

Report on **AY2018** Operational Performance

July 2019

Hiroshima University



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○ Overview of Hiroshima University

(1) Current Profile (as of the end of AY2018)

(i) Name: Hiroshima University

(ii) Location

- Headquarters: Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture
- Campuses: Higashi Hiroshima Campus: Kagamiyama, Higashi-Hiroshima City, Hiroshima Prefecture
 - Kasumi Campus : Kasumi, Minami-ku, Hiroshima City, Hiroshima Prefecture
 - Higashi-Senda Campus : Higashi-Senda-Cho, Naka-ku, Hiroshima City, Hiroshima Prefecture

(iii) Officers

- President: Mitsuo Ochi (since April 1, 2015)
- Executives: 7
- Auditors: 2 (including one part-time auditor)

(iv) Schools, departments and other institutions

- Academy of Hiroshima University
 - Headquarters for Education
 - Schools: 12
 - School of Integrated Arts and Sciences, School of Letters, School of Education, School of Law, School of Economics, School of Science, School of Medicine, School of Dentistry, School of Pharmaceutical Sciences, School of Engineering, School of Applied Biological Science, School of Informatics and Data Science
 - Training and Research Vessel TOYOSHIO MARU (School of Applied Biological Science)*
 - Graduate schools: 11
 - Graduate School of Integrated Arts and Sciences, Graduate School of Letters, Graduate School of Education, Graduate School of Social Sciences
 - Graduate School of Science, Graduate School of Advanced Sciences of Matter, Graduate School of Biomedical & Health Sciences, Graduate School of Engineering, Graduate School of Biosphere Science, Graduate School for International Development and Cooperation, Hiroshima University Law School
 - Marine Biological Laboratory, Graduate School of Science*
 - Setouchi Field Science Center (Graduate School of Biosphere Science) Saijo Farming Station*
 - Setouchi Field Science Center (Graduate School of Biosphere Science) Takehara Marine Science Station*
 - Advanced course: 1
 - Special Course of Special Support Education
 - Attached research institute: 1
 - Research Institute for Radiation Biology and Medicine*

○ Hospital

○ Library

○ National joint usage facility: 1
Hiroshima Synchrotron Radiation Center*

○ Joint usage facility for national universities in the Chugoku/Shikoku Area: 1
Saijo Seminar House

○ Joint education and research facilities on campus: 26
Research Institute for Nanodevice and Bio Systems*, Research Institute for Higher Education, Information Media Center, Natural Science Center for Basic Research and Development, Morito Institute of Global Higher Education, Center for Collaborative Research & Community Cooperation, Center for the Study of International Cooperation in Education, Health Service Center, Center for Peace, Environmental Research and Management Center, Hiroshima University Museum, Beijing Research Center, Hiroshima Astrophysical Science Center, Institute for Foreign Language Research and Education, Hiroshima University Archives, Institute for Sport Sciences, HiSIM Research Center, Center for Contemporary India Studies at Hiroshima University, Research Center for Diversity and Inclusion, Amphibian Research Center, Translational Research Center, Resilience Research Center, Brain, Mind and KANSEI Sciences Research Center, Genome Editing Innovation Center, Digital Monozukuri (Manufacturing) Education Research Center, Harassment Consultation Office

○ Attached schools: 11

Hiroshima University Kindergarten; Hiroshima University Kindergarten, Mihara; Hiroshima University Elementary School; Hiroshima University Elementary School, Shinonome; Hiroshima University Elementary School, Mihara; Hiroshima University Junior High School; Hiroshima University Junior High School, Shinonome; Hiroshima University Junior High School, Mihara; Hiroshima University Junior High School, Fukuyama; Hiroshima University Senior High School; Hiroshima University Senior High School, Fukuyama

* Facilities marked with an * are designated by the government as joint usage, joint research or joint education centers.

(v) Students and school staff (as of May 1, 2018)

- Students: Undergraduate students 10,810 (including 75 foreign students)
 - Graduate students 4,559 (including 1,199 foreign students)
 - (including Hiroshima University Law School and Professional Development Program for Teachers and School Leaders)
 - Advanced courses 15
 - Attached schools 3,764
- Teachers and administrative staff members:
 - Teachers 1,899 (including 213 attached schools teachers)
 - Administrative staff members 1,757

(2) Basic Objectives of Hiroshima University

1 Principles

Hiroshima University (hereinafter referred to as "HU") fulfills its roles as a national university based on its founding principle "a single unified university, free and pursuing peace" and the following five guiding principles: Pursuit of Peace, Creation of New Forms of Knowledge, Nurturing of Well-Rounded Human Beings, Collaboration with Local, Regional and International Communities, and Continuous Self-Development.

2. Basic Policy

As a comprehensive research university located in Hiroshima, the first city in the world exposed to an atomic bomb, and an international peace and cultural city, Hiroshima University steadily carries out the Global Campus Expansion and Innovation Initiative in accordance with the "Program for Promoting the Enhancement of Research Universities" and the "Top Global University Project" (top type), both sponsored by the Ministry of Education, Culture, Sports, Science and Technology (hereinafter referred to as "MEXT"), aiming to provide education and conduct research of international-class level. Through "innovation" and "internationalization" of the university, HU pursues to become a Top 100 comprehensive research university in the world in ten years.

HU also strives to serve as a national center representing Japan and leading the world and as a regional center for the Chugoku and Shikoku Regions in Japan, by taking advantage of its unique characteristics and strengths, responding to the needs of the times and society, to realize a "University of World-wide Repute and Splendor for Years into the Future." HU is committed to training highly cultured individuals with a global outlook who will work for peace through its traditional and proven liberal arts educational programs, and at the same time, focuses on developing persons who will play active roles in international and regional societies through world-class specialized education built on top-level research activities in the world.

In the area of research activities, HU continues to focus on establishment of research centers and research environments, which have been implemented in the Second Period of the Medium-Term Plan (hereinafter, the "Second Medium-Term Period"), by utilizing support programs, such as the MEXT Program for Promoting the Enhancement of Research Universities, and pursues free and highly creative research activities to achieve top-level research results in the world. In the academic fields that HU has a great advantage, such as pedagogy, condensed matter physics, space science, creation of functional materials, semiconductors and nano-technology, and biotechnology, HU pursues advanced research activities of high quality. HU also develops research centers for radiation disaster medicine, as a university that has supported the region's restoration from calamities of the atomic bomb. It also pursues advanced research of high quality in the areas of regenerative medicine, hepatic diseases and brain science.

In the area of educational activities, HU carries out specific activities of the Hiroshima University Global Campus Expansion and Innovation Initiative developed in the Second Medium-Term Period, by utilizing support programs, such as the MEXT Top Global University Project, aiming to provide world-class education to develop educated people who can play active roles globally in solving unforeseeable problems for humankind and in pursuing peace, with their advance knowledge and abilities. To comply with the international standards for education and improve the quality of education, HU improves its educational activities through its internal education evaluation system and also receives outsider evaluations from an international consortium of universities, SERU (Student Experience in the Research University).

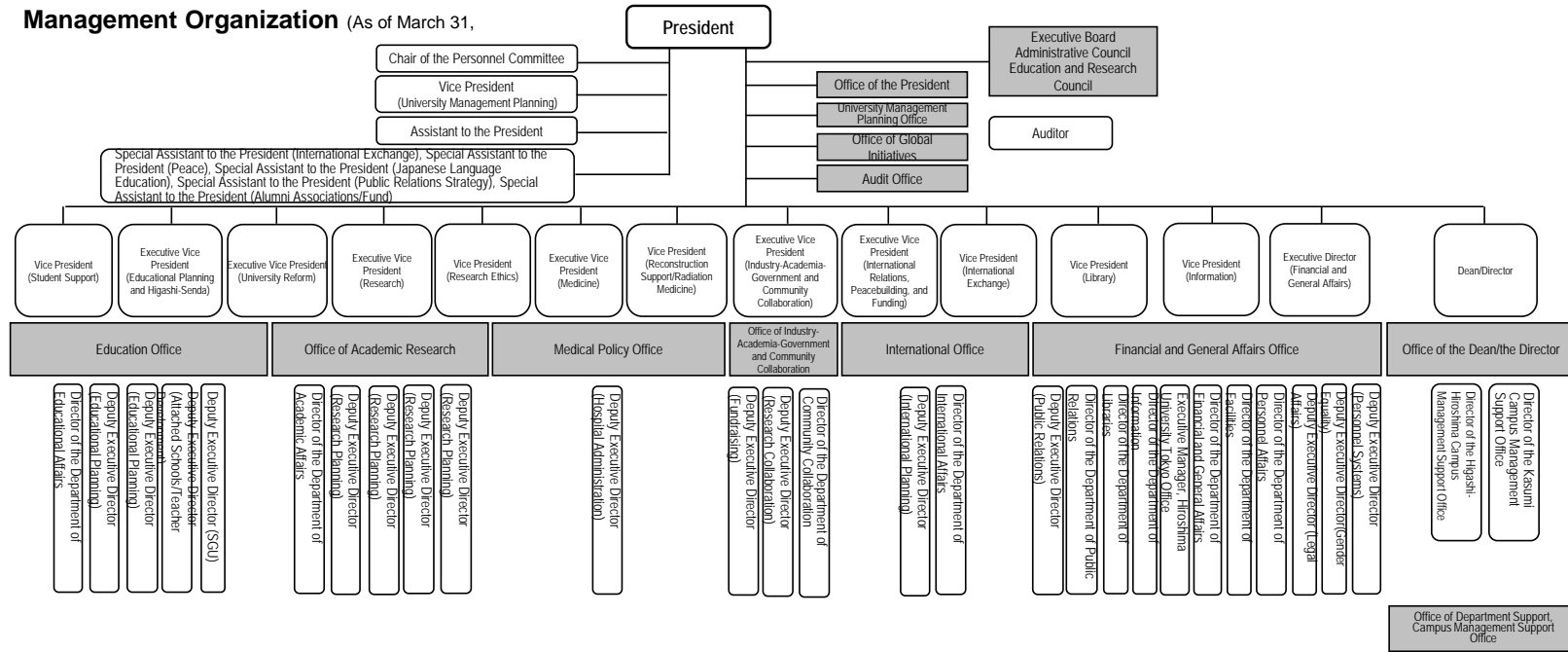
In the area of social contribution, HU focuses on activities to promote advanced collaboration with thriving industries in the region, such as transportation equipment and machinery industries, and with regional communities in Hiroshima Prefecture and neighboring prefectures. HU has worked in the Second Medium-Term Period to contribute to enhancement of the international competitiveness of the region and creation of innovation, by utilizing support from the Center of Innovation Stream programs of MEXT and the Building of Consortia for the Development of Human Resources in Science and Technology program of the Japan Science and Technology Agency. To contribute to regional vitalization and enlivenment, HU implements region-oriented education and research to develop people who can play active roles globally, responding to needs in areas having strong global orientation within Hiroshima Prefecture, by utilizing support from the MEXT Center of Community Program and the Hiroshima University Regional Contribution Program.

In the area of the operation and administration of the university, HU strengthens its management foundation under the leadership of the President, while constantly reviewing and improving its governance system, to maximize its functions in education, research and social contribution. HU monitors the performance of educational and research activities within the university by utilizing its unique achievement-motivated key performance indicators (A-KPIs[®]) and its IR (Institutional Research: a function to gather and analyze information on activities within a university). Based on the analysis obtained from these functions, HU conducts strategic university management, taking advantage of its strengths and characteristics.

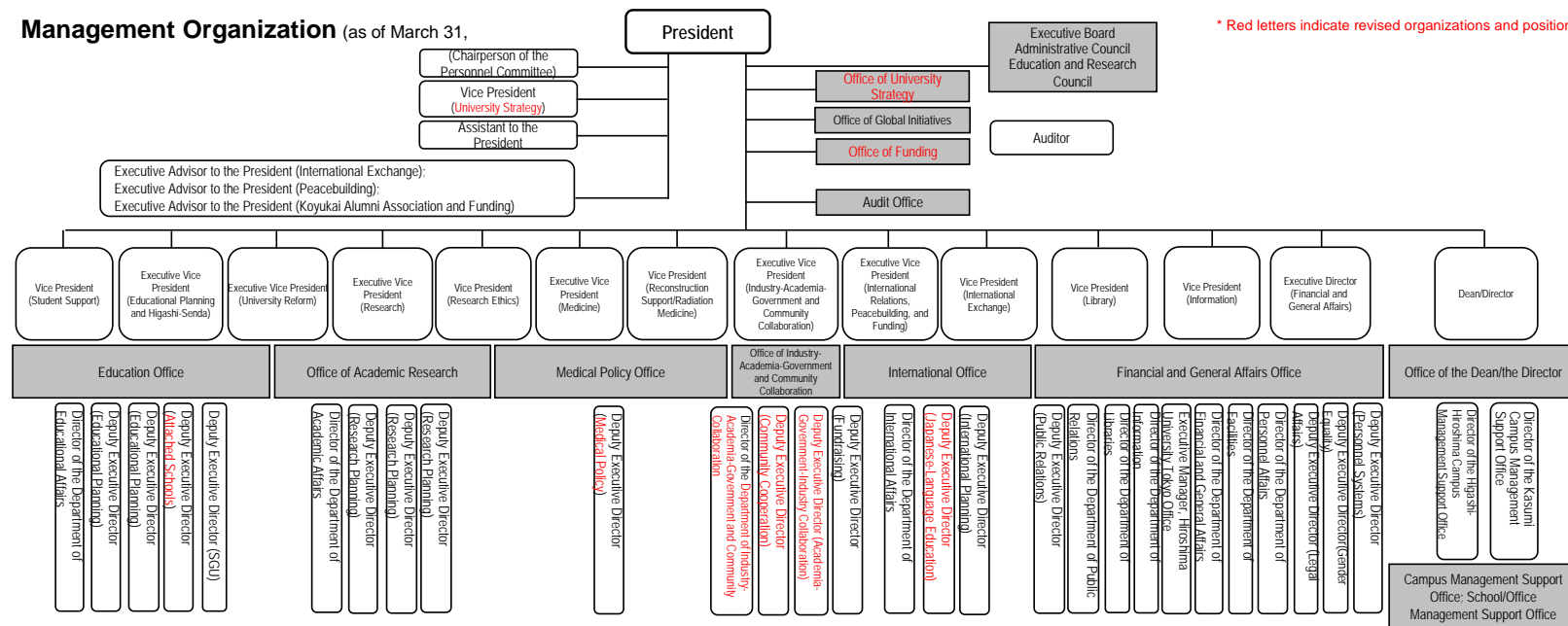
(3) Organization of Hiroshima University

See Pages 4 and 5.

Management Organization (As of March 31,

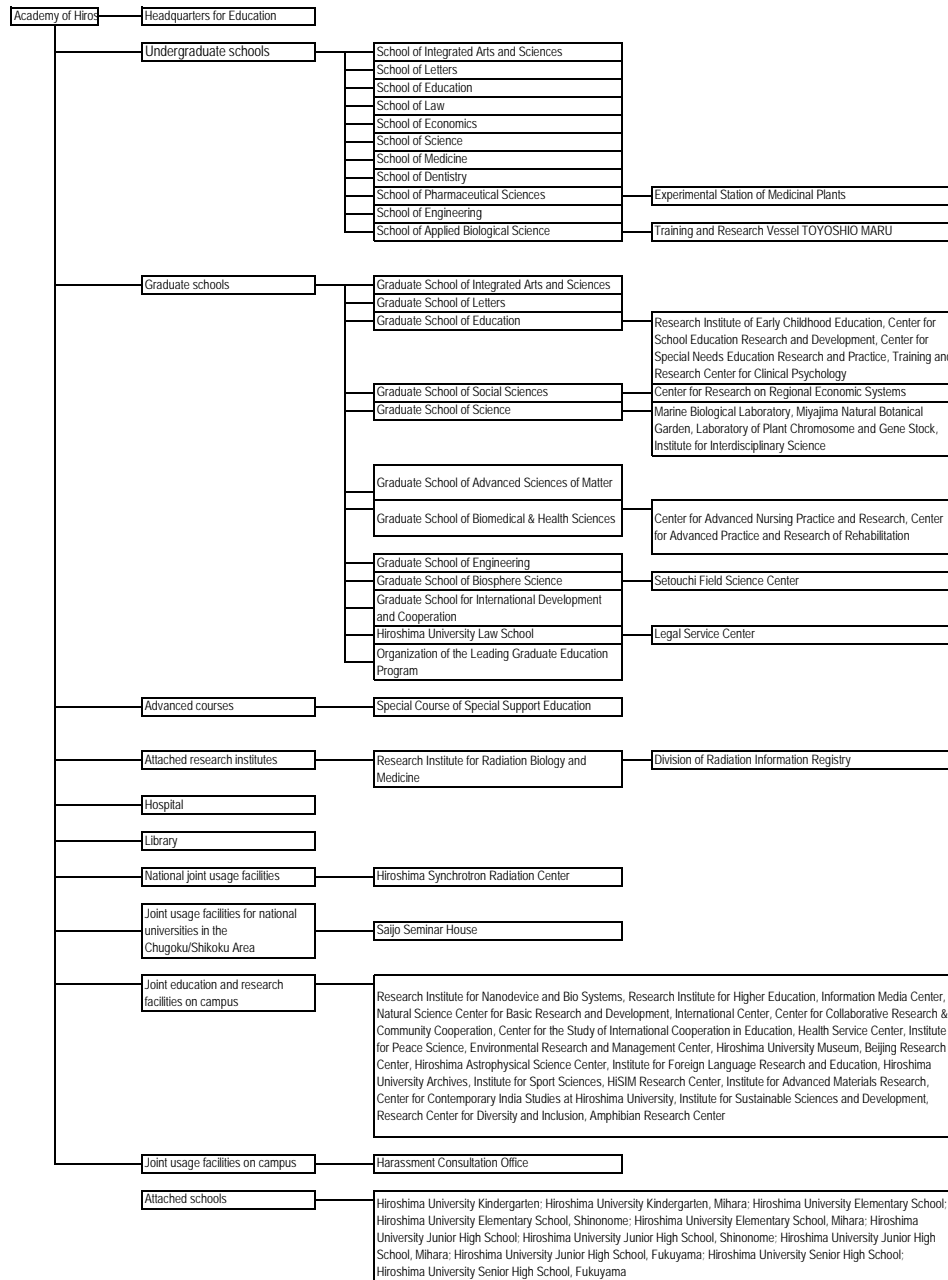


Management Organization (as of March 31,



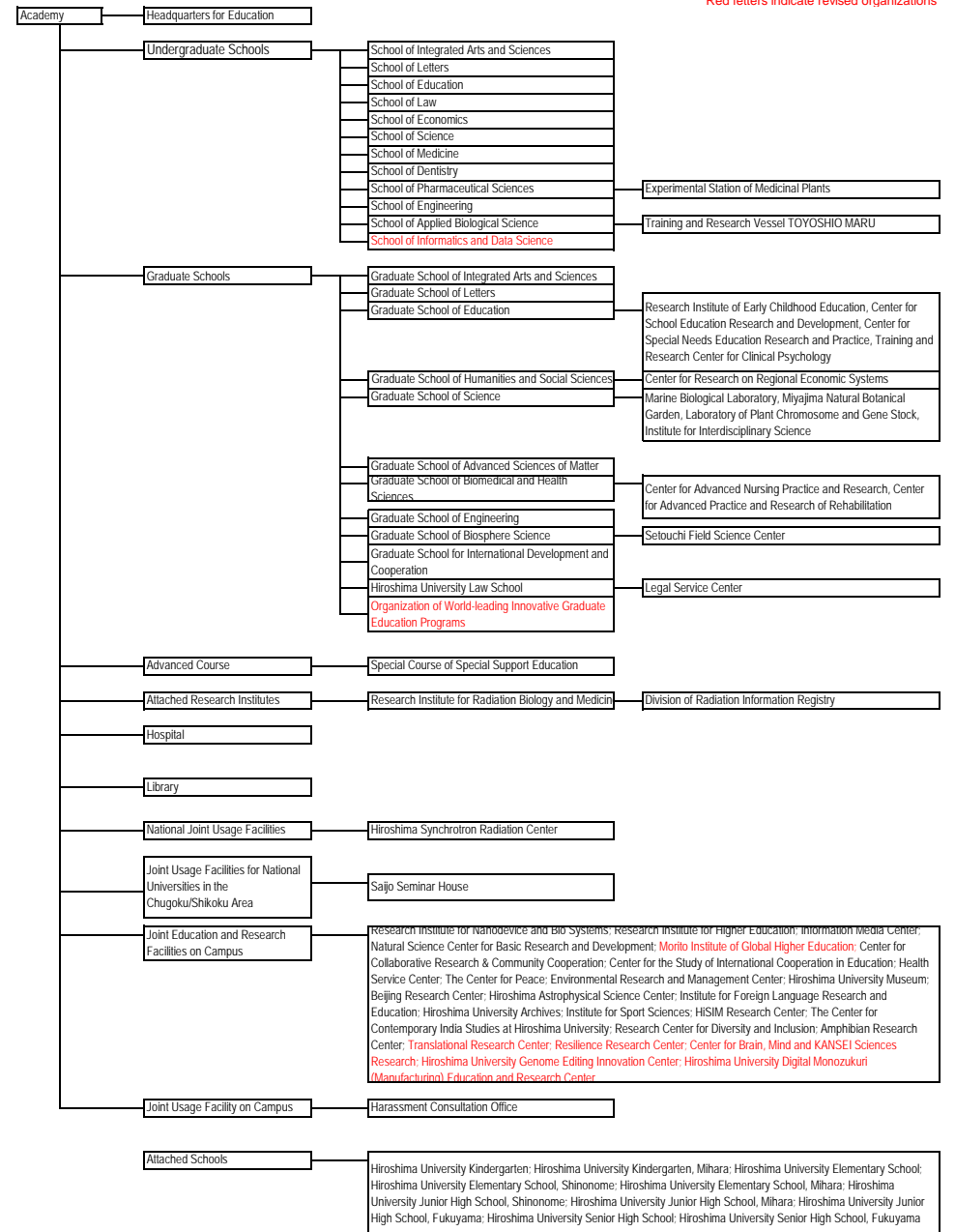
* Red letters indicate revised organizations and positions

Education and Research Organizations (as of March 31, 2018)



Education and Research Organizations (as of March 31, 2019)

* Red letters indicate revised organizations



Overview

Based on its founding principle “a single unified university, free and pursuing peace,” Hiroshima University conducts its education, research, medical and social activities to nurture people’s diversity and contribute to the development of a free and peaceful international society. In its Academic Year 2018 (AY2018), Hiroshima University steadily implemented activities to achieve the objectives for the Third Medium-Term Period to realize a “University of World-wide Repute and Splendor for Years into the Future.” HU also worked on internationalization of education and enhancement of research abilities under the Program for Promoting the Enhancement of Research Universities (RU) and the Top Global University Project (SGU) of MEXT. To achieve the next 10-year plan “SPLENDOR PLAN 2017 (developed in April 2017)” to achieve the RU and SGU goals at a higher level, we have steadily conducted concrete action plans.

