quantitatively so that adult learners can continue their education to acquire new skills.

- Universities, professional training colleges and other higher education institutions should develop and provide specialized educational programmes for the fostering of core and highly capable human resources that can respond to the needs of industry and local governments. Through these programmes, students can acquire more advanced knowledge necessary for their occupations and also gain the knowledge and skills necessary to change careers in response to new growth industries. The government should support these efforts and the enhancement and application of the extension course certification system⁶. The government should also provide support for the continuing education of women in order to contribute to the advancement of their activities.
- Universities and professional training colleges are expected to utilize appoint people with practical experience in industry to develop pioneering courses, and pursue efforts to develop practical vocational education programmes through collaboration with industry to meet the continuing-education needs of adult learners and those of industry. In particular, the government should support the preparation of an

⁶ System granting certification, in accordance with the School Education Law, to those completing a university-level educational programme (a total of 120 hours or more) targeting adult learners who wish to receive systematic education.

environment for continuing-education in the field of science and engineering based on the “Strategy for Human Resources Development in the Field of Science and Engineering” (provisional name).

- In order to prepare an environment amenable for adult learners to continue their education, universities and professional training colleges should provide short-term programmes, enhance distance-learning courses, advance the utilization of ICT, etc. Private-sector enterprises should encourage the continuing education of their employees by providing sabbaticals⁷, making working hours flexible, and so on.
- The government should set a target of doubling within five years the number of adult learners studying at universities, professional training colleges and other higher education institutions (120,000 to 240,000), and implement support measures for adult learners through the flexible utilization of scholarship loan system, such as relaxing the requirements for payment, and changes in the employment insurance system. The government should also develop support measures for companies such as generous expenses subsidies to employers assisting employees in taking continuing education programmes.

5. Strengthening their management by reforming universities’ governance and enhancing universities’ financial bases

The realization of the recommendations proposed above will depend on whether each university makes the decision to launch these reforms. It will be essential to strengthen the management bases of universities by the provision of solid financial support from the public and private sectors to universities to advance these reforms as well as by the advancement of university governance reforms so as to enable university presidents with the desire to do so to exercise leadership and carry out bold reforms.

- After developing an overarching future vision for national universities that clarify their special strengths, characteristics, and role in society, etc., the government should formulate the reform process for all of the national universities in the summer in 2013. Moreover, national

⁷ Long-term leave granted by employers to employees who have worked for a certain period of time or who have achieved excellent results so that they can pursue relevant research or study.

universities are encouraged to revise their payroll and personnel systems by the full-fledged introduction of the annual salary system, a mixed salary system permitting remuneration from outside organizations, etc., and immediately start the strategic and priority allocation within the university of the management expenses grants for national universities and the clarification of the allocation of resources within the university. These bold and pioneering reforms should be carried out within the next three years. In line with these efforts, the government should establish new evaluation indices based on the results of educational and research activities, and the government should radically revise the system of the management expenses grants for national universities during the 3rd Mid-term Target Period (from fiscal 2016).

- Based on the special managerial characteristics of each university, the government and universities should establish systems allowing university presidents to exercise more university-wide leadership by securing independent funding for the university headquarters and president's office, strengthening and expanding university executive boards and the staffing at the university headquarters to assist the president, and so on. The method of selecting university presidents should also be reviewed. Fundamental governance reforms, including study of the revision of the School Education Law and other ordinances and intra-university regulations, should be carried out in order to clarify the role of faculty councils and revise the duties of department heads and the functions of university boards of directors, and strengthen the operational functions of auditors, etc.
- The government should provide a further prioritized allocation of funds for fundamental expenses, as well as strengthen the financial bases of universities through fiscal measures of the management expenses grants for national universities, subsidies for the maintenance and improvement of facilities, financial aid to private universities and fiscal assistance for public universities. For this, the government should consider allocations of funds in recognition of universities that carry out reforms allowing faculty to fully demonstrate their abilities by improving their capabilities and evaluating faculty from a wide-ranging perspective that includes their educational, research, university

management, and social activities. In regards to publicly-offered funds distributed to universities, the government should allocate the costs (indirect costs) for university-wide common infrastructure and the securing of human resources for educational and research support, and endeavor to allocate the proportion of indirect costs at 30% while securing the direct costs. The universities are expected to utilize the indirect costs effectively. In addition, the government should also prepare an environment, including revising tax regulations, for expanding donations and spurring the independent procurement of private-sector funds to enhance universities' educational infrastructure.

- Regarding private universities, which play a major role in higher education in Japan, the government should endeavor to establish a firm financial basis for them so that they will be able to provide diverse and high-quality education, as well as develop regional human resources having a global perspective and respond positively to the dramatically increasing demand for continuing education by adult learners. The government should provide more prioritized support for university-wide educational reforms for improving the quality of education in accordance with the spirit of each university's founding, unleashing universities that can support the fostering of human resources for regional development, and activating educational and research activities in collaboration with industry and other universities. In addition, comprehensive measures should be developed to further ensure the quality of university education, including clarifying the standards, raising the level of the review process for the establishment of new universities, providing necessary management guidance and support, and dealing with the situations with no prospect of improvement.
- In order to deal with the issues regarding the Amendments to the Labor Contract Law, which went into effect in April this year, such as developing career paths for researchers and personnel affairs management at universities, the government should consider mechanisms, based on the actual educational and research situations at universities, for ensuring the continuity of education and research, fostering young researchers, promoting the mobility of researchers, securing a stable supply of personnel for assisting research, and so on.

- Based on the realization that, for Japan, the power of universities undergirds the power of the nation now and in the future, the government should regularly hold the prime minister-sponsored “Summit for the Future Vision of Universities” (provisional name), comprising university presidents, prefectural governors, industry leaders, and others, to develop approaches for strengthening the functions of universities throughout society.