In April 2018, the University established the School of Informatics and Data Science, a core hub for data science and informatics education, and the Department of Integrated Global Studies in the School of Integrated Arts and Sciences, which plays a leading role in the development of human resources capable of solving problems in the international community and realizing the globalized campus of Hiroshima University.

To effectively link activities of teachers to the enhancement of the functions of the University, a governance system was established in April 2016 under which processes, from personnel deployment planning, recruitment and promotion to the selection of candidates, are discussed by the Executive Board and finally approved by the President. Specifically, the Central Personnel Committee was formed as an organization directly supervised by the President that centrally manages all labor cost points and discusses teacher deployment within the University. In collaboration with the Academy of Hiroshima University (a teachers’ organization operating independently from education and research organizations), the Committee implements strategic and systematic personnel allocation from a holistic viewpoint for the entire University beyond the borders of educational and research organizations. The academic performance of teachers is evaluated by using the University’s unique achievement-motivated key performance indicators (AKPI®), Basic Effort Key Performance Indicators (BKPI®), and other criteria. Through these activities, the University actively hired foreign teachers, female teachers, annual compensation-based teachers, and young teachers. These efforts also led to the establishment of new educational courses in AY2019: Graduate School of Integrated Life Science and Graduate School of Biomedical and Health Sciences.

1. Improvement in the quality of education, research, and other academic activities

(1) Status of educational programs

(i) Activities to develop globally competent human resources

- i) Verification and improvement of the numbering of courses and presentation in syllabuses [Project No. 1]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on p. 24.
- ii) Development of English proficiency of students [Project Nos. 2, 3, 7 and 8]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 24, 25, 26 and 27.

iii) Creation of the new requisite subject “Introduction to University Education” for all students in all departments [Project No. 4]
In AY2018, the University started a requisite subject, “Introduction to University Education” (2 credits), which all undergraduate students are required to take in the first term of their first year. The subject aims to give students opportunities to think about what it means to study at the University, clarify their goals, and develop the basic skills and attitude for studying at the University. The Course Review Working Group, which was formed in the General Education Control Department of the Headquarters for Education, created common textbooks in both Japanese and English for the course. New students from all undergraduate departments were divided into eight classes, one of which was taught in English. All classes used an online learning system (Learning Management System). Students used their laptop computers in the class. (Since AY2015, the University has required all students to possess a laptop computer to be used for activities at the University.)

The course comprises the following contents:

[Part 1: Learning at University]

Chapter 1: What do you learn at University? (School)

Chapter 2: Learning at University and the Transition to Society (Global Career Design Center)

Chapter 3: Study Abroad and Cross-Cultural Understanding 1 (International Center)

Chapter 4: Study Abroad and Cross-Cultural Understanding 2 (International Center)

[Part 2: Knowledge and Techniques for Learning]

Chapter 5: Using the Library and Collecting Resources (Library)

Chapter 6: Information Security and Information Ethics (Information Media Center)

Chapter 7: Study and Research Ethics (Academic Office)

Chapter 8: Academic Writing (Writing Center)

Chapter 9: Academic Presentations (Information Media Center)

[Part 3: Campus Life]

Chapter 10: Health Management and Mental Health (Health Service Center)

Chapter 11: Moral Awareness (Student Life Committee)

Chapter 12: Prevention of On-Campus Harassment (Harassment Consultation Office)

[Part 4: Social Awareness]

Chapter 13: Gender and Gender Equality (Research Center for Diversity and Inclusion)

Chapter 14: Diversity and Accessibility (Accessibility Center)

[Part 5: Global Citizenship]

Chapter 15: Becoming a Global Citizen: Lecture by Special Instructor (2 class sessions)

iv) Provision of the liberal arts subject “Becoming a Global Citizen” [Project No. 4]
As part of the requisite subject “Introduction to University Education,” which all new students are required to take in the first term, special lectures titled “Becoming a Global Citizen” were provided, inviting world leaders in sports, art, science, and business as lecturers. Twelve sessions were provided from April to May so that all new students could attend two sessions. A total of 4,763 students (including 4,671 students in the first year) attended the lectures. We conducted a questionnaire survey of these students and received the following feedback:

- “Was the topic of the session interesting to you?
To this question, more than 80% of students responded “very interesting” or “interesting” for almost all sessions. Although the topics of the sessions varied depending on the lecturer, students had a keen interest in the lectures.
 - “Was the session helpful to broaden your way of thinking and social perspective?”
To this question, about 90% of the students responded “very helpful” or “helpful.” The participants understood the session very well and felt that the contents were beneficial.
 - “Was the session helpful for your studying and University life in the future?” “Was the session helpful for you to think about your future career or job?”
To these questions, about 80% of the students responded “very helpful” or “helpful.” By providing these lectures immediately after admission to the University, we could provide opportunities to the students to think about their life at the University and future careers. The survey results indicate that many students were inspired by lectures given by speakers with extensive experience and insights who are active in their fields and that participants were very satisfied in general.
- v) Establishment of the School of Informatics and Data Science [Project No. 4]
In AY2018, the University established the School of Informatics and Data Science, which systematically and comprehensively provides advanced knowledge about data science and informatics to develop people who specialize in specific subjects in various fields. The School provided subjects to learn the basics of computer programming and statistics in AY2018. As a core hub of data science and informatics education at the University, the School has started efforts to enhance the function of the entire University.
- vi) Common subjects for graduates [Project No. 5]
Taking advantage of the characteristics and strengths of the University, we considered the establishment of an educational/research organization (a graduate school) that would lead to the functional enhancement of all graduate schools. As part of this consideration, we decided to provide common subjects for graduate students at the Graduate School of Integrated Life Science, and the Graduate School of Biomedical and Health Sciences which will be established in AY2019. These common subjects will be designed to provide a broad and deep general education and foster motivation to create “science for sustainable development,” and they will consist of two subject groups: 1) Sustainable Development and 2) Career Development and Data Literacy.
Every graduate student in these Schools is required to take at least one subject from each subject group of these new common subjects. These subjects aim to have students think deeply about what contribution the science they specialize in can make as “science for sustainable development” and acquire basic knowledge that is necessary to understand the recent progress of social systems and play an active part in modern society.
In September 2018, to develop a university-wide system, we considered the details of common subjects for graduate students for AY2020, including the start dates, assignment of TAs, and the enrollment method. The meaning and purpose of taking these common subjects will be explained to new students during the guidance session in April 2019. We also considered the expansion of common subjects for graduate students for AY2020 and decided to increase the number of subjects and classes.

- vii) Designation of the Advanced Genome Editing Human Resources Development Program as a WISE Program [Project No. 5]
In October 2018, MEXT announced the selection of Doctoral Programs for World-leading Innovative & Smart (WISE Programs) for AY2019. Hiroshima University's “Advanced Genome Editing Human Resources Development Program” was successfully selected as one of 13 universities and 15 programs. It was the only program selected from the Chugoku and Shikoku Region. This Advanced Genome Editing Human Resources Development Program provides a 5-year doctoral degree program, aiming to foster the world's highest education and research capabilities.
Two courses will be established: Life Science Course (5 years) and Medical Course (4 years). Students acquire knowledge and skills, from the basics to applications of genome editing, with quality-guaranteed unique curriculums. They aim to develop people who are capable of genome editing and can apply it in industry.
In these courses, students also conduct joint research with companies participating in the Program on Open Innovation Platform with Enterprise Research Institute and Academia (OPERA) and with other affiliated organizations. These joint research activities are expected to enhance the students’ ability to conduct cutting-edge and practical research and development. In AY2018, the University established the Hiroshima University Organization of the Leading Graduate Education Program and the Hiroshima University Genome Editing Innovation Center to work on close collaboration with organizations outside the University, and it actively communicated information on the activities of this Program. Internal rules have also been developed. This Program involving multiple disciplines starts from April 2019, and 12 students have been accepted.
- viii) Verification of educational quality assurance in the double degree program [Project No. 6]
We collected information from individual departments about the student exchange under the double degree program to confirm the current status of the program. We also exchanged opinions with persons in charge in individual departments to identify issues, including quality assurance of the curriculums and papers, bidirectionality of student dispatch and acceptance, and program management. These activities revealed problems, such as the need to improve the balance between the dispatch and the acceptance of students, among others. It was also found that efforts as an organization were not sufficient generally in all graduate schools. Considering these internal issues and the results of an analysis of the double degree programs currently implemented at European and U.S universities, we are now considering starting joint degree programs with universities in the European Union (EU).
- ix) Joint Graduate School Program between Capital Normal University (China) and Hiroshima University [Project No. 6]
In AY2015, Hiroshima University established the “Joint Graduate School Program of Capital Normal University and Hiroshima University” with Capital Normal University in Beijing, China, where Hiroshima University operates its Beijing Research Center. For this double-degree master’s program, solicitation and matching of students were implemented. In AY2019, three students are scheduled to enroll (compared with seven in AY2016, nine in AY2017 and six in AY2018).

Of the 16 students who have completed this double-degree master's program, two have proceeded or will proceed to the doctoral program of the University. This has proven that the Joint Graduate School Program achieved the objective to increase the enrollment of outstanding students in the doctoral courses.

- x) Addition of subjects taught in foreign languages [Project No. 32]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on pp. 33 and 34.

(ii) Activities to improve the quality of education

- i) Improvement in the self-check/evaluation system to improve the quality of education [Project No. 12]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on pp. 27 and 28.
- ii) Verification of proposals on the international evaluation of educational quality assurance by using Student Experience in the Research University (SERU) [Project Nos. 12 and 60]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on pp. 27 and 28.
- iii) Enhancement of the three-tier TA system [Project No. 13]
In AY2016, HU introduced the training assistant (TA) system "HIRODAI TA." HIRODAI TA is structured with three layers of TAs depending on the quality and competence required for activities: Phoenix Teaching Assistant (PTA), Qualified Teaching Assistant (QTA) and Teaching Fellow (TF). PTAs perform only auxiliary jobs relating to lessons. QTAs provide supplementary teaching during lessons, such as facilitation of discussions and demonstration of experiments, in addition to the assistance provided by PTAs. TFs teach students under the supervision of teachers, in addition to the types of assistance provided by PTAs and QTAs. In AY2018, HU implemented the following activities to enhance the system further. Through training activities and work experience as a TA, graduate school students are given opportunities to acquire the ability to overview knowledge of their specialized fields, deepen their understanding about education and learn methods to provide learning assistance. The TA system helps graduate school students to become independent educators and to improve the content and quality of education at the same time.
- **Diverse TA training activities:** In addition to training for students to acquire the QTA qualifications, open seminars for teachers and administrative employees who work with TAs were also carried out. As for student training, six sessions of the "QTA Qualification Training" were carried out, with 1,231 participants in total, including 262 foreign students. A curriculum subject to acquire TF qualifications, "University Teacher Training," was implemented (a common subject for graduates, two credits) with 11 students (including six foreign students). As for teachers, TA training sessions of the FD Training Program (Practice Course) were carried out, with ten participants. The University also offered a TF program designed for students who are employed as TFs. The program provided training to create teaching portfolios (with the participation of two students). Open seminars featuring lectures by experts invited from within and outside Japan were also provided: Engaging Students in Learning in English-medium Classes, Restoring the Freedom of Students to Learn at a Peaceful University (two classroom lectures, with six students), and Teaching Portfolio (TP) Creation Workshop (one workshop, with three students).

- **TA's participation in operating organizations:** Besides the two dedicated support desk staff members and five members of the Hirodai TA System Operation Committee, in AY2018, a TA team comprising two TFs and several QTAs autonomously participated in the planning and operation of the activities mentioned above. "Lead the Discussion" and "Support the Experiments and Exercises," breakout sessions of the QTA Qualification Training, were also planned and conducted by four TFs. In AY2018, six out of 42 TFs participated in the operating organizations.
 - **Results:** In AY2018, a questionnaire survey was implemented regarding student satisfaction with the QTA Qualification Training. More than 80% of the students who participated in the training responded "satisfied" or "very satisfied." A questionnaire survey of TAs was also conducted. The results of the survey indicate that students who volunteered to become a TA because they wanted to improve their learning support skills spent more time preparing for classes and had a stronger sense of self-efficacy in the classes than students who became a TA because their professors asked them to. It can be analyzed that their experience as a TA has also led to the enhancement of their own learning.
 - **Communication of achievements:** In "Higher Education Research Series 138" issued by the Research Institute for Higher Education of Hiroshima University, we published articles about the purpose, current status and results of the three-tier TA system; the results of the international forum "Reform in Teaching Assistant (TA) System in Universities - For Enhancement of Education in Undergraduate and Graduate Schools" that invited experts from the United States" (71 participants); and the results of the study meeting held in Tokyo in 2017 (11 participants). Also, in the Education Innovation Symposium "Creating Learning Experiences with Graduate Students: Beyond TAs" held at the Tokyo Institute of Technology, a teacher from the Hirodai TA System Operation Committee gave a lecture on our activities.
- iv) Teacher assignment using the Cross-Appointment System [Project No. 13]
The University used the Cross-Appointment System to promote mutual use of educational resources with partner organizations for teacher assignment. The use of the cross-appointment system in AY2018 increased to 18 agreements (11 with Japanese organizations and seven with foreign organizations) from six agreements in the previous year (four with Japanese organizations and two with foreign organizations).

(iii) Student support

- i) Student information system for smartphones [Project No. 13]
In AY2017, the external members of the Administrative Council held an opinion exchange meeting with students, and HU also conducted a student campus life survey. In these activities, students expressed opinions like the following: "It is difficult for foreign students to know how to use the student information system. An easy-to-understand app should be developed." (opinion exchange); and "The layout of the student information system website should be changed so that it is easy to see on smartphones" (survey). Moreover, the number of accesses to the student information system from smartphones exceeds the number of accesses from computers. Considering these circumstances, the University has modified the website design to support multiple devices, including smartphones. As a result, it has become easier for students to use the Student Information System.

- ii) Verification of a pre-enrollment scholarship [Project No. 14]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on p.28.
- iii) First-year internship (social experience) for all students from AY2019 [Project No. 15]
The University decided to start an internship (social experience) program for first-year students from AY2019. All first-year undergraduate students will be temporarily placed in external companies and organizations to receive social, work, or volunteering experience. This program aims to connect the learning and study at the University with social experience, motivate the students to study and live a meaningful campus life, and provide them an opportunity to think about their future careers, including career choices and occupational aptitude. During AY2018, we made preparations for the university-wide implementation of this program.
- iv) Expansion of career support [Project No. 15]
To support job hunting of students, HU provided the following characteristic career support activities in AY2018:
- Career support/job placement support
 - To further strengthen and enhance career support and employment support to the students, the University started the Hiroshima University Career Support Network, consisting of alumni associations and other groups and organizations of graduates and related parties. On December 8, 2018, the first meeting of the Network, the Hiroshima University Career Support Network Conference, was held to discuss measures to expand the support network. The network is managed mainly by the Global Career Design Center, and the members include the HU Alumni Association, the HU Kanto Network, HU Kansai Phoenix No Kai, HU Senda Juku, the HU Sports Alumni Association, the HU Kasumigaseki Network, the HU Association of Former Career Supporters, and the HU Tokyo Office.
 - To help students become familiar with the businesses and jobs in the real world and think about campus life and their own future career, a new course, the "Career Design Course," started in AY2018. Alumni of the University who have abundant experience at local companies were invited to talk about real episodes in the business forefront.
 - Home for Innovative Researchers and Academic Knowledge Users (HIRAKU) Project
 - Hiroshima University, Yamaguchi University, and Tokushima University collaborated to form an industry-academia-government consortium. It was a part of the "Home for Innovative Researchers and Academic Knowledge Users (HIRAKU)" project [one of the "Development of Next Generation Researcher" programs under the Building of Consortia for the Development of Human Resources in Science and Technology project (the Ministry of Education, Culture, Sports, Science and Technology)]. The purpose of the consortium is to develop and retain excellent young researchers (students in the doctoral courses, postdocs, and tenure track teachers). The consortium, comprising mainly national and private universities, companies, and public organizations in the Chugoku/Shikoku Region, developed systems that promote mobility of human resources and diverse career paths and established environments where researchers can independently conduct and concentrate on research activities, including the leveraging of HIRAKU-PF (a portfolio of young researchers) and long-term dispatch of interns to companies. Under this project, 22 researchers were dispatched to the United Nations Institutions for Training and Research

(UNITAR), Denso Corporation, the Benesse Educational Research & Development Institute, and other companies. As part of this project, the University hosted the speech contest "HIRAKU 3MT (Three Minute Thesis) Competition 2018" on September 15, in which doctoral course students talked three minutes about the vision and appeal of their research in easy-to-understand language. Thirty-one doctoral students from nine universities, including HU, made presentations. The University also co-hosted with Vitae, a UK researchers' organization, skill development workshops for planning field-integrated projects on June 28-30, July 2-3, and February 7.

- As a result of these efforts, Hiroshima University ranked third in the "Ranking of Japanese universities with outstanding employment of graduates" and second in the "Ranking of Japanese universities with high satisfaction of graduates on working conditions offered by employers," published by Vorkers, Inc. on October 23, 2018.
- v) Hiroshima University Regional Parent Meeting [Project No.15]
In AY2018, the University carried out a new project for parents of HU students, the HU Regional Parent Meeting, at four venues (Kobe, Hiroshima, Fukuoka, and Matsuyama). This project aims to help parents and family members of HU undergraduates (in the first and second years) to understand the learning environment and student support at HU. A total of 288 parents and family members participated at the four venues. The program included a speech by the President; a presentation on campus life, study abroad programs and career paths; speeches by graduates and graduate students; and information exchange meetings and private consultation meetings.
Participants were asked to fill out a questionnaire after the meeting. On a question about general satisfaction, 90% of the respondents chose "4" or "5" (5 scales, 1. Dissatisfied to 5. Very satisfied). Positive feedback was also obtained in the free description responses, such as the following: "Admission is not the goal. I appreciate that you continue to provide parents with information about the university in this way"; "I could better understand the specific employers and the support you provide for job-hunting. The information I got in this meeting will be useful when I talk with my son about his future plan"; and "I had chances to talk with other parents and graduates. I felt assured." Because the responses to the questionnaire were generally positive, we will hold this parent meeting again next year and in subsequent years.
- vi) Enhancement of accessibility education [Project No. 16]
 - To improve and expand teaching support and ubiquitous support using ICT and cloud technology, the University created the Handbook for Accessibility Support for Teachers 2019 based on sensitive matters to be considered and actual examples of consultations. In March, it was published on the Accessibility Center's website and also distributed on campus. In March, the University also created the Ubiquitous Support Guidebook on the latest support technologies, considering the expected demand for support next year and thereafter.
 - In March, a checklist of accessible designs (meaning the design of the teaching style and other facilities to ensure accessibility of students from diverse backgrounds, including students with disabilities) was created after reviewing the format and contents.
 - As a result of the following activities to improve accessibility education, the enrollment in accessibility education subjects reached 11.1%, exceeding the target of 8%.

- **Distribution of Accessibility Minimum Standard e-learning course:**

We developed a new course, "Accessibility Minimum Standard," by examining and organizing educational contents and defining its position in the Accessibility Leader Development Program for Teachers. In March, online distribution of the course started via the Learning Management System.

- **The 13th Accessibility Leader Development Program:**

The following sessions were conducted: Practices for four subjects (84 students) + Exercises for three subjects (25 students) + a lecture for one subject (19 students); and five classroom training sessions (two summary writing sessions, one guide help session, one sign language session, and one accessibility workshop) (54 students).

To improve the literacy of members of HU regarding diversity and accessibility and to promote the shift to daily consideration from special support and attention to disabled students, the University continued the offering of the Online Accessibility Study Course for 2017, following the previous year, to all HU members (students, teachers and administrative staff members) (distributed until June 2018, with 125 participants). Online Accessibility Study Course 2018: Introduction and Basics were also created and have been offered from July 2018 (337 participants).

In December 2018, the 13th Accessibility Leader Certification Examination was conducted. Thirty-two people from HU acquired an accessibility leader qualification (1st grade - seven people, 2nd grade - 25 people).

A total of 644 students, teachers, and administrative staff members participated in the accessibility leader training program.

Apart from the accessibility leader training program, accessibility education subjects were also taught as part of liberal arts subjects (Introduction to University Education: 2,372 students; Introduction to Student Wellness: 53 students; and Introduction to Hiroshima Leaders for Peace and Harmony: 116 participants).

These activities expanded the opportunities to educate and learn about accessibility at the University and promoted an environment where students, teachers, and administrative staff members could acquire more advanced knowledge depending on their interest.

- vii) Addition of university-leased mixed-boarding student houses [Project No. 34]
Please refer to "3. Actions for Strategic and Ambitious Objectives and Plans" on p.34.

- (iv) **Improvement in the method to screen enrollment applicants**

- i) New admission examinations of individual undergraduate schools for AY2021 [Project No.17]
HU has published the "Announcement Regarding Revision of Hiroshima University Admission Examinations for Enrollment in AY2021 (released May 22, 2018)." This announcement was developed based on its student admission policy, which reflects the graduation requirements, the diploma policy, the curriculum structure, and the curriculum implementation policy of Hiroshima University. As described in this Announcement, the University will improve its admission examination method by focusing on evaluating applicants comprehensively from multiple aspects based on three fundamental academic abilities. These three abilities are fundamental knowledge and skills; thought, judgment, and presentation abilities necessary to use knowledge and skills to solve problems; and a proper attitude for proactive learning. The

revision of the examinations was outlined in the admission examination briefings for high school teachers (12 venues), campus explanation meetings (8 venues), the Open Campus, and admission examination briefing at prep schools in August. It was also explained at the time of high school visits and campus tours (228 schools).

- ii) Utilization of scores of third parties' English proficiency tests in undergraduate school admission screening [Project No. 18]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on p.28.
- iii) Use of an online application system for graduate school admission examinations equipped with an English interface [Project No. 19]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on p.29.
- iv) Utilization of scores of third parties' English proficiency tests in graduate school admission screening [Project No. 20]
Many graduate schools at HU use scores of third parties' English qualification/proficiency tests to evaluate the four English skills (reading, listening, writing, and speaking) of applicants. However, as a result of confirmation of their current use status, it was found that they utilized only TOEIC, TOEFL, and a few other tests. To broaden the range of utilization of third parties' tests in the future, each graduate school considered various types of qualification and certification tests.

- (2) **Status of research activities**

- (i) **Development of global research centers**

- i) Continuous creation and development of diverse research centers [Project No. 21]
Since AY2013, the University has encouraged researchers within the University to make proposals to create incubation research centers that can perform world top-level research activities. Intensive support is provided to selected proposals to assist them in developing into self-sustained research centers with outstanding research achievements that can conduct research activities independently with externally procured funds.
In AY2018, we selected three new incubation centers. The interim evaluation of one self-sustained research center of the second project was conducted. For five incubation centers of the second project, the Council of the Organization for Research Promotion, comprising the President as the chairman, deans and directors, and other members, conducted a final and precise evaluation, including interviews with researchers. As a result of this evaluation, it was decided to continue the support of two incubation centers and discontinue the support of three incubation centers. Consequently, the University currently has ten self-sustained research centers and 15 incubation research centers.
In AY2018, the University will conduct a final evaluation of the self-sustained research centers of the first project and will have final evaluation interviews at the beginning of AY2019. The Genome Editing Innovation Center, one of these centers, has developed into a joint education and research facility on campus, which led to the adoption of large-scale projects, such as the WISE Program (MEXT).
- ii) Expansion of the international research network [Project No. 21]

HU has actively worked to conclude comprehensive agreements with foreign universities and research institutions. In AY2018, it concluded 47 agreements with other universities (totaling 345 agreements) and 29 agreements with departments of other universities (totaling 386) to expand its international research network, which will promote joint research activities and collective writing of papers.

HU concluded a university-level memorandum of understanding (MoU) with the Council of Scientific & Industrial Research (CSIR) in India (an organization directly controlled by the Indian government). This MOU aims to establish a joint research and education hub, mainly led by HU's self-sustained research centers and expand the range of research exchange throughout India. HU also carried out seminars, international conferences and other research exchange activities that would lead to joint research in the future with the University of Vermont, USA, and other foreign universities under new inter-university agreements. HU promoted joint international research projects between organizations and expanded its global research network to have research bases around the world.

HU also established the Network for Education and Research on Peace and Sustainability (NERPS). NERPS consolidates activities at Hiroshima University that contribute to solving global environmental issues and the achievement of the global common sustainable development goals (SDGs) into one place. It creates and proposes interdisciplinary research for Peace and Sustainability. To promote the 17th goal of SDGs "Partnership for the goals," NERPS held the second and the third Hiroshima University SDGs Symposiums (December 2018 and February 2019). Representatives from universities (including students), the national government and local governments, companies, and overseas research institutions gathered to discuss the common issues of SDGs from different standpoints and perspectives. NERPS has started activities to promote international joint research and researcher exchanges to contribute to peace, the environment, and all other SDGs.

- iii) Increase in international collective writing of papers [Project No. 22]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on p.29.
- iv) Strategic focus on research activities by utilizing a new evaluation technique for research activities [Project No. 23]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on p.30.

(ii) Research support and effective use of research resources

- i) Reinforcement of the research support system [Project No. 25]
From AY2013, to reinforce its research support system, HU has worked to establish a campus-wide URA organization (under the Research Planning Office) comprised of senior URAs (University Research Administrators), who take charge of research promotion at the headquarters, and URAs and associate URAs, who support research activities in individual departments. To support big projects, experts with academic careers who can understand the contents of research activities have been mainly appointed as the senior URA and URAs. HU worked to optimize the URA organization to support the enhancement of research abilities by developing and deploying both URAs with advanced academic knowledge and URAs with administrative skills to promote collaboration among URAs and the combining of their diverse abilities.

In AY2018, to ensure that URAs can conduct activities stably and autonomously, systems for URA were established, including a salary system, an evaluation system, and a system to secure financial resources necessary for recruitment and retention, with the consensus of all departments. URAs whose current terms have expired and have acquired an indefinite conversion right will shift to the new system at their request. URAs have provided support for vitalization of international research activities in core research fields of the University. They assist in filing applications for external financial aid programs and assist in the active publication of results of international research activities.

In AY2014, the Writing Center started to provide financial aid for a part of the costs of English proofreading services. In AY2018, aid of 6,015,018 yen was provided for 310 uses of proofreading services.

To promote the internationalization of the administrative office, URAs and administrative employees work with two foreign fellows who speak English as their mother tongue (a science communicator in charge of international public relations and a fellow in charge of consultation on English paper writing) at the same workplace. HU also established a support system for international research activities that utilizes both the language skills and the management ability of URAs and advanced specialists. With this support system, when an organization within the University conducts international joint research activities with a foreign organization or expands the international research network, the administrative work can be quickly and flexibly processed. For example, the native English-speaking staff members can concurrently check drafts of agreements, applications for large-scale fund-raising from foreign sources, and other documents prepared in English.

(3) Activities to strengthen management and other functions to facilitate industry-academia-government collaboration

- i) Activities to strengthen management and other functions to facilitate industry-academia-government collaboration [Project No. 28]
In the area of industry-academia collaboration, it was decided to start the Co-creation Institute for Preventive Medicine from April 1, 2019. It is the second co-creation institute intended to promote co-creation of new added value through collaborative research activities between Hiroshima University and business enterprises and promote the development of human resources based on advanced mutual understanding and trust between independent organizations.
To further deepen the collaboration with partner organizations under comprehensive collaboration agreements, HU opened the Hiroshima University Kure Satellite in the city hall of Kure City on January 30, 2019. It also opened the Hiroshima University AIST Collaboration Office at the Chugoku Center of the National Institute of Advanced Industrial Science and Technology (AIST) on February 1, 2019.
On January 10, 2019, HU concluded a memorandum of understanding on disaster prevention and mitigation with the Chugoku Regional Development Bureau. It is a part of the new disaster prevention/reduction initiative that started after the heavy rain disaster that struck the region in July 2018. On January 28, HU also concluded a memorandum of understanding with the New Energy and Industrial Technology Development Organization (NEDO) regarding mutual cooperation in entrepreneur support.

The "Guideline for Promoting Joint Research Projects between Industry, Academia and Government" co-published by MEXT and METI stipulates the reform of the personnel evaluation system for teachers engaged in collaborative activities between, industry, universities and the government. To follow this guideline, the University reviewed the teachers' BKPIs® related to industry-academia collaboration activities (social contributions) and built a system to evaluate industry-academia collaborative activities conducted by teachers.

ii) Reinforcement of information delivery functions [Project No. 28]

To promote the use of HIMAWARI, the Hiroshima University Industry-Academia Research Seeds Database for Co-Creation search website, HU reviewed and modified the input interface to make it easier for teachers to input seed information. The output function has also been enhanced. A function to convert the data to a PDF file in an easy-to-see and easy-to-understand way has been added. These improvements in the system are expected to increase registration of research seeds and access by enterprises to search for HU's research seeds, which will increase the number of joint research agreements and acquisition of more external funds.

(4) Cooperation with society and contribution to the community

i) Expansion of organizational large-scale joint research projects [Project No. 28]

The University established the Hiroshima University Disaster Mitigation Project Research Center (to operate until March 2021) in AY2011. It has worked to develop a regional disaster prevention network by sharing information between researchers. On July 11, 2018, the "Hiroshima University July 2018 Heavy Rain Disaster Investigation Group" was formed. It held a general meeting and a press report meeting to announce specialists at the University who engage in disaster prevention research activities and started the expansion of the researcher network. To further promote research on disaster prevention and mitigation and to contribute to society more practically through disaster mitigation, the University established the Hiroshima University Resilience Research Center as a base for collaboration between researchers and constant organizational activities. The opening ceremony was held on September 20, 2018. On November 14, the Center held the Conference of the Resilience Research Center with Allied Local Governments. Forty risk management representatives from Hiroshima Prefecture and 23 local governments in Hiroshima Prefecture and representatives from Kasaoka City (Okayama), Iwakuni City (Yamaguchi), and Waki Town (Yamaguchi) participated in the event. At the conference, presentations were given regarding the direction of the cooperation with local governments, the status of research activities at HU, and the research subjects of the Center. Local governments (Hiroshima City, Fukuyama City, and Higashihiroshima City) also reported their cases to share understanding on the current situation and issues of the local governments.

The Hiroshima Monozukuri Digital Innovation Creation Program was established in AY2018 by the industry-academic-government collaboration between Hiroshima Prefecture, Hiroshima University, Mazda Co., Ltd, and other local organizations. This program was granted the Cabinet Office's Subsidy for Regional University/Industry Development. The program will promote industry-academic-government collaboration in a wide range of activities to realize digital innovation in the region. As part of this program, the Digital Monozukuri (Manufacturing)

Education Research Center was established on February 1, 2019 to promote R&D and human resource development in the manufacturing digital innovation field.

The University has applied for the MEXT initiative "Improvement of Open Innovation Organization," aiming to increase large-scale joint research projects between organizations and establish an intensive management system. Unfortunately, its application was not adopted this year. The University is now preparing its application for next year, including collaboration with the project leader and the support team and requesting the cooperation and interviewing of researchers at HU, executing departments of enterprises, experts, and universities whose proposals were adopted by MEXT. It also actively collects information and considers project plans.

To accelerate industry-academia collaboration between organizations, HU concluded comprehensive collaboration agreements with outside parties and expanded the "Joint Research Course." In AY2018, HU concluded six additional comprehensive collaboration agreements: two agreements with companies and four with other universities, totaling 82 agreements.

As for comprehensive collaboration agreements with companies, in addition to the existing five agreements with Mazda Motor Corporation, HU has two agreements with Kobelco Construction Machinery Co., Ltd., one with JFE Steel Corporation, and one joint research lecture with Mayekawa Manufacturing Co., Ltd.

In AY2018, nine joint research lectures were added, totaling 15 lectures. Subsequently, four more lectures were added in April 2019. By establishing industry-academia joint research centers within HU that will be operated for the long term and pursuing large-scale joint research projects between organizations, HU has further promoted its research activities, social deployment of research results, and creation of innovations.

ii) Development of sites for the Hiroshima Research Complex [Project No. 28]

The Research Complex Promotion Council carried out activities to establish a base for the Research Complex. It held three executive meetings (May 10, August 22, and November 14) and a second general assembly (December 26) to share information on the progress of their activities and discuss its future plan. Specific activities included the Startup Seminar (Genome Editing Innovation Hub, New Business Creation Seminar) (March 7 with 41 participants) and the Hiroshima Data Science Forum 2019 (Hiroshima Data Science Arena) (March 18, with 196 participants), where they communicated information on their activities to create innovation to a wide range of interested people.

HU hosted the Innovation Training Program 2018 (from October 17 to January 18 with 720 participants) to provide an opportunity for people in the region who work in innovation fields to review and update their knowledge on engineering. It also hosted the 5th Hiroshima Entrepreneurship Program (from October 27 to January 12, with 20 participants). In this talent development program, participants learned and practiced entrepreneurship (the ability to find and solve problems by themselves) by repeated training on idea creation and thinking.

iii) Projects to create new businesses from Hiroshima University [Project No.28]

To contribute to the creation of employment and new industries and the vitalization of the regional economy, Hiroshima University has decided to establish with Hiroshima Bank a venture fund for returning its research results to society and creating new businesses from HU.

The project is working to launch the fund in April 2019. HU is also working on the establishment of HU-led ventures. A project to develop a magnetic targeting device for bone marrow mesenchymal stem cells was chosen by JST as the Program for Creating Start-ups from Advanced Research and Technology (START).

HU also collaborated with universities in four Latin American countries (Mexico, Peru, Colombia, Bolivia) with which it has inter-university agreements. HU and these universities started a pitch event (G1PEC) for teachers, administrative staffs, undergraduates, and graduate students, intending to solve social issues in these countries and create new businesses there. HU is also working on opening the G1PEC website.

Activities to support the startup of ventures were also conducted, including the first workshop of "Compact BRAVE" (June 1), "PR Event" pitch events (May 25 and September 21), and the "Higashi Hiroshima Startup Academy" program (February 2 to February 23).

iv) Center of Innovation (COI) [Project No. 28]

Hiroshima University plays a core role in the Center of Innovation (COI) Program (the Center of KANSEI Innovation Nurturing Mental Wealth) of the Japan Science and Technology Agency (JST). In the research field, HU researchers have been working to capture the mechanism of "a moment to awareness" in the KANSEI process and researching the more essential area of perception. The program also worked on applying the past research results to social implementation (such as the conversion of a saliency map into a tool). The program has also developed a prototype of a KANSEI/perception sensing device that connects basic research results with elemental technologies. The researchers collaborated with many participating companies in applied development, demonstrations, and experiments.

To widely publicize these research results to society, the program held an open symposium in Tokyo in June 2018 (216 participants) and had an exhibit booth at the JST Fair 2018 in August. To strengthen collaboration between participating organizations, the program conducted a summer study session in August 2018, mainly comprising young researchers (with 119 participants). A three-center joint result reporting meeting was also held in December (with 76 participants).

In addition to the foundation built by COI (sites, systems, and industry-academia collaboration), the Brain, Mind and KANSEI Sciences Research Center was newly established in October 2018 for continuous research. The Center started working on the integrated implementation of research, education, and industry-academia collaboration as a core institute in this field.

In the second interim evaluation by JST, the program obtained an S+ rating (S is the highest rank) for its activities to realize these visions (backcasting, R&D results, and activities to realize social implementation) and the continuous formation of innovation.

To further optimize intellectual property management, in February 2019, HU concluded with all participating organizations the "Memorandum for Research Activities at the Center of KANSEI Innovation Nurturing Mental Wealth," revising the former memorandum.

Looking ahead to the completion of the project, HU also developed a portfolio in the areas of education, research and social deployment for realizing the independent operation of centers. It also started consideration of a structure that further accelerates the WISE Program concept and social implementation of the science of KANSEI.

v) Formation of a Program on Open Innovation Platform with Enterprises, Research Institutes and Academia (OPERA) [Project No. 28]

To promote full-fledged industry-academia joint research projects between organizations, with close collaboration with industry, HU has established and operates an industry-academia "genome editing" co-creation consortium, comprising 33 organizations (10 universities and research institutes and 23 companies). During the JST interim evaluation, interviews of participating organizations (five universities and five companies) were conducted to identify issues that need to be considered for social implementation of research results. In AY2018, five new organizations participated in the project, contributing to the expansion of joint research.

vi) Promotion of regional revitalization by playing the role of a center of communities [Project No. 28]

HU has established the Committee for Promoting Center of Communities to establish systems to support centers of communities (COCs) after the project is completed. The committee has developed systems to promote activities that have been started by the COC project. The committee has also established a support system for the project, "Human Resource Development for the Project to Create International Marine Cultural and Living Sphere through Tourism." (*)

(* A joint project led by Hiroshima City University. It was designated by MEXT as a COC+ project for regional vitalization driven by local universities.)

As ongoing programs after the completion of the COC project, HU has implemented two educational programs to develop "Hiroshima Leaders for Peace and Harmony" who can contribute to the realization of a society where diverse people live harmoniously in diverse areas. They are the Peace Science Course: Introduction to Hiroshima Peace Initiative Leader Program; and the Special Program: Hiroshima Peace Initiative Leader Program.

Following AY2017, the "Peace Science Course: Introduction to Hiroshima Leaders for Peace and Harmony" was provided to 116 students. In a student questionnaire, the satisfaction with this course was high, with about 80% of the participants responding "very satisfied" or "satisfied."

The Special Program: Hiroshima Peace Initiative Leader Program started from AY2018, with six students from four departments. This Special Program held regular exchange meetings with the students to understand their needs. It also provided field practice by visiting facilities in the communities to see the current problems of the communities to deepen the understanding that is necessary for solving their problems. [(February 15 (Fukutomi Town and Toyosaka Town), March 4 (Toyosaka Town), and March 15 (Akitsu Town))]

In the COC project, the University worked with the local community to build a community-oriented education system for undergraduate schools. After the completion of the COC Project, these activities have been continued. In particular, the School of Applied Biological Science offered community-oriented liberal arts seminars, and students chose "community" as the subject for their graduation paper. The School also provided community-oriented educational subjects open to students from other departments. It has developed into university-wide education.

(5) Activities for globalization

- i) Establishment of a foundation for the development of globally competent people [Project No.30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- ii) Utilization and dissemination of a Japanese version of the BEVI test (an attribute test measuring adaptability to different cultures) [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- iii) Short stay program “Study Tour Abroad for Realization and Transformation (START)” [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- iv) Improvement and expansion of the organization of the Morito International Advanced Education School [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- v) Japanese language and culture training to encourage international students to study at HU [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- vi) Addition and expansion of overseas sites [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- vii) Conclusion of inter-university exchange agreements [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- viii) Peace Lecture Marathon [Project No.30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- ix) Medium-term and long-term student exchange program [Project No. 30]
Please refer to “3. Actions for Strategic and Ambitious Objectives and Plans” on pp. 30, 31, 32 and 33.
- x) Brush-up seminar for Japanese teachers residing overseas [Project No. 32]
Please refer to “Actions for Strategic and Ambitious Objectives and Plan” on pp. 33 and 34.

- xi) Provision of online Japanese language programs [Project No. 32]
Please refer to “Actions for Strategic and Ambitious Objectives and Plan” on pp. 33 and 34.

(6) Activities of the Hospital

(1) Activities to improve education and research functions of the Hospital

- i) Active exchange with foreign institutions [Project No. 36]
 - Hiroshima University Hospital (hereinafter the “HU Hospital” or simply the “Hospital”) accepted a visiting group of 34 medical students from Hasanuddin University in Indonesia (under the inter-university exchange agreement concluded on December 10, 1997).
 - The Hospital accepted two doctors and one nurse from Taichung Veterans General Hospital (Taiwan) for training (under the inter-department exchange agreement concluded on March 15, 2015). Two doctors, one nurse, and two administrative staff members from the HU Hospital participated in the International Symposium on Advanced Patients Care held at Taichung Veterans General Hospital in October.
 - One neurosurgeon and one nurse were dispatched to Chitwan Medical College to provide assistance in epilepsy surgeries (under the inter-department exchange agreement concluded on August 29, 2016).
 - Three radiotherapy physicians and one medical physicist were dispatched to the National Cancer Center of Mongolia (under the inter-department exchange agreement concluded on March 28, 2018).
- ii) Development of a world-top-class radiation therapy team [Project No. 37]
The Hospital established a program to develop globally competent human resources (a radiation therapy team) that provide world-top-class radiation therapy and to dispatch the developed human resources to other medical institutions in the region and neighboring Asian countries. Under this program, the Hospital dispatched a study group to advanced radiation therapy facilities in and outside of Japan to develop an educational program that realizes the standardization of radiation therapy techniques. The Hospital also collected information necessary for establishing a regional collaboration system for radiation therapy. It also conducted a team-building workshop to deepen mutual understanding between different job categories involved in radiotherapy. Also, in cooperation with enterprises, it offered exercise training sessions to build a collaborative structure. The Hospital also made presentations at academic conferences on team medicine in radiotherapy.
- iii) Development of globally competent medical professionals for the future [Project No. 37]
The HU Hospital strives to develop globally competent medical professionals who are able to practice next-generation medicine by integrating it seamlessly into regional medicine. To achieve this goal, it held meetings with related facilities, aiming to establish a network of medical institutions of HU and foreign medical institutions mainly led by the Center for Development of Globally Competent Medical Professionals for the Future Program and to develop a human resource development program utilizing the network. To promote the blending of advanced medicine and regional medicine, the Hospital held the World Health Summit in Hiroshima 2018 in October (with about 100 participants) and a special open seminar for young doctors in February 2019, inviting lecturers from Vanderbilt University,

U.S.A. It also held 14 sessions of open seminars to disseminate information to doctors, residents, and medical professionals at the HU Hospital.

- iv) Development of human resources capable of providing medical care in the event of nuclear disasters [Project No. 37]
As a support center for advanced radiation exposure medicine and as a general medical and support center for nuclear disasters, the Hospital endeavored to develop human resources capable of providing medical care in the event of nuclear disasters. The Hospital had doctors, nurses, and clinical radiation technologists participate in training abroad, specialized seminars, and other relevant events.
- v) Promotion of medical research activities [Project No. 38]
In April 2018, to promote its medical research activities, HU established the Hiroshima University Medical Translational Research Organization, with the Vice President in Charge of Research Ethics appointed as Deputy Director. Under this Organization, the Medical Translational Research Council was formed. The HU Hospital worked with the Translational Research Center, which was established on April 1 to consider measures to promote the following activities: establishment of an ARO (Academic Research Organization) that organically integrates medical research activities at HU to maximize their functions; translational research that turns the results of basic medical research into clinical use; acquisition of additional competitive funds from the Japan Agency for Medical Research and Development (AMED) and MEXT subsidy programs; and IR (Investor Relations) for medical research.
- vi) Support for Paralympic athletes [Project No. 38]
Toward the Olympic and Paralympic Games in 2020, the Hospital, mainly via its Sports Medical Center, provides support to world-top-level athletes with disabilities (para-athletes). To establish a multi-support system to ensure collaboration between different job functions, the Hospital expanded its research projects to improve the performance of para-athletes and to prevent injuries to para-athletes. Joint research projects with sports associations for the disabled were also implemented to deploy research results in actual playfields. Results of these research projects were presented at academic meetings and on other occasions in and outside Japan. Furthermore, in accordance with an agreement concluded between four parties (Hiroshima University, the government of Hiroshima Prefecture, the Hiroshima Prefecture Sports Association for the Disabled, and NPO STAND) in October 2016 for collaboration and coordination in para-sports activities, the ALL HIROSHIMA SPORTS SUMMIT 2019 and the Sports Experience for the Disabled event were conducted.

(ii) Activities to ensure quality of medicine

- i) Expansion and improvement of the function of the Liver Disease Consulting Office [Project No. 35]
The Hospital's role as a medical collaboration center for liver diseases is diversifying. The government's incentive project for hepatitis control centers accepted the Hospital's proposal to assign liver disease supervising coordinators at the Hospital who oversee liver disease coordinators at other centers in the prefecture. To cope with the expected expansion of

activities and ensure the efficient operation of the project under these circumstances, we now position the Liver Disease Consulting Office as one of the central clinical divisions of the Hospital because nurses should be stationed at the Office.

- ii) Establishment of the AYA Generation Cancer Department at the Cancer Treatment Center [Project No. 35]
AYA stands for adolescent and young adult. It is the generation after the childhood period and before the middle-aged period and is the most dynamic generation that experiences active life events, such as schooling, working, marriage, and childbirth. The Cancer Treatment Center established the AYA Generation Cancer Division, which specializes in cancers of the AYA generation. A multi-disciplinary team, comprised of doctors, dentists, nurses, pharmacists, physical therapists, occupational therapists, speech therapists, medical social workers (MSWs), child life specialists (CLSs), psychologists, nutritionists, and other medical specialists, has started providing multi-layered medical services to ensure that proper treatment and support are provided continuously to AYA patients who grow and experience changes in their living environment while they receive treatment and post-treatment care.
- iii) Art museum on the hospital premises [Project No. 35]
The YHRP Museum, an art museum that houses approximately 1,300 works donated by collectors, opened in October on the premises of the University Hospital to provide a peaceful and healing environment not only for patients but also for a wide range of local citizens. (The name "YHRP" comes from the words "Yasuragi (serenity)," "Heiwa (peace)," "Rehabilitation," and "Poland.")
- iv) Support to female doctors to stay on their career path [Project Nos. 35 and 37]
Following the previous year, HU Hospital was selected again in 2018 as one of the implementers of the "Female Doctor Career Support Model Promotion Project" of the Ministry of Health, Labor and Welfare. This project set up the "Hiroshima University Hospital Hiring Quota for Female Doctors 2018," an additional quota besides the regular recruitment quota of the Hospital, to provide tailored support to female doctors who want to return to work under various situations. All four applicants under this quota were hired. The project provided female doctors opportunities and support to return to work and also resulted in securing doctors for the Hospital.
- v) Designation as the first allergic disease medical center in Hiroshima Prefecture [Project No. 36]
The Hospital has a total of 11 allergy specialists in three departments: dermatology, internal medicine, and otolaryngology. It accepts, diagnoses, and treats patients with serious or refractory symptoms. In February 2019, recognizing these advantages, the government of Hiroshima Prefecture designated Hiroshima University Hospital as a center for allergic diseases, the first in the prefecture, where patients with atopic dermatitis and other severe allergic symptoms are diagnosed and treated and medical professionals specializing in allergy are developed.

<p>vi) Conclusion of a medical support agreement with Sanfrece Hiroshima [Project No. 36] In May 2017, to support J1 Sanfrece Hiroshima, a professional soccer team, in the area of medical care, the Hospital, Mazda Hospital and Sanfrece Hiroshima signed a medical support agreement. Doctors from the Department of Orthopedic Surgery have provided medical treatments to and performed surgical operations for team members as team doctors of Sanfrece Hiroshima. The Hospital has also provided support in the psychological and nutritional areas as well as support for everyday health care, such as internal medicine. Also, the Sports Medical Center of Hiroshima University Hospital began programs to support players' ability to improve their competitive power by conducting motion analysis and giving instructions regarding ideal body movement and muscle power building.</p> <p>vii) Securing of doctors in mountainous areas and on islands [Project No. 40] Aiming to secure the posting of doctors in mountainous areas and on islands in Hiroshima Prefecture, the government of Hiroshima Prefecture and the University have implemented the "FURUSATO (Hometown) Admission Quota" for the School of Medicine since FY2009. Fourteen students enrolled in the second year of this project completed a six-years undergraduate course and two years of initial training in March 2018. In April 2018, they were posted to local medical institutions.</p> <p>viii) Training for researchers in Hiroshima Prefecture [Project No. 40] The Hospital and the government of Hiroshima Prefecture co-hosted "Clinical Trial Researcher/Operator Training" for researchers at hospitals in Hiroshima Prefecture three times during AY2018. The training provided information on interpretation of the latest clinical research methods and planning of clinical research. It also conducted a group work program to develop a protocol and other sessions to deepen their knowledge of medical research involving human subjects.</p> <p>(iii) Activities for continuous and stable hospital management</p> <p>i) Reinforcement of the governance system [Project No. 35] To ensure that it makes appropriate decisions as a hospital, the Hospital reviewed the responsibilities of deputy directors and associate directors. As of April 1, 2018, to strengthen the governance at the Hospital, the responsibilities of deputy directors were changed from "Medical/Disaster" to "Medical," and the responsibilities of associate directors were changed from "Regional Cooperation" and "Working Environment Improvement and Cost Improvement" to "Disaster" and "Regional Cooperation/Working Environment Improvement."</p> <p>ii) Establishment of a medical service organization for the Futaba Area in Fukushima Prefecture [Project No. 36] The Hospital received a request from Fukushima Medical University to cooperate in establishing a medical care organization in the Futaba Area, Fukushima Prefecture, in anticipation of the lifting of the evacuation order issued following the accident at the Fukushima Daiichi Nuclear Power Station and of the return of citizens to the town in the future. In April 2016, in response to this request, the Hospital established the Fukushima Medical Support Center within HU Hospital. One physician from the Center has been stationed at Fukushima</p>	<p>Medical University since October 2016 and one ER doctor since May 2018 to cooperate in the enhancement of the medical system in Fukushima Prefecture.</p> <p>iii) Establishment of a nuclear disaster medical care organization [Project No. 36] As an advanced medical support center for radiation exposure and a general support center for nuclear disaster medical care, HU Hospital strove to establish a system for nuclear disaster medical care. It sent lecturers to nuclear disaster drills conducted by the government and prefectures that have nuclear power plants and other nuclear facilities to provide advice and guidance. It also held study sessions and decontamination drills as part of activities to enhance people's awareness of nuclear disaster medical care. The Hospital also participated in a drill in response to a request for assistance as a registered organization of the Response and Assistance Network (RANET) of the International Atomic Energy Agency (IAEA).</p> <p>iv) Support to female doctors to stay on their career path [Project Nos. 37 and 40]</p> <ul style="list-style-type: none"> • In April 2017, the Hospital established the Woman Doctor Support Center to promote creation of working environments that support job satisfaction and efficiency of female doctors and to establish workplaces where female doctors can continue their careers and are encouraged to return to work. To promote support to female doctors in cooperation with other medical institutions in the region, the Center hosted the Hiroshima Prefecture General Conference for Support for Woman Doctors, with the participation of hospital directors and personnel managers from related hospitals in Hiroshima Prefecture; interested parties from the government of Hiroshima Prefecture, prefectural and municipal medical associations, and the Hiroshima Prefecture Regional Medical Support Center; and managers of clinical departments and personnel managers from HU Hospital. At this conference, participants exchanged opinions regarding establishment of support systems and actions to realize these systems, including systems to support the continued careers of female doctors who have some constraints, such as childcare, and the possibility of providing a matching system on a continual basis to match female doctors seeking jobs with hospitals seeking doctors based on their respective requests and conditions. • To support female doctors working at HU Hospital and other medical institutions in Hiroshima Prefecture, the female doctor support team "Hiroshima Sanbon no Ya"(meaning three arrows) was formed, comprising the Woman Doctor Support Center of HU Hospital, the Hiroshima Prefecture Medical Association, and the Hiroshima Prefecture Regional Medical Support Center. It provides consultation for female doctors who need support and also holds support events, such as exchanges between female medical students and female doctors. <p>v) Improvement of hospital management [Project No. 39]</p> <ul style="list-style-type: none"> • The Hospital calculated costs of each clinical department and each function by using the University Hospital Management Accounting System (HOMAS2) to identify departments where operating profit increased or decreased significantly from the same period of the previous year to analyze factors behind these changes. In the first quarter of AY2018, the Hospital also calculated the costs for each DPC (Diagnosis Procedure Combination) of clinical departments that ranked 5th to 10th and notified them of the results.
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- For hospitalized and discharged patients treated under the Diagnosis Procedure Combination/Per Diem Payment System (DPC/PDPS), monthly medical treatment fees of each clinical department were analyzed. Surgical technique levels were analyzed by using the system proposed by the “Federation of Social Insurance Committees of Surgical Societies (Gaihiren).”
 - For hospitalized patients who were treated under the DPC/PDPS and discharged, we analyzed each treatment department regarding its “patient composition,” “management indicators,” “profit and loss,” “average hospitalized days of DPC patients and discharge rate and per-day medical costs of Phase II patients,” “distribution of profit and loss of Top 10 Diagnosis Groups by DPC,” “use rates of treatment departments by cost,” and “Top 10 ranking of quantities and value of drugs by treatment department.”
 - The Hospital conducted a review meeting chaired by the Director once a month to update medical devices according to a predetermined schedule. Based on the inspection of medical equipment conducted in 2017, the review meeting also discussed renewal plans for aged large medical equipment by using various financial resources.
 - In April 2018, the Hospital established a new manager post in charge of management improvement. This manager worked with relevant departments to reduce costs, including negotiating discounts with suppliers of medical and other materials.
 - We analyzed the inventories of pharmaceuticals and medical materials based on the results of physical inventory-taking. We notified departments of unconsumed medical materials with expired dates of record and collected them from the relevant departments to reduce inventory differences and reduce the inventory size.
 - In an effort to reduce costs, HU Hospital, as a member of the National University Hospital Council of Japan, joined the joint price negotiation with manufacturers on nine categories of high-performance medical materials, with the cooperation of the National University Hospital Purchasing Manager Council and other interested parties.
- vi) Activities for proper deployment of doctors [Project No. 40]
In June and August 2018, the Hospital held the Meeting of Directors and Clinical Professors of University Hospitals in Hiroshima Prefecture, with the participation of representatives from the Hiroshima Prefectural Hospital Office, the Hiroshima City Hospital Organization, the heads of hospitals in the area, and professors from clinical departments of HU. The meetings confirmed the situation of the medical supply system and shared issues in Hiroshima Prefecture.

(7) Activities of schools attached to the University

(i) Activities to tackle educational tasks

- i) Activities under MEXT Research & Development School Program and other programs [Project Nos. 41, 42, and 43]
Attached schools worked on two projects under the “MEXT Education, Research & Development Program,” one project under the MEXT “Super Global High School Program (SGH)” and one project under the “Super Science High School Support Program” (SSH) of the Japan Science and Technology Agency. As a result, HU high schools won various prizes, including the Silver Award in the “29th Japan Mathematical Olympiad (JMO),” the Bronze Medal in the “59th International Mathematical Olympiad (IMO),” the JFE Steel Prize in the “16th Japan Science & Engineering Challenge JSEC2018,” the Prime Minister Award in the

“Statistical Data Analysis Competition,” and the Gold Prize in the “Hiroshima Prefecture Science Olympiad.”

HU also published a book that summarizes the philosophy, practice, and research of childcare and education of HU kindergartens to disseminate the information to childcare givers and researchers in Japan and overseas.

- ii) Development of globally competent human resources at attached schools [Project Nos. 41, 42, and 43]
- On July 21, September 29, October 27, and December 8, 2018, and January 12, 2019, HU Fukuyama Junior High School and Fukuyama Senior High School conducted the IDEC Cooperation Program. In this program, high school students in the second year conducted group discussions, together with international students from the Graduate School for International Development and Cooperation, about the Environment, Peace and Education [five sessions, a total of 16 international students, a total of 18 high school students].
 - Attached schools concluded partnership agreements with foreign schools. Exchange activities were conducted with these foreign schools, such as joint research, collaborative learning, and mutual school visits (two schools in Korea, one in Thailand, one in China, one in Australia, one in Indonesia, two in Singapore, and two in Germany).
 - One teacher from an HU high school participated in the “Program to send teachers of high schools and integrated junior/senior high schools to India,” aimed to promote exchange between India and Japan.

(ii) Collaboration with the University and individual departments

- i) Development of a rubric to evaluate qualities and abilities necessary for a globally competent person [Project Nos. 41, 42 and 43]
We thoroughly examined the draft of the rubric developed in AY2017 by developing specific evaluation methods and materials through class exercises at attached schools and kindergartens. On February 18, 2019, the Research Promotion Committee held a meeting, in which teachers from the Graduate School of Education participated as members, to verify the adequacy of the rubric based on the activities at attached schools and kindergartens.
- ii) Cooperation in educational and research activities of the University [Project Nos. 41, 42, and 43]
The schools attached to Hiroshima University cooperate in educational and research activities of HU in accordance with the “Procedures for Requesting Cooperation of Attached Schools in Educational and Research Activities of the University.” In AY2018, attached schools cooperated in nine teaching projects and six research projects of HU.
At HU junior and senior high schools which have been designated as super science high schools (SSHs), the “Program to Connect Education between SSHs and the University” was also conducted. The students in the second year of HU high school were divided into groups of three to four by the type of “assigned study.” A total of 11 university teachers, seven from the Graduate School of Education and four from the Department of Integrated Global Studies of the School of Integrated Arts and Sciences, participated in this project and provided support to the students, helping them work on their assigned study in three sessions.

As collaborative schools of HU, the attached schools accepted eight graduate students from the Professional Development Program for Teachers and School Leaders (Graduate School of Education) of the University. Four teachers from attached schools were also dispatched as trainees to graduate schools of HU (one to the Professional Development Program for Teachers and School Leaders and three to other majors) to improve their teaching qualities and abilities.

iii) Joint research projects between undergraduate schools and attached schools [Project Nos. 41, 42, and 43]

Joint research projects between undergraduate schools and attached schools have been continued since 2004 and were also implemented in AY2018. Six applications were submitted by departments at the University. The University selected four joint research projects that covered various fields. The results of the 13 research projects (with a 2-year research period) selected in AY2017 were presented at academic conferences and compiled into English papers. They were also globally made available to the public on the Hiroshima University Institutional Repository (issued on March 31, 2019).

iv) Teaching practice in international situations [Project Nos. 41, 42 and 43]

At attached junior and senior high schools, teacher trainees received coaching on creating teaching plans in English. They also considered teaching methods to develop a global mindset.

(iii) Regional collaboration

Activities as teacher training centers in West Japan [Project Nos. 42 and 43]

To play the role of teacher training centers in West Japan, attached schools of HU accepted teachers from other prefectures and cities under personnel exchange programs or training programs. Attached schools have worked on the development of systematic training programs for these exchange teachers based on the qualities and abilities of exchange teachers according to their individual career stages. In AY2018, to develop teachers who can play a central role in improving classroom learning, we accepted one teacher from one private school in Hiroshima Prefecture under a memorandum on acceptance and training of teachers. A new agreement was also concluded with Hiroshima Prefecture for long-term acceptance of teachers for early childhood education, based on which we accepted one teacher in AY2018. Attached schools also cooperated in teacher training at other schools in the region by sending their teachers as lecturers to other schools for in-house training to strengthen their teacher training functions.

- The school management policy of Hiroshima University Fukuyama Junior High School and Fukuyama High School is "Strengthening Collaboration with the Community." As specific actions, the attached schools promoted (1) collaboration with the Fukuyama city office and local industries as a part of the SGH (super global high school) program and (2) collaboration with local schools and boards of education.

(iv) Review of roles and functions

Activities to establish a Hiroshima University version of "Measures to Enhance Functions" [Project Nos. 41, 42, and 43]

The Attached Schools Function Enhancement Review Working Group (WG) continued deliberation on extensive areas, including the role of attached schools in contributing to the enhancement of university functions, appropriate scale and number of attached schools based on the trends in teacher training, enhancement of functions of individual attached schools, cooperation with prefectural and city boards of education, and contributing to solving problems in education in the region.

In August 2018, the Interim Report was compiled, which outlined the policy to further strengthen functions of attached schools with closer cooperation with the University. Common goals were set, such as "Human Resource Development for SDGs and Society 5.0," in collaboration with the University while maintaining an appropriate size of attached schools. Plans to enhance the function of attached schools in each area were developed, including the development of teachers who can practice diversity education, advanced education and research facilities that collaborate with the community, and the development of next-generation curriculums.

(8) Joint usage and joint research centers

Research Institute for Radiation Biology and Medicine

(i) Activities and achievements as a joint usage/research center (including activities to strengthen the joint usage/research system and activities conducted in line with the purpose of the Institute)

i) Contribution as an academic center [Project No. 27]

The Research Institute for Radiation Biology and Medicine of Hiroshima University has established the "Research Center for Radiation Disaster Medical Science," a network of joint research centers with Nagasaki University and Fukushima Medical University, based on the former "Research Base for Radiation Consequence and Medical Science (stand-alone organization, from AY2010 to AY2015). In AY2018, this network of joint research centers carried out a total of 204 joint research projects (an increase of seven projects from the previous year), playing a core role in forming an academic center for radiation accidents and medical science.

ii) Triangle Project [Project No. 27]

The Research Center for Radiation Disaster Medical Science endeavors to contribute to the advancement of academic research as a network of three research centers by taking advantage of the strengths and characteristics of individual universities. As a part of this effort, it started the Triangle Project in AY2017, working on research on the following: consequences and risks of low-dose exposure, medical treatment of radiation hazards, and social impact of radiation disasters and protection from radiation. An integrated research team was formed, comprising researchers from three member research institutes (the HU Research Institute for Radiation Biology and Medicine, the Atomic Bomb Disaster Institute of Nagasaki University, and the Fukushima Global Medical Science Center of Fukushima Medical University). This team conducted 28 research projects (an increase of three projects from the previous year).

iii) International symposium [Project No. 27]

The Institute held an international symposium in January 2019 on the subject of "Cooperative wisdom among communities for disaster preparedness and response" in Fukushima City.

Fourteen world-leading experts (including six experts from abroad) were invited as speakers to share information and insights on the latest developments in radiation accidents and medical science research activities. The meeting gathered 261 participants. This symposium also provided development opportunities for young researchers. A hybrid session for young researchers was held, a combination of a short speech presentation with a poster presentation. The Young Researcher Poster Prize was awarded to the most outstanding presenter.

- iv) Implementation of Fukushima Prefecture Citizen University Open Forum [Project No. 27]
Under the theme of “Think Recovery. Change the Perspective from Receiver to Provider of Support - What Messages Can We Deliver?,” the Fukushima Prefecture Citizen University Open Forum was held in Fukushima City in February 2019. About 130 citizens attended this program. The Forum included keynote lectures, proposal presentations from students, panel discussions and other events. Participants shared lessons learned from disasters and reconstruction experience as globally valuable assets, discussed reconstruction from a disaster from the viewpoint of contributing to the creation of a sustainable society, and explored ways to make the experience of reconstruction in Fukushima a universal asset that should be shared globally.
- v) Loose collaboration between network-type joint research centers
In AY2017, to promote cooperation and exchange between network-type joint research centers of the three universities, the “Agreement on Promotion of Collaboration and Cooperation Between the Network Joint Research Center for Materials and Devices, the Research Center for Biomedical Engineering, and the Research Center for Radiation Disaster Medical Science” was concluded. Under this agreement, we held a mutual achievement report meeting and made a poster presentation at an international symposium.

(ii) Unique activities and achievements of the Research Institute for Radiation Biology and Medicine

- i) Holding of an exhibition [Project No. 27]
From August 3 to September 20, 2018, HU held the exhibition “Pathologist Chuta Tamagawa Goes to the Nuclear Field - Atomic-Bomb Sickness, Challenges Faced by Professor of Hiroshima University School of Medicine” at the Medical Museum of the School of Medicine. The exhibition included materials and panels featuring medical and research activities conducted by Chuta Tamagawa and other medical professionals who were committed to medical activities at the time of the nuclear bombing and subsequent research activities at the University and the Institute. More than 1,100 people visited the exhibition.
- ii) Seminars [Project No. 27]
Seminars were held almost every month, for both internal and external researchers and students, by inviting Japanese and foreign researchers from inside and outside the University as lecturers. These seminars contributed to improving research capabilities of participants and promoted active exchanges between researchers.
- ii) Discovery of individual differences in sensitivity to low-dose radiation [Project No. 27]

A joint research team led by Hiroshima University performed chromosomal analysis of lymphocytes before and after CT to examine the effects of low-dose radiation exposure on the human body. As a result, the team found that there is an individual difference in the increase of chromosomal abnormalities in low-dose radiation exposure. This research result is expected to lead to the establishment of personalized radiotherapy based on individual differences in sensitivity to low-dose radiation.

- iv) Discovery of molecular mechanisms that prevent chromosomal abnormalities caused by radiation and anticancer drugs [Project No. 27]
A joint research team led by Hiroshima University found that ATM, a DNA damage signal regulator, moderately suppresses the binding of repair factors to damaged DNA by phosphorylating ARP8, a component of the chromatin remodeling complex. In other words, the team proved that ATM not only acts as a repair accelerator but also as a brake, adjusting the repair activity to an appropriate range and preventing chromosomal abnormalities. The results of this research are expected to lead to the establishment of new medical treatment that prevents cancer induced by radiation exposure or drugs by controlling the DNA's repair mechanism.

Hiroshima Synchrotron Radiation Center

(1) Activities and achievements as a joint usage/research center (including activities to strengthen the joint usage/research system and activities conducted in line with the purpose of the Center)

- i) Status of the joint use/joint research activities [Project No. 21]
The Hiroshima Synchrotron Radiation Center accepted a total of 127 proposals for joint use/joint research projects (136 applications, acceptance rate of 93%), including 93 proposals for general projects (solicited twice a year) and 34 proposals for academically urgent tasks (solicited throughout the year), exceeding the target number of acceptances (120 projects) projected in the action plan. The Center also actively implemented international joint research projects. Thirty-six proposals (24%) out of all accepted proposals were from overseas, exceeding 31 projects (29% out of 131 proposals) accepted in AY2017. Of the 228 users (actual number) in AY2018, 75, or 33%, were non-Japanese users. In AY2018, seven foreign organizations joined the network. The network of international joint research has expanded to 73 institutions.
- ii) Research results [Project No. 21]
In AY2018 the Center published 38 peer-reviewed papers. Papers published in journals with seven or more impact factors (IFs) amounted to three papers: one paper on Advanced Materials (IF=22.0), one paper on Computational Materials (IF=8.9), and one paper on Physical Review Letters (IF=8.8). Papers published in journals with 3.5 or more impact factors (IFs) amounted to 19 papers (50% of all papers). We published 25 international joint papers during AY2018 (66% of all papers). We issued one press release on ultra-high-resolution angle-resolved photoemission spectroscopy and one on the generation of vector radiation beams.

- iii) Joint international research [Project No. 22]
The Center invited a professor from the Ioffe Physical Technical Institute of the Russian Academy of Sciences under an inter-department agreement as a specially appointed foreign professor for three months, who engaged in research on nanomagnetic materials and the development of soft X-ray reflection spectrometers. The Center invited a professor from the University of Science and Technology of China as a specially appointed professor for one month, who engaged in research on the fine electronic structure of strongly correlated materials.
- iv) International symposium [Project No. 27]
 The Center held the International Workshop on Trends in Advanced Spectroscopy in Materials Science (TASPEC) on October 4-6, 2018. Participants totaling 110 (including 22 foreigners) from 11 countries exchanged information on the latest trends in advanced spectroscopy in materials science and discussed future prospects. On March 7 and 8, 2019, the Center held the 23rd Hiroshima International Symposium on Synchrotron Radiation. A total of 84 participants from ten countries (including seven foreign researchers) discussed trends in advanced research projects in the materials science and biomolecular science fields, which use radiation in the vacuum ultraviolet and soft X-ray range. The Symposium also summarized joint research projects for the year.
- v) Synchrotron radiation experiments by graduate students [Project No. 27]
 Under the cross-credit agreement between the HU Graduate School of Science and the Graduate School of Natural Science and Technology of Okayama University, the Center conducted the Synchrotron Radiation Experiments for Graduate Students (as a curriculum subject of Hiroshima University). Six students from HU and five from Okayama University took this subject in AY2018.
- vi) High school-university collaboration [Project No. 27]
 The Center accepted 1,023 junior and senior high school students under training projects for junior and senior high school students in the Chugoku and Shikoku regions, including super-science high school students, the Global Science Campus Project of Hiroshima University, JSPS's "Hirameki-Tokimeki Science" project, and other projects. It also accepted 90 trainees from overseas under the JST's Sakura Science Plan and the summer school project for Russian students. The Center also participated in projects of MEXT, such as Science & Technology Week, Children's Visit Day, and Culture Week, and accepted 1,593 people in total.
- vii) External evaluation and self-check/evaluation [Project No. 27]
 On April 5, 2018, the Center received a third-party evaluation and was highly evaluated regarding its ability to achieve research results of academic significance by using world-leading advanced measurement systems and its contribution to the development of people who are expected to play significant roles in synchrotron radiation science.

- viii) Collaboration with inter-university research institute corporations [Project No. 27]
The Center succeeded in generating the world's first vector synchrotron radiation beam in a joint research project with the Institute for Molecular Science (National Institute for Natural Science) and Nagoya University (Joint press release of the University, the Institute for Molecular Science, and Nagoya University). A light with completely new properties is expected to lead to a new research method in materials and life sciences. An assistant professor of the Center won the 13th Young Scientist Award of the Physical Society of Japan for this achievement.

(ii) Unique activities and achievements of the Hiroshima Synchrotron Radiation Center

- i) Active implementation of cross-field research projects [Project No. 27]
 The Center worked on research of the three-dimensional structure of biological materials in aqueous solution by using synchrotron radiation dichroism spectroscopy, developed a temperature variable mechanism that can control the sample temperature with ten times the accuracy of conventional methods, and achieved high-throughput measurement that uses a condenser mirror. The Center held the 23rd HiSOR Workshop, "New Development in Life Function Research - Innovation in Measurement and Theoretical Technology for Molecular Chirality," which collected information on the world's most advanced chiral technology and examined the realization of high-performance synchrotron radiation circular dichroism technology.
- ii) Research on spin physicality [Project No. 27]
An assistant professor of the Center received the MEXT Young Scientist Prize in the science and technology field in AY2018 for a research project on spin physicality by using the world's highest efficiency spin- and angle-resolved photoemission spectrometer with synchrotron radiation. Looking ahead to the next-generation light source plan, the Center has launched an R&D project for spin/angle-resolved photoemission spectroscopy experiments to develop a micro-beam spin/angle-resolved photoemission spectrometer that uses a laser as a light source. This project has enabled angle-resolved photoemission spectroscopy measurement using different microdomains. The Center also designed and built a multi-channel spin detector that is 1,000 times more efficient than existing equipment.

Research Institute for Nanodevice and Bio Systems

(1) Activities and achievements as a joint usage/research center (including activities to strengthen the joint usage/research system and activities conducted in line with the purpose of the Center)

- i) Status of joint use/joint research, development of human resources, and activities to communicate information (Activities and achievements of network-type centers in general) [Project No. 27]
 The Research Center for Biomedical Engineering was established (AY2016 to AY2021) as a network of joint research centers of four universities: the Research Institute for Nanodevice and Bio Systems of Hiroshima University, the Institute of Biomaterials and Bioengineering of Tokyo Medical and Dental University, Laboratory for Future Interdisciplinary Research of Science and Technology of the Tokyo Institute of Technology, and the Research Institute of Electronics of Shizuoka University. The Research Center for Biomedical Engineering conducts

research activities to realize practical use of bio materials and medical equipment. The total number of joint research projects by the four universities has increased steadily, 157 in AY2016, 195 in AY2017 and 211 in AY2018, suggesting the importance of this field.

- ii) Status of joint use/joint research [Project No. 27]
HU conducted 41 joint research projects (including four projects with foreign organizations) at the Research Institute for Nanodevice and Bio Systems in AY2018, an increase by two from the previous year. It also conducted 4 unique joint research projects.
- iii) Human resource development [Project No. 27]
 In AY2018, HU granted 12 awards to the Institute: seven awards to students supervised by teachers of the Institute (two at international symposiums, three at symposiums and academic conferences in Japan, and two cases of excellent student scholarships) and five awards to teachers, researchers, and researcher groups.
- iv) Activities to provide information [Project No. 27]
 Research results and information on exercise sessions and lectures were communicated via the website of the Institute and via the website of the Graduate School of Advanced Study of Matter, where Institute teachers concurrently serve as teachers. A newsletter (annual, 216 copies), an annual research report (annual, 177 copies), and a research institute newsletter (Nano Tech-teku, quarterly) were distributed to related parties at the University.

(ii) Unique activities and achievements of the Research Institute for Nanodevice and Bio Systems

- i) Research results [Project No. 27]
 The following is an outline of research activities that are expected to be put into practical use in the near future, among many research results:
 - The Institute developed a new portable breast cancer testing device that uses radio waves free of X-ray exposure and conducted a pilot clinical trial.
 - A system to find cancer in the large bowel automatically and in real time from video images captured by a large bowel endoscopy was created and has been used in clinical experiments. The results were demonstrated in a press release and at many exhibitions.
 - At international conferences, the Institute presented the research results of radiation-resistant SiC circuits and image sensors intended for the Fukushima Daiichi Nuclear Power Plant decommissioning and received four awards. The Institute also held four lectures inviting lecturers from outside the University.
- ii) Expansion of the international joint research network [Project No. 27]
 The Institute concluded inter-department exchange agreements with one institution: Hanoi National University of Education (Vietnam). Combined with the 12 agreements concluded in the past, the Institute now has inter-department exchange agreements for international joint research projects with 13 institutions (14 research departments). The Institute concluded a research and education agreement with the Micron Foundation in the U.S. and accepted a donation from the Foundation.

- iii) Development of young human resources [Project No. 27]
 The Institute contributed to human resource development through the following projects: three programs of practice and training implemented at the University under the Nanotechnology Platform of MEXT, trial creation of solar cells and measurement in the “Liberal Arts Seminar” for first-year university students, and solar cell practice lessons for junior and senior high school students. Integrated circuit fabrication training (6 days) was a great success with the participation of two students from the University of Moratuwa (Sri Lanka) under an inter-department exchange agreement and 24 other students.
- iv) International workshops [Project No. 27]
 The Institute hosted the 3rd International Symposium of the Research Center for Biomedical Engineering at Satake Memorial Hall on November 8 and 9, with 224 participants from Japan and abroad. This symposium is held at the same time as the International Nanotechnology Workshop,” which is also hosted by the Institution every year. Four world-leading researchers (from the U.S. and other countries) and twelve researchers in Japan were invited to the workshop to have active discussions.
- v) Activities under the MEXT Nanotechnology Platform [Project No. 27]
 To promote technical support and joint research on a nationwide scale, the Institute provides support to nearly 50 projects each year. Starting from 2012 and until 2021, as one of 16 microfabrication platforms in Japan, the Institute provides its advanced processing equipment for open use to external organizations. In AY2018, it provided support to 54 projects, the highest number ever.
- vi) Collaboration with local industries [Project No. 27]
 The Institute implements collaborative research activities with five local companies, including Phenitech Semiconductor Corp., a major semiconductor company in the Chugoku Region, and Mazda Motor Corporation. Specifically, the Institute is jointly developing next-generation SiC power semiconductor devices with Phenitech Semiconductor Corp.
- vii) Procurement of external funds [Project No. 27]
The external funds acquired in FY2018 for scientific research, contract research, joint research and other research activities totaled 129,510,000 yen. This is about 2.7% higher than the external funds acquired in FY2017 (126,150,000 yen).

**(9) Activities of educational joint usage centers
 Training and Research Vessel TOYOSHIO MARU**

One mix-boarded field work program was provided to students from non-fishery or marine universities. Thirteen students from other universities took this program. HU also offered the TOYOSHIO MARU for use by other universities for their own field work programs. The vessel was used by three programs of other universities, Kochi University, Fukuyama University and Kitasato University, accepting 74 students. In some of HU's own field work programs, mixed boarding was also offered to students from other universities and outsiders if there were vacancies in the programs. A total of 54 people from outside participated in 22 voyages. By using a questionnaire, HU asked these students and teachers to evaluate the joint use of the vessel for educational

programs. The programs received positive comments, such as “The subject was very interesting,” “I think you should continue this program next year and after,” and “I will recommend this program to my younger friends.” For the requests for program contents received in the survey, we have continued making improvements to provide education of higher quality.

In November, the vessel was also used to transport freshwater of about 20 tons to Suo-Oshima, where the water supply was shut down for a considerable period. All information about the voyages of the vessel is published on the website to promote its shared use.

Marine Biological Laboratory

The Marine Biological Laboratory provided four intensive field work and lodging programs to a total of 26 students from other universities. Under the JST’s Sakura Science Plan, the Laboratory conducted a program to promote the internationalization of higher education that accepted ten students from two universities in the Republic of Indonesia, including one partner university under an inter-university exchange agreement. The Laboratory also provided “Rinkai Hack,” a hands-on training course, in cooperation with genome informatics researchers from Japan and abroad. In AY2018, which was the second year of this program, to promote the internationalization of the program, the range of participants, which had been graduate students and postdoctoral students in Japan, was expanded to include international students, and the course was provided mainly in English. Thirty-two students from various universities participated.

As part of community contribution activities, the Laboratory has continued to provide programs for students of Onomichi City Takami Elementary School since AY2010. In AY2018, it provided four educational programs, including an event to collect and classify organisms and a class to create bookmarks by using seaweed. It also provided one laboratory program for students from a private junior high school in Osaka. A super science high school laboratory program was provided for students from Seishin Girl’s High School in Okayama, which started in 2016.

The laboratory was also actively offered for joint use and public use, including visits of representatives from foreign educational institutions and survey and research activities of research institutions, aquariums and a wide range of other organizations. Preparations were made for laboratory programs, which will start from the next academic year, for students from other universities. The website was improved to promote the use of the Laboratory. The Laboratory held meetings of the operation committee with the participation of all members from inside and outside the University and exchanged opinions to ensure the efficient and effective operation of its activities for the next four years.

Saijo Farming Station, the Setouchi Field Science Center

The Saijo Farming Station provided six field work programs for students from other universities, exchange students from South East Asia, and adults, which were participated in by 139 people. In the questionnaire survey conducted every year, participants have expressed positive opinions, such as “I discovered the comprehensiveness and fun of field science,” “It was an opportunity to think about the relationship between food and agriculture,” and “It was an opportunity to think about the relationship between food and life.” Again, in AY2018, the number of applicants to these programs far exceeded the enrollment limits. However, the actual number of participants was fewer than a usual year because many students canceled their enrollment due to the damage caused by the heavy rain in July. Students from the Kansai and Kanto areas also took these

programs, not only students in the Chugoku/Shikoku areas. The Farming Station fulfilled its function as a national educational joint use center.

In addition to the six field work programs mentioned above, the Farming Station also provided field work sessions to about 26 students from universities specialized in partner animals and laboratory animals (such as schools for laboratory animal managers, veterinary technicians, trimmers and animal trainers) and students from animal-related vocational schools to provide them opportunities to learn about farm animals they don’t handle in their classes.

As part of the Super Science High School program, the Farming Station has also continuously given educational guidance to students from Hiroshima Prefectural Saijo Agriculture High School. Specifically, under the “Study on the effect of a horse-mediated education program for high school students” project, the Farming Station gives guidance on research planning and analysis about 4 to 5 times a year to 5 to 10 students every year. The results of the research are presented at an academic conference every year. The Farming Station also offered educational tours and work experience to children and students from kindergartens, elementary schools, and junior and senior high schools as requested. The Farming Station accepted about 230 students in AY2018, compared to about 190 in the past.

Information about the education programs of this Farming Station is published on the website to promote its shared use.

Takehara Marine Science Station, Setouchi Field Science Center

The Takehara Marine Science Station provided two intensive field work and lodging programs designed mainly for students from other universities. A total of 30 students from 11 universities in and outside Japan enrolled in these programs. All programs were participated by students from HU and other universities. In a questionnaire survey, about 60% of participants from HU positively evaluated the participation of students from other universities. About 96% of students from other universities were satisfied with the exchange between students. They expressed such opinions as “It was inspiring to exchange opinions with students from other universities,” “I was motivated by the high motivation of students from other universities,” and “The program was beneficial as I could ask questions of senior students from other universities,” and they provided many other positive opinions. The survey results show that the program was mutually beneficial for students from HU and from other universities. The Station was actively offered for joint use and public use by both Japanese and foreign institutions. It was used for field work and summer school programs of Japanese and foreign educational institutions. It was also used for investigation and research activities by research institutions and a wide range of organizations. It provided a total of six community awareness programs for a wide range of students, from elementary school to senior high school students, including field activities, exercises and lectures. It accepted 32 high school students under two Sakura Science Plan projects (from the Philippines and China). The Station provided comprehensive support to their activities, including field research, collection of natural life forms, sorting of data, and presentation practice.

2. Operations and Financial Conditions

(1) Objectives relating to improvement of operation and efficiency

Please refer to special notes on pp 42 and 43.

(2) Objectives relating to improvement of financial conditions

Please refer to special notes on pp. 47 and 48.

(3) Objectives relating to self-check/evaluation and provision of information

Please refer to special notes on pp 51 and 52.

(4) Objectives relating to other operation-related matters

Please refer to special notes on pp. 56, 57, 58 and 59.

3. Actions for “Strategic and Ambitious Objectives and Plans”

Unit 1	Actions to Become a Top 100 University in the World University Ranking	
Medium-Term Objectives [1]	Develop educated people who can play active roles globally in identifying and solving unforeseeable problems for humankind and in pursuing peace with their advanced knowledge and abilities.	
Medium-Term Plan [1]	The numbering of curricular subjects and English translation of syllabuses, which started in the Second Medium-Term Period, should be further expanded to all subjects in order to establish an internationalized education system.	
Plan for AY2018 [1]	Improve the numbering method and presentation in the syllabuses based on the results of the examination conducted last year.	
Progress	<ul style="list-style-type: none"> • Following AY2017, <u>we achieved numbering and input (English translation) (100%) of all syllabuses (April 2018).</u> • Aiming to achieve numbering and input of all syllabuses (English translation) (100%) in AY2019, we have set the target to achieve about 90% as of the end of AY2018. <u>In fact, as of the end of AY2018, we achieved this target. Input of 93.3% of syllabuses in Japanese was completed and input of 93.0% of syllabuses in English was completed.</u> • In the examination conducted in AY2017, we found inconsistency between the “Semester/Term” of the subject and the “Course Level” in the numbering for some syllabuses. We urged the relevant undergraduate departments and graduate schools to correct this inconsistency via the Curriculum Committee of the Headquarters for Education. As a result, the inconsistency was eliminated in the syllabuses for AY2019. 	
Medium-Term Plan [2]	To realize globalized education, all undergraduate schools should introduce degree courses all taught in English by AY2019 and verify their effectiveness for the globalization of students.	
Plan for AY2018 [2]	The School of Integrated Arts and Sciences introduces degree courses all taught in English. It also considers and makes preparations for new degree courses that will start in AY2019.	
Progress	<ul style="list-style-type: none"> • In April 2018, the University established the Department of Integrated Global Studies, under the School of Integrated Arts and Sciences, which offers a degree program consisting of only subjects taught in English. The purpose of this department is to develop people capable of thinking about various problems in the international community from a global viewpoint, being open to different nations, ethnicities, cultures and religions, and cooperating with others. The globalization of education has steadily progressed at Hiroshima University. • Eight departments (other than the School of Integrated Arts and Sciences) created detailed descriptions and made other preparations for 18 programs that will start in April 2019 (1 program each at the School of Law, School of Economics, School of Science, School of Medicine, School of Dentistry, School of Pharmaceutical Sciences, and School of Applied Biological Science and 11 Programs at the School of Engineering). Other departments are also continuing to review and make preparation for programs to be started in AY2020. For liberal arts subjects under these programs, <u>the General Education Control Department further increased the use of English in liberal arts subjects. As a result, liberal arts subjects taught mainly in English increased from 36 subjects (AY2018) to 141 subjects (AY2019).</u> 	
Medium-Term Plan [3]	Train students to acquire the communication and presentation skills required in a globalized society. To achieve this objective, HU should add and expand subjects taught in English and special training programs for developing professionals with English skills. In addition, periodic English proficiency measurements should be conducted, aiming to bring about 25% of all undergraduate school students up to the level of TOEFL® i BT80.	
Plan for AY2018 [3]	We should consider and implement measures to achieve the goal of about 25% of undergraduate students reaching the TOEFLiBT80 level in AY2019 based on the achievement level of students. The measures include an increase of subjects taught in English and special programs for English professional training and regular measurement of English proficiency of students.	

		<p>Progress</p>	<p>To develop globally competent people who pursue peace with their international education, the University introduced a special program, the “Global Peace Leadership Program,” in FY2017 to help students to deepen their understanding of Japanese culture and peace, to acquire English abilities, the ability to identify and solve problems in a multicultural society, and leadership skills, and foster career path development. In AY2018, HU received 28 enrollment applications for this program and selected 20 students by document screening and interviews. Four students enrolled in this program in 2017 were sent to the University of Nevada, Reno (2), the US, the University of Edinburgh (1), the UK, and Chulalongkorn University (1), Thailand, for about four months. Three students sent abroad under this program made debriefing presentations in English after they came home to stimulate the motivation of other students under this program to study abroad. To improve English proficiency, an opportunity to take the IELTS™ (a test to evaluate whether a person has the English ability necessary for studying abroad) free of charge was offered to all 38 students enrolled in the program, and 24 students took the exam.</p> <ul style="list-style-type: none"> • Continuing from FY2017, liberal arts subjects designed to improve the TOEIC® score of students to 730 points were provided: Communication Seminar I in the first term and Communication Seminar II in the third term. Because the effectiveness was confirmed as explained below, we decided to continue Communication Seminar I and II in AY2019. <ul style="list-style-type: none"> ○ <u>Of the students who took Communication Seminar I, 208 students took the TOEIC® L&R IP test in both April and May. The average scores of these students increased by about 161 points from April to May. There were 69 students whose scores improved to more than 730 points in the May test from less than 730 in the April test.</u> ○ <u>Of the students who took Communication Seminar II, 134 students took the TOEIC® L&R IP test in both October and November. The average scores of these students increased by about 72 points from October to November. There were 19 students whose scores improved to more than 730 points in the November test from less than 730 in the October test.</u> ○ <u>Of the students who took both Communication Seminar I and II, the average score of 133 students who took TOEIC® L&R IP tests in April, May, October, and November was analyzed. It improved 144 points from April to May, 72 points from October to November, and 165 points from April to November.</u> • From mid-June to mid-November, the TOEIC® Skill Up Class was offered, which was a non-curricular program designed to improve skills of students to communicate in English and to help them to achieve 730 points in the TOEIC® tests. There were 109 enrollments (95 at Higashi-Hiroshima Campus, 14 at Kasumi Campus). To verify the effectiveness of the TOEIC® Skill Up Class, enrolled students were required to take the TOEIC® L&R IP test in November. Of 75 undergraduate students who attended the class at least once, 46 students (about 60%) took the test. <u>Of these 46 students, 27 improved their scores from the time of their enrollment in this program.</u> • In late September, to improve TOEIC® scores of students and their skills to communicate in English, HU conducted the “Short Study Abroad Experience on Campus” program, a program to experience language training classes of a study abroad program on the HU Higashi-Hiroshima and Kasumi campuses. There were 41 enrollments on the Higashi-Hiroshima Campus and 12 on the Kasumi Campus. A questionnaire survey was conducted regarding satisfaction with the program. Of 21 undergraduate and graduate students who responded, 20 responded that they were “very satisfied.” Because we received the following positive comments in the free description box of the questionnaire, we will continue this program next year. <ul style="list-style-type: none"> ○ I didn’t feel comfortable speaking in front of people in the past. However, in the presentation, I could speak in English. The program was a good opportunity that opened the path to my future. ○ I hope you provide this type of program more frequently in the future. You should design a program such that students who are not good at English don’t feel uncomfortable. ○ Because I did not have much time to learn English during the summer vacation, the program was helpful to raise my motivation to learn before the school restart in autumn. <p>The Institute for Foreign Language Research and Education offers the online English learning program “NEXT” (comprising the General English Training Course, the TOEIC®L&R Test Course, and the English Word Power Enhancement Course, a total of six courses). A total of 933 students enrolled in the program for the period from April to September (629 undergraduate students, 287 graduate students, and 17 other students). The number of students enrolled in the program for the period from October to March totaled 827 (616 undergraduate students, 197 graduate students, and 14 other students).</p> <ul style="list-style-type: none"> • In AY2018, the percentage of undergraduate students who reached the TOEFLiBT80 level was 11.1% (1,222 students/11,020 students in total).
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Medium-Term Objectives [2]	Develop experts who can play active roles globally in identifying and solving unforeseeable problems for humankind and in pursuing peace, by creating values based on their advanced knowledge.														
	Medium-Term Plan [7]	Introduce degree courses all taught in English in all graduate schools, targeting an increase to 66 courses by AY2019, to develop experts with advanced knowledge who can play active roles in modern society, by providing a globalized graduate school education. Results of these programs should be verified.													
	Plan for AY2018 [7]	Add degree courses all taught in English and verify the results of the existing degree courses in light of their intended purposes.													
	Progress	<ul style="list-style-type: none"> As of April 2018, we had 69 degree courses all taught in English, achieving the target for AY2019 (66 courses). 													
	Medium-Term Plan [8]	Develop researchers and experts who can work independently with the communication and presentation skills required in a globalized society. To achieve this objective, HU should encourage students to make presentations at international academic conferences. HU should also add and expand degree courses all taught in English. By these programs, HU should bring about 30% of all graduate school students up to the level of TOEFL® i BT86.													
	Plan for AY2018 [8]	The University aims to achieve the goals of improving the English abilities of about 30% of graduate students to the TOEFL® i BT86 level by AY2019 by taking into account the specialty of their major fields and of helping them develop into globally competent and independent persons. To achieve these goals, the University should encourage students to make presentations at international academic conferences. HU should also consider and add subjects taught in English and degree courses all taught in English.													
	Progress	<ul style="list-style-type: none"> From mid-June to mid-November, the TOEIC® Skill Up Class was offered, which was a non-curricular program designed to improve skills of students to communicate in English and to help them to achieve 730 points in the TOEIC® tests. There were 70 enrollments (54 at Higashi-Hiroshima Campus, 16 at Kasumi Campus). To verify the effectiveness of the TOEIC® Skill Up Class, enrolled students were required to take the TOEIC® L&R IP test in November. Of 42 graduate students who attended the class at least once, 21 students (about 50%) took the test. <u>Of these 21 graduate students, 9 improved their scores from the time of their enrollment in this program.</u> HU widely informed graduate students, via the online Student Information System and other ways, that they could take the TOEIC® L&R IP tests in May and November for free. The following table shows the number of graduate students who took the tests and the number of students who scored 780 points or higher in the TOEIC® test. <table border="1"> <thead> <tr> <th>Test time</th> <th>Test takers</th> <th>Students who scored TOEIC® 780 points or higher</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>May</td> <td>402</td> <td>60</td> <td>The number of test takers increased by 69 to 333 students. There were 64 students of TOEFL i BT86 level (TOEIC® 780 points) or higher last year.</td> </tr> <tr> <td>November</td> <td>457</td> <td>62</td> <td>The number of test takers increased by 108 to 349 students. There were 48 students of TOEFL i BT86 level (TOEIC® 780 points) or higher last year.</td> </tr> </tbody> </table>		Test time	Test takers	Students who scored TOEIC® 780 points or higher	Remarks	May	402	60	The number of test takers increased by 69 to 333 students. There were 64 students of TOEFL i BT86 level (TOEIC® 780 points) or higher last year.	November	457	62	The number of test takers increased by 108 to 349 students. There were 48 students of TOEFL i BT86 level (TOEIC® 780 points) or higher last year.
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		Progress	<ul style="list-style-type: none"> • In late September, to improve the TOEIC® scores of students and their skills to communicate in English, HU conducted the “Short Study Abroad Experience on Campus” program, a program to experience language training classes of a study abroad program on the HU Higashi-Hiroshima and Kasumi campuses. There were 24 enrollments on the Higashi-Hiroshima Campus and 5 on the Kasumi Campus. A questionnaire survey was conducted regarding satisfaction with the program. Of 21 undergraduate and graduate students who responded, 20 responded that they were “very satisfied.” From the following positive comments in the free description field of the questionnaire, we could confirm that the program led to the improvement of the English proficiency of participants: <ul style="list-style-type: none"> ○ I didn’t feel comfortable speaking in front of people in the past. However, in the presentation, I could speak in English. The program was a good opportunity that opened the path to my future. ○ I hope you provide this type of program more frequently in the future. You should design a program such that students who are not good at English don’t feel uncomfortable. ○ Because I did not have much time to learn English during the summer vacation, the program was helpful to raise my motivation to learn before the school restart in autumn. <p>The Institute for Foreign Language Research and Education offers the online English learning program “NEXT” (comprising the General English Training Course, the TOEIC®L&R Test Course, and the English Word Power Enhancement Course, a total of six courses). A total of 933 students enrolled in the program for the period from April to September (629 undergraduate students, 287 graduate students, and 17 other students). The number of students enrolled in the program for the period from October to March totaled 827 (616 undergraduate students, 197 graduate students, and 14 other students).</p> <ul style="list-style-type: none"> • As of the end of AY2018, the percentage of subjects taught in English was 27.4%, an increase of 3.6% from the previous year. As of April 2018, there were 69 degree courses all taught in English, an increase of seven courses from last year. • As for the English language proficiency of graduate students, of 1,131 students who took the TOEIC® L&R IP test, 248 (21.9%) scored 780 points or higher.
	Medium-Term Objectives [5]		Promote global standardization of education in collaboration with other universities to improve the quality of education, and reinforce the campus-wide system for global standardization.
	Medium-Term Plan [12]		Based on the attainment target-type education program implemented in the Second Medium-Term Period, to pursue global standardization of education and improve the quality of education, HU should improve its internal education evaluation systems for undergraduate and graduate schools under the supervision of the Education Promotion Organization, and improve the internationality of the education system based on these evaluations. It should also receive international evaluation of its educational quality assurance systems by the SERU (Student Experience in the Research University), an international consortium of universities.
	Plan for AY2018 [12]		Conduct self-check and evaluation of education in undergraduate and graduate schools. Undergraduate schools should conduct self-check and evaluation by referring to their improvement plans formulated in the previous year. We should examine the proposals related to international evaluation of educational quality assurance conducted last year by the Student Experience in the Research University (SERU) consortium.
	Progress		<ul style="list-style-type: none"> • In the internal educational quality assurance system of Hiroshima University, undergraduate and graduate schools conduct self-check and evaluation as a part of the preparation of an annual report. The Committee of Educational Quality Assurance verifies the appropriateness of their self-check and evaluation and reports the results of the verification to individual undergraduate and graduate schools. Then, based on the results of the verification, undergraduate and graduate schools make improvements to their educational programs and systems and report the results of their improvement activities to the Committee of Educational Quality Assurance in an improvement report. Finally, the Committee of Educational Quality Assurance checks the improvement reports to confirm the results of improvements.

		Progress	<ul style="list-style-type: none"> In AY2018, undergraduate and graduate schools conducted self-check and evaluation of their education during AY2017. The Committee of Educational Quality Assurance created a report of the evaluation results. Undergraduate schools conducted self-check and evaluation with an awareness of global competency, in accordance with their respective improvement plans formulated last year, based on evidential common data (such as the percentage of students proceeding to graduate schools and the credit acquisition rate) and the results of the student survey conducted by the Student Experience in the Research University (SERU) consortium. Members of major universities comprising the Student Experience in the Research University (SERU) consortium compiled the peer review results into the SERU Consortium Team Field Survey Report. We considered actions for proposals made in that report.
	Medium-Term Objectives [6]		Expand support to students with various needs (including international students, adult students and students with disabilities) and create and improve the learning environments for these students.
	Medium-Term Plan [14]		Introduce a new “pre-enrollment scholarship program” by AY2019. In this program, scholarship students are selected based on the results of admission examinations conducted at overseas satellite centers of the University. The results of the scholarship screening will be notified to the international students before they come to Japan. Expansion of financial support to students should be considered, including the number of students who receive scholarships and the amount and the duration of the scholarships.
	Plan for AY2018 [14]		Graduate schools that have adopted the pre-arrival admission exam system for international students should implement a new pre-enrollment scholarship program and verify the number of recipients and the amounts of scholarships granted in the previous year.
	Progress		<ul style="list-style-type: none"> In AY2017, the Hiroshima University Pre-Enrollment Scholarship Program was introduced. In the same year, a questionnaire survey was conducted of the recipients of the scholarship. The survey results showed that the recipients were generally satisfied with the number of recipients and the amount of the scholarship. Judging that the current system needed no revision, HU announced the autumn program of the scholarship in August. Five students were recommended from five graduate schools as recipient candidates. In September, as a result of the examination of the candidates, it was decided to provide scholarship to these five students. Combined with the two recipients selected in the spring program, the number of recipients increased to seven in AY2018. In AY2018, information on this scholarship program was posted on the University's website (Japanese and English) and the Student Information System site to ensure that the program would be widely recognized by international applicants under the Pre-Arrival Admission Examination System. As a result, seven students were recommended as recipient candidates in AY2018, an increase by one from AY2017. The University will continue to publicize this scholarship program widely next year and thereafter to pre-enrollment students abroad.
	Medium-Term Objectives [7]		Introduce a new screening system to accept excellent Japanese and international students with diverse backgrounds from within and outside Japan.
	Medium-Term Plan [18]		For the AO admission examination, all undergraduate schools should use internationally recognized English qualification/proficiency tests that measure the four English skills (reading, listening, writing and speaking) to evaluate applicants' abilities by the time of the admission screening for AY2017. In addition, these English tests should be used for the regular admission screening of all undergraduate schools by the time of the admission screening for AY2019 to promote admission of globally competent students.
	Plan for AY2018 [18]		All undergraduate schools should utilize English qualification/proficiency tests that measure the 4 English skills in the regular admission examination.

		Progress	<ul style="list-style-type: none"> In April 2018, Hiroshima University announced "Major Changes in the AY2019 Admission Examinations (Outline)." One of the major changes is the adoption of "deemed full marks" for admission in AY2019 (the examination is conducted in AY2018). When a person takes a regular admission examination of the University that requires the results of the National Center for University Entrance Examinations, if the applicant has a score of a certain third party's English proficiency test that satisfies the level set by HU, the applicant is deemed to have scored full marks in the English language test of the HU admission examination. These "deemed full marks" apply to the regular admission examination, and they also apply to the AO admission examination and the admission examination with endorsement and the admission examination with endorsement (for regional quota) of the Department of Medicine of the School of Medicine. HU announced this revision to students preparing for the admission exam at various occasions, including the publication of the "Guidelines for the Admission Examination for FY2019" in June and the "Admission Guidelines AY2019 and Schedules of Admission Examinations (first and second tests)" in November. The revision was also announced at admission examination briefings for high school teachers (12 venues), campus explanation meetings (8 venues), the Open Campus in August, and briefings at eight prep schools. Of all applications for the regular admission examination that closed on February 6, 2018, 5.1% (369 applicants) applied for "deemed full marks."
		Medium-Term Plan [19]	Develop an online application system in English which includes the functions to upload an application, organize a portfolio and process applications seamlessly from submission of application documents to admission to the University, in order to solicit excellent students from other countries. By AY2020, the developed online system should be introduced in all graduate schools. In addition, all graduate schools should conduct admission examinations at overseas satellite centers of Hiroshima University.
		Plan for AY2018 [19]	Develop an online application system in English equipped with a portfolio function that seamlessly processes all procedures, from application to admission. The developed system should be used first in some graduate schools on a trial basis. Admission examinations in HU's overseas satellite centers should also be expanded.
		Progress	<ul style="list-style-type: none"> HU already operates an online application system in English equipped with a PDF file uploading function. In addition to this system, in AY2018, HU introduced an admission procedure system developed last year. Instruction manuals (Japanese and English versions) for applicants were created. The system was used on a trial basis for Master's Course Special Admission Screening II, an admission exam of the Graduate School of Letters for international applicants, in late November. Based on the results of this trial, we identified and verified issues, such as handling of applicants who do not use the online system (such as government-sponsored international students). The method to import photo data for a student card was improved. We will continue the verification necessary for the full-scale introduction of the system. As for admission examinations at HU's overseas satellite centers, the Graduate School of Letters, the Graduate School of Social Sciences, and the Graduate School of Science held briefing sessions to explain the schools and studying at HU in May (only the Graduate School of Letters) and September at the HU Beijing Research Center. The Graduate School of Social Sciences conducted written tests and interviews at the HU Beijing Research Center. The Graduate School of Science conducted interviews and aptitude tests at the Beijing Research Center and Vietnam National University (Ho Chi Minh School). Pre-arrival admission examinations that use skype were implemented by the Graduate School of Integrated Arts and Sciences, the Graduate School of Letters, the Graduate School of Education, the Graduate School of Advanced Sciences of Matter, the Graduate School of Engineering, the Graduate School of Biomedical & Health Sciences, the Graduate School of Biosphere Science, and the Taoyaka Program for Creating a Flexible, Enduring, Peaceful Society. Document screening and interview tests were also conducted by the Graduate School of Integrated Life Science and the Graduate School of Biomedical and Health Sciences, which will open in AY2019.
	Medium-Term Objectives [8]	Promote free and highly creative research activities, strengthen the ability to make presentations of HU's characteristic research activities in international society, and collaborate with other research institutions in and outside Japan, to achieve top-level research results in the world.	
	Medium-Term Plan [22]	Strive to become a world Top 100 comprehensive research university. To achieve this goal, good environments for research activities should be created, including deployment of University Research Administrators (URAs), technical staff members and other research management staff members who provide administrative support for research activities so that researchers can concentrate on research activities. The number of published papers should be increased by about 1.5 times from the number as of the end of the Second Medium-Term Period, by retaining excellent researchers. Increase the number of Top 1% and Top 10% cited papers. In the humanities and social science fields, books and papers deserving of important academic prizes should be published. Strengthen international research activities through joint research activities and researcher exchanges with foreign institutions. The number of papers authored jointly with foreign researchers should be double the number as of the end of the Second Medium-Term Period.	

		Plan for AY2018 [22]	In striving to become a World Top 100 comprehensive research university, based on the results of the interim evaluation of the “Program for Promoting the Enhancement of Research Universities” of MEXT in the previous year, we should conduct research enhancement activities. Such activities include establishment of good environments where researchers can concentrate on research activities, contributing to improvement in the number of published papers and other research result indicators and to retention of excellent researchers.
		Progress	<p>The following measures were implemented to create a research environment where young researchers can concentrate on research and to retain excellent researchers:</p> <ul style="list-style-type: none"> • As an effort to reflect opinions of young researchers in activities to strengthen research capabilities, URA conducted one-on-one interviews to identify issues and develop problem awareness of young researchers. HU also cultivated a community of young researchers for interdisciplinary exchanges. For example, as an opportunity for young researchers to gather and share information and exchange opinions, lunch meetings facilitated by a URA was implemented. For young researchers who could not participate in the lunch meeting due to schedule constraints, Office Hours were offered to allow a one-on-one exchange of opinions with the director in charge of research. • As a part of the “Home for Innovative Researchers and Academic Knowledge Users (HIRAKU)” project [one of the “Development of Next Generation Researcher” programs of MEXT], HU developed and held a Vitae workshop, a Japanese version of Vitae of the UK. Mentor instructors also provided advice and guidance to young researchers to develop their awareness of diverse and autonomous career paths, not a uniform career path. As a result, all four eligible teachers passed the screening of the first tenure track teachers. As a result of this effort, the number of acquisitions of external funds by eligible young teachers increased to 41 in AY2018 from 34 in AY2017 (including continuing projects). • The Writing Center continued activities to improve the research environment, including consultation on English paper writing, holding seminars and workshops for writing English papers, and implementation of the English Paper Writing Retreat program. As a result, the number and percentage of papers co-authored with foreign researchers increased [AY2017: 737 papers (33.2%) → AY2018: 814 papers (34.4%)].
	Medium-Term Objectives [9]		Strengthen the research management function to properly evaluate research activities and provide efficient support to research activities in key fields.
	Medium-Term Plan [23]		By using its unique Achievement-motivated Key Performance Indicators (AKPI®) that evaluate personal performance of teachers and monitor the performance of the educational and research activities at HU, HU should conduct proper evaluation of its research activities. It should decide key research fields it will focus on and should strategically allocate researchers and staff members to these research fields.
		Plan for AY2018 [23]	Future visions and strategies were developed for the interim evaluation of the “Program for Promoting the Enhancement of Research Universities” of MEXT conducted in the previous year. Based on these visions, strategies and the results of the interim evaluation, HU should evaluate its research activities and intensively assign researchers to strategic fields that HU places emphasis by using its unique Achievement-motivated Key Performance Indicators (AKPI®) that evaluate personal performance of teachers and monitor the performance of the educational and research activities at HU.

		Progress	<p>To develop young researchers and human resources for innovative research, HU should build <u>a system to evaluate and highly recognize ambitious and creative researchers.</u></p> <p>To achieve this, young researchers <u>need to develop their diversity in a research environment that promotes interdisciplinary research projects,</u> not just silo-type research activities. Based on this idea, in AY2018, HU carried out a project to vitalize the organization in collaboration with a project to expand the international research network (Project No. 21).</p> <p>Specifically, HU has a system to develop global research centers on its campus. Under this system, young researchers were encouraged to form research groups and become the leaders of these groups. Moreover, <u>in addition to the evaluation using AKPI® and other indicators, HU established an evaluation system that appropriately evaluates the potential of young researchers.</u> The international research activities of HU's young researcher group were highly evaluated in AY2018. Specifically, HU encouraged international research activities and disciplinary combination in the interim evaluation of the incubation research center for functional nano-oxides led by a young researcher. This project was designated by the Japan Society for the Promotion of Science (JSPS) as a research center formation project in AY2018. <u>The University also recognized these activities appropriately and promoted the young leader of the research center from associate professor to professor.</u> Similarly, the Genome Editing Research Center was designated by MEXT as a core program of the WISE Programs in AY2018, and HU upgraded the center to the Genome Editing Innovation Center (a joint education and research facility on campus). <u>Young researchers were intensively allocated to this center as a strategic focus field of the University.</u></p>
	Medium-Term Objectives [12]		Pursue complete "globalization" of the entire University to realize world-class quality education and strengthen its world competitiveness, aiming to become a TOP 100 university in the World University Ranking.
		Medium-Term Plan [30]	Implement internationalization of degree programs and active recruitment of international students, aiming to increase the percentage of international students to over 12% of all students. Increase the percentage of Japanese students with study abroad experience to over 8% of all students. To achieve this objective, HU should encourage students who participated in the START program (a short-stay-abroad program for students in the first year) and other short-stay programs to participate in longer-period study abroad programs.
		Plan for AY2018 [30]	To increase the percentage of international students among all students from the previous year, measures for increasing international students should be reviewed and improved based on verification of measures taken in the previous year. Increase the percentage of Japanese students with study abroad experience from the previous year by reviewing and improving the START program and other study abroad programs for Japanese students to match the various needs of students. The effect of each study abroad program on the increase in the number of Japanese students sent overseas should be verified.
		Progress	<p>Quantitative expansion was promoted while maintaining the quality of the study abroad programs. As a result of this effort, the percentage of international students among all students reached 12.5% (as of May 1, 2019), and the percentage of Japanese students sent to foreign universities reached 4.7% (during AY2018).</p> <p>■ Development of foundations for the development of globally competent people</p> <p>To steadily implement our long-term plan, SPLENDOR PLAN 2017, and to achieve the goals of "Development of Globally Competent People Who Pursue Peace With Their International Education" and "University of World-wide Repute and Splendor for Years into the Future," we repeated discussions on the self-evaluation and the third party's evaluation of the current international strategy and formulated the new "Hiroshima University International Strategy 2022" with AY2022 as the final year.</p> <p>To operate and implement the study abroad exchange programs of the University efficiently and effectively, and to further improve the programs, the Study Abroad and Exchange Program Review Group was established under the International Exchange Promotion Organization to review these programs.</p> <p>The new strategy and the new operating system are expected to promote the development of globally competent people backed by the philosophy and quality assurance of education, not by emphasizing too much on the achievement of numerical targets.</p>

		<p style="text-align: center;">Progress</p>	<ul style="list-style-type: none"> ■ Utilization and dissemination of a Japanese version of the BEVI test (an attribute test that measures adaptability to different cultures) BEVI-j, the Japanese version of the BEVI test developed and introduced in AY2016, enables objective and direct evaluation of study abroad programs and optimizes programs based on the results. Therefore, it has attracted the interest of many universities. In FY2018, we held 29 workshops (with the participation of about 430 people from about 130 universities/institutions/companies) and three presentations at academic conferences (including two overseas). By the end of AY2018, <u>the BEVI-j test was adopted by a total of 11 national and private universities, including Tsukuba University, University of the Ryukyus, Sophia University, Kansai University, Ryukoku University, and Soka University. Eight universities, including Osaka University, Nagoya University, Kwasei Gakuin University, and Ritsumeikan University, are preparing for its adoption next year. HU also started development of the Chinese version of BEVI in cooperation with Purdue University in the U.S. HU also started provision of the English revised version of BEVI to Malmö University in Sweden under a collaboration agreement.</u> During AY2018, the University conducted a total of about 4,000 BEVI-j tests before and after the 38 study abroad programs. All first-year students (about 2,500 students) also took the BEVI-j test. We analyzed the characteristics of students of each department and made a comparison between students who participated in study abroad programs and students who didn't. Based on these objective data, we identified what types of students were selected for these study abroad programs and how their competencies changed after participating in the study abroad programs. We confirmed that the competency of students improved as projected in many programs. To further enhance the contents of the programs, we drew an evaluation report analyzing the score distribution of the students and informed the results to the program managers. ■ Expansion of the START short stay-abroad program Since 2010, HU has offered the START Program, a short stay-abroad program for first-year undergraduate students with little overseas experience. The University bears a portion of the costs incurred by program participants. In AY2017, HU established a step-up program, "START + (PLUS)," for students in the second and third years, which is more focused on the development of linguistic abilities of students. These programs added one course in AY2017 and four courses in AY2018. A total of 13 courses were provided, sending 301 students to eleven countries/regions (the number of applicants was 411). In AY2017, <u>the Lithuania START + program was established and implemented in cooperation with the HU satellite center in Lithuania. This was a unique joint training program where HU students and employees dispatched from a partner company under a comprehensive cooperation agreement with the University study English in the same class. It was also a rare co-mingling opportunity for both the HU students and the company employees.</u> ■ Improvement and expansion of the organization of the Morito International Advanced Education School The Hiroshima University Morito Advanced International Education School 3+1 Program accepts students in the fourth year from foreign undergraduate schools for three terms and provides them advanced education and Japanese language education. After returning to their home countries and completing bachelor courses at their respective home universities, these students may elect to proceed to graduate schools of HU to develop themselves into advanced experts in their specialized fields. As a result of thorough publicity activities, the number of enrollments drastically increased in AY2018. [26 students in AY2016, 90 in AY2017, and 146 in AY2018 (an increase of 56 students from last year)] [178 applicants for AY2019 (as of May 2019)]. <u>More than half of the students who completed this program proceeded to graduate schools of HU (including applicants) [14 students out of 24 in AY2016; 33 students out of 63 in AY2017]. Further expansion of this program is expected as it serves as a pump to sending more international students to HU graduate schools.</u> To promote enrollment of more international students centered on this program, HU decided to establish an organization serving as both a Japanese language/culture education center and an administrator of foreign student acceptance. In October 2018, the current International Center and the Morito program were reorganized into the "Morito Institute of Global Higher Education." <u>In AY2019, the Institute will accept more diverse international students, including students with disabilities, and aim to further expand its functions.</u>
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- Provision of special Japanese language and culture study programs to motivate international students to study at HU
 HU offered a short-stay program of about two weeks to foreign students who had interest in the Japanese language and culture. Participating students took classes at Hiroshima University, attended socializing events with Japanese students at HU, and visited companies in Hiroshima Prefecture to deepen their understanding of the Japanese language and culture.
 Since it was started in AY2010, the program has been expanded by adding courses and accepting more students every year. In AY2018, 11 courses were offered and 290 international students were accepted (an increase of 44 from 246 students in AY2017).
 In AY2017, the program accepted international students with a hearing disability for the first time. In AY2018, it accepted Chinese students with visual impairments. The program added elements of special support education.
Two of the eight students with hearing disabilities who participated in this program in AY2017 entered HU as research students in AY2018, aiming to proceed to graduate schools next year.
- Reinforcement and expansion of overseas satellite centers
 In addition to the 16 overseas satellite centers established in fourteen countries/regions by AY2017, two satellite centers were added in AY2018 to strengthen their functions further (a total of 18 satellite centers in 15 countries/regions as of the end of AY2018). In August 2018, HU established the "Hiroshima University/Yanshan University Center for Language and Culture Research Center" at Yanshan University, China, the third HU satellight center in China. In September 2018, HU established the Hiroshima University Mongolia Research Center at Ulaanbaatar State University, Mongolia, which serves as a satellite center to promote student and academic exchanges in East Asia. In May 2019, HU established a new satellite center at the University of Münster in Germany. By using this center, HU plans to implement a joint project with the University of Münster in 2020 on the subject of peace.
- Conclusion of inter-university exchange agreements
 HU actively concluded exchange agreements with foreign universities. As of the end of AY2018, HU had 345 inter-university exchange agreements, an increase of 44 from 301 agreements in AY2017. HU aims to promote active student exchange with educational institutions in various countries and establish a hub structure for international joint research activities by adding foreign partner universities.
 From AY2017 to AY2018, HU concluded inter-university agreements with Harvard University, one of the oldest higher education institutions in the U.S. and always the world's top university, and Arizona State University, one of the most innovative universities in the U.S., to start academic and educational exchanges. Under these agreements, research internship programs were started with these universities to exchange students. In AY2018, HU accepted six students from Harvard University and one student from Arizona State University.
 One of the major results of the active collaboration with overseas universities was the 2nd Japan-Taiwan University Presidents' Forum (sponsored by the Japan Association of National Universities) held in Hiroshima in May 2018. The Forum was attended by approximately 200 people from 40 Taiwanese universities/institutions and 72 Japanese universities/institutions. With the theme of "Promotion of Collaboration in Education and Research in the Globalizing Society," they discussed international education exchanges and global student mobility to cope with globalization and deepened the friendships between universities in Japan and Taiwan. Based on this experience, Hiroshima University held a PR event in May 2019 in cooperation with the top two universities in Taiwan (National Taiwan University and National Sun Yat-sen University).
- Peace Lecture Marathon
 To develop globally competent people who pursue peace with their international education, the University requires all students, including international students, to take peace education subjects as required liberal arts subjects. Necessary arrangements were made so that all international students, including short-term exchange students, could take these subjects by providing some of these Peace Education subjects in English. In AY2018, a "Peace Lecture Marathon" was newly planned and implemented. Government representatives and ambassadors in Tokyo gave lectures on the theme of peace. So far, four lectures have been provided by the Minister of Higher Education of the Arab Republic of Egypt, Prime Minister of the Republic of Lithuania, Ambassador of Turkey to Japan and Ambassador of the European Union to Japan, providing opportunities to HU students (including international students) and citizens to think about peace.

		<p>■ Expansion of medium- and long-term student exchange programs</p> <p>As a part of the Project to Promote Globalization of Universities, the PEACE program and the ILDP Program have been implemented. The PEACE Student Exchange Program is a bilateral student exchange program introduced in AY2016, and about 50 students a year are exchanged with universities in Cambodia, Myanmar, Laos, Vietnam, and Thailand. The "ILDP (International Linkage Degree Program) for Implementing Leading-Edge Technology in Society" started in AY2017, and about 36 students a year are exchanged with universities in India. Through these programs, the University has promoted short-, medium- and long-term student exchange with universities in Asia with cross granting of curricular credits. As for the "AIMS-HU Program," which was adopted in AY2013 and whose subsidy period ended in AY2017, HU continued a student exchange program in AY2018 by finding personnel and financial sources from within HU.</p> <p>HU has also offered various medium- and long-term student exchange programs to satisfy the diverse needs of students and based on the abilities of students. It sent students to foreign partner universities under the HUSA (Hiroshima University Study Abroad) short-term student exchange program with credit transfer with partner universities and under study abroad programs via university consortia, including the University Study Abroad Consortium (USAC) and the University Mobility in Asia and the Pacific (UMAP).</p>
	Medium-Term Plan [31]	To respond to the globalization of education, HU should increase the percentage of teachers with foreign nationalities or teaching or research experience in foreign countries to 47% of all teachers. In addition, the percentage of administrative staff members with foreign nationalities or with working experience in foreign countries should be increased to 8% of all administrative staff members.
	Plan for AY2018 [31]	To respond to the globalization of education, HU should increase the percentage of teachers with foreign nationalities or with teaching or research experience in foreign countries to 39.2% or higher of all teachers by personnel plans in accordance with the Teacher Deployment Policy. In addition, the percentage of administrative staff members with foreign nationalities or with working experience in foreign countries should be increased to about 6.0% of all administrative staff members by recruiting foreign staff members and sending Japanese staff members abroad for training.
	Progress	<ul style="list-style-type: none"> The following personnel plans were implemented to promote the globalization of education at HU and to strengthen the function of the educational departments. As a result, <u>the percentage of foreign teachers and teachers with teaching or research experience in foreign countries as of May 1, 2019 was 41.6% of all teachers (an increase of 0.5% from the previous year), exceeding the target of 39.2%.</u> <ol style="list-style-type: none"> <u>International recruitment was completely implemented</u> to hire globally competent teachers with excellent educational and research abilities from inside and outside Japan. To put priority on recruitment of globally competent teachers in its personnel deployment plan, HU continued the "<u>foreign and globalized teachers recruitment quota</u>" when it submitted a personnel request. According to this quota, HU recruited 35 international teachers. To strengthen research capabilities and improve the international evaluation of HU, HU established the "<u>foreign teacher (short-term) recruitment quota</u>" in the Teacher Deployment Policy and hired ten foreign teachers. Since AY2014, HU has continued to add foreign administrative staff members. <u>In AY2018, one foreigner was employed as an administrative staff member (one was hired in AY2017).</u> <p>To increase administrative staff members with working experience in foreign countries, HU has sent one employee to the Long-term Educational Administrative Training Program (LEAP) of MEXT and one employee to the International Academic Exchange Training Program of the Japan Society for the Promotion of Science. After they return from these training programs, one employee will be sent to LEAP and two will be sent to the International Academic Exchange Training Program of the Japan Society for the Promotion of Science. As a result of these programs, the percentage of administrative staff members with foreign nationalities or with working experience in foreign countries had reached 7.7% of all administrative members as of May 1, 2019 (an increase of 0.9% from the previous year), exceeding the target of 6%.</p>
	Medium-Term Plan [32]	To promote global standardization of education, HU should increase subjects taught in foreign languages to about 30% of all subjects both in undergraduate and graduate schools. HU should also improve the Japanese language study program for international students. It should be redesigned and divided into classes according to the level of Japanese language skills to effectively improve the Japanese language skills of international students and deepen their understanding of Japanese culture.

		Plan for AY2018 [32]	With the introduction of degree courses taught in English, HU should increase subjects taught in foreign languages to about 30% of all subjects both in undergraduate and graduate schools in AY2020. Japanese language classes by proficiency level should also be offered, and a questionnaire survey should be conducted regarding the proficiency levels of students.
	Progress		<ul style="list-style-type: none"> • The Curriculum Committee of the Headquarters for Education urged the expansion of graduate courses all taught in English. As a result, seven courses taught in English were added in AY2018, totaling 69 courses. Participants in the “How to Teach in English” FD increased from 34 in AY2015 to 65 in AY2016, to 109 in AY2017 and to 111 in AY2018. By these efforts, <u>the percentage of subjects taught in foreign languages had reached 29.2% of all subjects of undergraduate and graduate schools (3,647 of 12,492 subjects) as of March 2019, significantly exceeding the target of 20% for AY2018.</u> In AY2019 the number of subjects taught in foreign languages will further increase. <u>The Department of Integrated Global Studies, School of Integrated Arts and Sciences, will start specialty subjects taught in English. A total of 141 subjects in liberal arts will be taught mainly in English (Peace Education: 4 subjects, University Education Basics: 8 subjects, Domain: 55 subjects, Information: 2 subjects, Health and Sports Sciences: 6 subjects, Social Collaboration: 27 subjects, Fundamental: 39 subjects).</u> ■ Brush-up seminar for Japanese teachers residing overseas The Morito Institute of Global Higher Education, established in October 2018, aims to become an education center for the Japanese language and culture where sophisticated Japanese education is provided by retraining Japanese teachers residing overseas. In May 2018, <u>the Morito Institute implemented the first Overseas Japanese Teachers Brush-up Seminar, designed to retrain overseas Japanese teachers at HU. Six overseas Japanese teachers participated in this seminar.</u> The seminar focused on the teaching of the Japanese language to meet needs of individual students and language research. It included class visits and special workshops attended by teachers from universities in the Chugoku/Shikoku Region, providing Japanese language teachers with opportunities to brush up their Japanese proficiency, teaching skills, and research skills. ■ Provision of online Japanese language programs The Morito Institute of Global Higher Education, which was established in October 2018, used an online learning program to train international students in the Japanese language before they came to Japan. To place students into classes by their proficiency level, in AY2018, HU developed a system to give international students an online placement test to measure their Japanese proficiency before they come to Japan. Starting from international students who were already in Japan, the online placement test was implemented in April 2018 (609 students in April; 534 students in October). For the “Online Anytime Access Japanese Education System (MyJT)” app that was introduced at the end of AY2016, we adopted a new approach in AY2018. <u>User IDs for MyJT were preferentially assigned to international students with beginner to intermediate Japanese proficiency levels based on their Japanese class levels determined by the online placement test so that they can intensively improve their Japanese proficiency.</u> By measuring the Japanese proficiency of international students before they came to Japan, the data could be used for class placement and for giving guidance before coming to Japan. International students could improve their Japanese proficiency level by using the self-learning program before coming to Japan, which in turn enabled more effective Japanese language education after they came to HU.
		Medium-Term Plan [34]	By AY2019, encourage Japanese students (about 12% of all Japanese students at HU) to live in boarding houses with international students to promote cultural exchange in daily life and to nurture the internationality of Japanese and international students.
		Plan for AY2018 [34]	Improve the status of the university-leased mixed-boarding student houses based on the verification conducted last year.

		Progress	<ul style="list-style-type: none"> The goal for this year was to reduce operating expenses while securing the same number of occupants as the previous year by considering the results of the previous year's verification (i.e., the occupancy rates of international students and Japanese students in the mixed-boarding houses) and the creation of a new housing program for international students. <p>To broaden the range of choices of housing for international students, besides the existing Ikenoue Dormitory, the International House, Sun Square Higashi-Hiroshima, designated international student apartment houses with life support (new housing program) and affiliated apartment houses were added. The solicitation for application was announced in April.</p> <p>With the introduction of designated international student apartment houses with life support (new housing program), <u>the percentage of designated international student apartment houses has increased from 14% (47/339 students) to 47% (124/265 students) while the management costs of student housing were reduced by about 15 million yen compared to the previous year.</u></p> <p><u>As of November 1, 2018, 1,559 Japanese students lived in mixed boarding houses with 600 international students, which is larger than as of the same date last year (1,532 Japanese students with 777 international students as of November 1, 2017).</u></p>
	Medium-Term Objectives [20]		Improve the environment for stronger leadership by the President and allocate internal resources strategically by utilizing IR.
	Medium-Term Plan [46]		Transfer the management of labor costs of teachers from individual departments to central management in order to strengthen education and research abilities. Teachers and researchers should be strategically allocated, by using HU's unique Achievement-motivated Key Performance Indicators (AKPI®) and other methods that evaluate personal performance of teachers in educational and research activities.
	Plan for AY2018 [46]		Under the leadership of the President, teachers and researchers should be strategically allocated by using HU's unique Achievement-motivated Key Performance Indicators (AKPI®), Basic Effort Key Performance Indicators (BKPI®) and other methods that evaluate personal performance of teachers in educational and research activities.
	Progress		<ul style="list-style-type: none"> To implement university-wide projects (such as the establishment of undergraduate and graduate schools) and strengthen the advantages of individual departments and the functions of unique academic fields, under the leadership of the President and in accordance with the Hiroshima University Teacher Deployment Policy, HU used Basic Effort Key Performance Indicators (BKPI®) in addition to Achievement-motivated Key Performance Indicators (AKPI®) for allocating teachers (personnel allocation). <p>To retain and develop excellent researchers and to promote active educational and research projects, HU's personnel allocation focused on increasing young teachers, female teachers and foreign teachers in all departments. The age structure of teachers was also improved by deploying more Associate Professors, Lecturers, and Assistant Professors.</p> <ul style="list-style-type: none"> As of March 31, 2019, HU had received 462 personnel requests from individual departments and strategically deployed teachers in responding to 203 requests.
	Medium-Term Objectives [21]		Enhance the international competence of teachers and staff members capable of conducting excellent education and research activities in an international competitive environment.
	Medium-Term Plan [47]		To recruit and retain excellent teachers and administrative staff members from inside and outside Japan, HU should establish more flexible personnel and compensation systems, including an annual compensation system and a mixed compensation system. The percentage of teachers who work under the annual compensation system should be increased to about 21% of all teachers.
	Plan for AY2018 [47]		To recruit and retain excellent teachers and administrative staff members from within and outside Japan, HU should establish more flexible personnel and compensation systems, including an annual compensation system and a mixed compensation system. The percentage of teachers who work under the annual compensation system should be 17.4% of all teachers or higher.

		Progress	<ul style="list-style-type: none"> • To increase the number of teachers who work under the annual compensation system, HU distributed a leaflet that outlines the annual compensation system to teachers scheduled to be hired and existing teachers to make sure that they are aware of the system. As a result, the percentage of teachers who work under the annual compensation system (including specially appointed teachers) had reached 23.4% of all teachers as of March 31, 2019 (an increase of 1.1% from the previous year), significantly exceeding the target of 17.4%. The percentage of succeeding teachers (i.e. teachers who were employed by the University before it was incorporated) who work under the annual compensation system increased to 21.7% (an increase of 1.5% from the previous year). • Based on the guidelines published by MEXT in February 2019 and the statuses of other universities, HU is considering new salary systems, including a new annual compensation system, as part of the reform of personnel and salary management affairs. The new annual compensation system will be introduced by the end of AY2019. • An English leaflet was created to promote the use of the Cross Appointment System among organizations abroad. It was decided that, in principle, the Cross Appointment System applies to foreign teachers who are hired for a short term under the labor cost point hiring quota. • The use status of the Cross Appointment System as of March 31, 2019 increased to 18 agreements (seven agreements with foreign organizations and 11 with Japanese organizations) from six agreements in the previous year (four with Japanese organizations and two with foreign organizations). • To promote further use of the Cross Appointment System, in April 2018, “researchers” and “education and research promoters (coordinators, managers, etc.)” were added to the range of applicable employees. In April 2019, “teachers providing donated lectures and other similar teachers” will be added to the range of applicable employees. It was also decided that the standards, the period, the procedures, and other details for the system should be clearly defined and documented.
		Medium-Term Plan [48]	To provide more opportunities to excellent young teachers (under 40) and to vitalize educational and research activities throughout the University, the percentage of young teachers (under 40) should be increased to about 34% of all teachers, by hiring tenure-track teachers in accordance with the teacher employment plan.
		Plan for AY2018 [48]	To provide more opportunities to excellent young teachers (under 40) and to vitalize educational and research activities throughout the University, the percentage of young teachers (under 40) should be increased to about 31% (or 17.6% for teachers to whom the accumulation of operating cost subsidies for severance benefits applies) by implementing personnel deployment in accordance with the Teacher Deployment Policy based on the plan for hiring young researchers.

		<p>Progress</p>	<ul style="list-style-type: none"> • In AY2016, the organization of teachers was separated from the organization of education and research, and the Academy of Hiroshima University was established as a central organization of teachers. The management of labor costs of teachers was transferred from individual departments to central management by the Academy under the leadership of the President. The Central Personnel Committee was established as an organization directly supervised by the President. This Committee manages teacher labor costs and reviews the allocation of teachers, including selection of candidates. The President gives final approval on personnel matters relating to teachers based on the Committee's review and prior deliberation by the Executive Board. <u>With this organizational structure, the Central Personnel Committee uses its unique Achievement-motivated Key Performance Indicators (AKPI®) and other criteria to consider strategic and systematic personnel allocation from a holistic viewpoint for the entire university beyond the borders of educational and research organizations.</u> • <u>To vitalize education and research activities by hiring young researchers and contribute to the development of science by developing their abilities, a "Young Assistant Professor (35 years and under) Recruitment Quota" was set.</u> Under this quota, 26 researchers were examined for hiring in AY2019. • To promote the employment of young teachers, HU offered young assistant professor positions for AY2019 and examined 16 applicants for employment until May 2019. The examination for employment will be conducted by October 2019. • By utilizing the subsidies from the MEXT "Building of Consortia for the Development of Human Resources in Science and Technology" project, HU decided to select three candidates for employment in the 10th period (AY2019 first term) and select seven posts for a public job offer in the 11th period (AY2019 second term) and 12th period (AY2020 first term). By utilizing subsidies from the MEXT "Leading Initiative for Excellent Young Researchers" program (for researchers newly hired in AY2019), HU decided to select two posts for a public job offer and file an application. (All posts would be offered under the tenure track system.) • It was decided to add 17 points (about 34 posts) of the "Young Assistant Professor Recruitment Quota" to the Teacher Deployment Policy for FY2020. <u>By these programs, as of March 31, 2019, the percentage of tenure track teachers among all full-time teachers increased to 15.9% (an increase of 3.4% from the previous year).</u> • As of March 31, 2019, the percentage of young teachers (under 40) among all full-time teachers was 23.1% (almost the same as the previous year) (or 20.6% for teachers to whom the accumulation of operating cost subsidies for severance benefits applies). The target of 31% could not be attained. • HU will conduct the following activities to achieve the objectives of the Medium-Term Plan: <ol style="list-style-type: none"> (1) Continue to recruit and hire "Young Assistant Professors" (2) Take priority measures to maintain the percentage of young teachers among newly hired teachers at about 70% (Establish a young teacher post through the internal promotion system, and prioritize the employment of young teachers) (3) Expand the assistant professor posts at the Hospital (4) Utilize the Reserve for Special Purpose to add more young teachers (5) To vitalize its educational and research activities at HU, retention and development of excellent teachers is necessary. To achieve this, teachers should be evaluated fairly and appropriately regarding their abilities and performance, and the evaluation should be reflected in their recruitment and promotion. In particular, HU should develop young researchers so that they can start their career as a university teacher with ease of mind and improve their abilities as a teacher. To realize this, HU developed the "Policy for Retaining and Developing Excellent University Teachers - To become a university where young teachers play active roles with ease of mind" (approved by the Board on November 21, 2017). In accordance with this policy, HU should recruit tenure-track teachers. (6) Under the central management of personnel affairs of teachers, and in accordance with the Hiroshima University Teacher Deployment Policy, a request to replace a post with a young teacher should be preferentially satisfied. In accordance with the policy in (1) above, all departments should offer the tenure-track system (with a contract term of five to seven years) to young researchers who are newly hired to promote medium- and long-term employment of young researchers.
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	Medium-Term Objectives [23]	Encourage teachers and administrative staff members to keep a Work-Life Balance. Actively post female teachers and employees to decision-maker positions relating to the management of the University.
	Medium-Term Plan [51]	To promote active participation of female teachers and administrative staff members in the activities of the University, the percentages of female teachers and female managers should be increased to about 20%.
	Plan for AY2018 [51]	To promote active participation of female teachers and administrative staff members in the activities of the University, the percentage of female teachers should be increased to about 17.1% of all teachers and female managers should be increased to about 15.5% of all managers by implementing personnel deployment in accordance with the Teacher Deployment Policy.
	Progress	<ul style="list-style-type: none"> • The percentage of female teachers at the end of March was 17.0% (an increase of 0.9% from the previous year) against the target of 17.1%. • Under the central management of personnel affairs of teachers, as a part of the effort to recruit diverse human resources, HU continued to set the "Female Teachers Recruitment Quota" when it submitted a personnel request and offered 28 posts to female teachers. • <u>In AY2018, HU continued the Positive Action in Recruiting Teachers Program.</u> It is a program to choose a female teacher preferentially if the achievement and other evaluation results are on the same level. HU also continued open job offers targeting women only as a part of the MEXT "Building of Consortia for the Development of Human Resources in Science and Technology" program. • <u>HU created new internal promotion, which will take effect from AY2020.</u> As one of the request categories, <u>the Female Manager Recruitment Quota was set to secure diverse human resources</u> by improving gender equality and the percentage of female managers. • The Committee for Promotion of Female Researchers Roles confirmed the target percentages of female teachers in the Third Medium-Term Plan and the "Initiative for the Implementation of Diversity in Research Environment" (leading type) of MEXT. At the meetings of the Committee, members exchanged opinions for active recruitment of female researchers and requested cooperation in research on excellent female researchers that would lead to future human resource requirements. The Education and Research Council announced the percentage of female teachers among all positions offered and the percentage of existing female teachers every quarter. • Under the "Initiative for the Implementation of Diversity in Research Environment" (leading type) of MEXT, to broaden the base of future female researchers, HU has started the Career Advancement Project (CAP) Researcher Program, which is an initiative to support the career restart of female researchers with doctoral degrees who are not employed. Under this program, HU decided to hire one full-time researcher and two part-time researchers. • The percentage of female managers at the end of March was 15.1% (a decrease of 0.2% from the previous year) against the target of 15.5%. • To post more female teachers to the Education and Research Council and other decision-maker positions relating to the management of the University and to increase the number of female senior managers, the Central Personnel Committee implemented an open offer for "Female Teacher Promotion" in accordance with the Teacher Deployment Policy of AY2019. Under this project, ten female teachers were promoted to higher posts. • On July 30, 2018, with the theme of "Aiming for a society where both women and men can play an active role," HU held the 1st Diversity Environment Promotion Symposium, mainly targeting managers, to raise awareness about the organizational systems necessary to ensure women's active participation.

○ Attainment status of each objective

I. Operations and financial conditions
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(1) Objectives relating to improvement of operation and efficiency
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(i) Improvement of operation of the organization
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Medium-Term Objectives	<p>[19] Establish an effective and transparent operation system to maximize the educational and research functions, by taking advantage of the strengths and characteristics of the University.</p> <p>[20] Improve the environment for stronger leadership by the President and allocate internal resources strategically by utilizing IR.</p> <p>[21] Enhance the international competence of teachers and staff members capable of providing excellent education and conducting research activities in the competitive international environment.</p> <p>[22] Develop administrative staff members having knowledge on specialty fields who can provide stronger support to educational and research activities.</p> <p>[23] Encourage teachers and administrative staff members to keep a Work-Life Balance and actively post female teachers and employees to decision-maker positions relating to the management of the University.</p>
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Medium-Term Plan	Annual Plan	Progress
[44] To realize independent operation with a wide range of perspectives, opinions from external members of the Administrative Council (including foreign members) should be collected and reflected in the operation of the University as a corporation via interviews between the President and deans/directors of departments.	[44] Based on opinions and reviews received from external reviewers (including one or more external members of the Administrative Council), the results of a third party's evaluation by the Evaluation Committee and the President's interviews with deans and directors, necessary improvement should be implemented. The actions that have been taken by individual departments should be verified and the effectiveness of the PDCA cycle should be improved.	IV
[45] To strengthen its governance system, HU should review and revise its decision-making processes. The President and Auditors should hold regular meetings to keep close communication with each other, and to monitor the independence of auditors and effectiveness of the support to auditors, to strengthen the functions of auditors.	[45] To strengthen the governance system, the functions of individual operational organizations should be reviewed and modified as needed. The President and auditors should hold regular meetings to discuss the results of audits by auditors, and these results should be reflected in the operation of the University as a corporation. The independence and effectiveness of the support to auditors should be monitored, and improvement and expansion of their functions should be implemented as needed.	III
[46] Transfer the management of labor costs of teachers from individual departments to central management in order to strengthen education and research abilities. Teachers and researchers should be strategically allocated, by using HU's unique Achievement-motivated Key Performance Indicators (AKPI®) and other methods that evaluate personal performance of teachers in educational and research activities.	[46] Under the leadership of the President, teachers and researchers should be strategically allocated by using HU's unique Achievement-motivated Key Performance Indicators (AKPI®), Basic Effort Key Performance Indicators (BKPI®) and other methods that evaluate personal performance of teachers in educational and research activities.	III
[47] To recruit and retain excellent teachers and administrative staff members from inside and outside Japan, HU should establish more flexible personnel and compensation systems, including an annual compensation system and a mixed compensation system. The percentage of teachers who work under the annual compensation system should be increased to about 21% of all teachers.	[47] To recruit and retain excellent teachers and administrative staff members from within and outside Japan, HU should establish more flexible personnel and compensation systems, including an annual compensation system and a mixed compensation system. The percentage of teachers who work under the annual compensation system should be 17.4% of all teachers or higher.	III

<p>[48] To provide more opportunities to excellent young teachers (under 40) and to vitalize educational and research activities throughout the University, the percentage of young teachers (under 40) should be increased to about 34% of all teachers, by hiring tenure-track teachers in accordance with the teacher employment plan.</p>	<p>[48] To provide more opportunities to excellent young teachers (under 40) and to vitalize educational and research activities throughout the University, the percentage of young teachers (under 40) should be increased to about 31% (or 17.6% for teachers to whom the accumulation of operating cost subsidies for severance benefits applies) by implementing personnel deployment in accordance with the Teacher Deployment Policy based on the plan for hiring young researchers.</p>	<p>III</p>
<p>[49] Retain and develop excellent administrative staff members by recruitment, transfer, promotion, training and other activities in accordance with the administrative personnel development plan, by clarifying the knowledge and skills necessary for the operation of each department and improving the abilities of employees by using this knowledge and these skills; enhancing the motivation of employees by clarifying the career paths and the promotion criteria; and improving the productivity of all employees by creating and providing opportunities to engage in challenging tasks.</p>	<p>[49] In accordance with the administrative personnel development plan, HU should retain and develop excellent administrative staff members by recruitment, transfer, promotion, training and other activities and programs. These activities should be reviewed and, if necessary, improvement measures to be taken in the following years should be developed.</p>	<p>III</p>
<p>[50] HU should create environments that encourage teachers and administrative staff members to use programs designed for keeping a Work-Life Balance, through active communication and holding seminars about these programs. By AY2019, HU should strive to receive accreditation for compliance with the "General Employer Action Plan" (third period) of the Ministry of Health, Labor and Welfare under the Act on Advancement of Measures to Support Raising Next-Generation Children.</p>	<p>[50] Based on the "General Employer Action Plan" (third period) for the period from AY2014 to AY2019, HU should promote the use of Work-Life Balance support programs for employees by actively communicating and holding seminars about these programs and should verify the use status of these programs. Based on the results of the verification, HU should also develop an environment where employees find it easy to use these programs.</p>	<p>IV</p>
<p>[51] To promote active participation of female teachers and administrative staff members in the activities of the University, the percentages of female teachers and female managers should be increased to about 20%.</p>	<p>[51] To promote active participation of female teachers and administrative staff members in the activities of the University, the percentage of female teachers should be increased to about 17.1% of all teachers and female managers should be increased to about 15.5% of all managers by implementing personnel deployment in accordance with the Teacher Deployment Policy.</p>	<p>III</p>

I. Operations and financial conditions
 (1) Objectives relating to improvement of operation and efficiency
 (ii) Objective relating to restructuring of the education and research organizations

Medium-Term Objectives	[24] From the viewpoint of strengthening functions of all departments of the University, based on the population of students 18 years old, social needs and other factors, HU should restructure and establish flexible and optimized educational and research organizations, taking advantage of its strengths and characteristics.
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Medium-Term Plan	Annual Plan	Progress
[52] Conduct active educational and research activities, taking advantage of the strengths and characteristics of the University, by redefining its missions and identifying social needs. Separate teachers from the education and research organizations to build a flexible teacher organization that enables strategic allocation of teachers to important educational and research fields. Educational and research organizations should also be reorganized and their enrollment quotas should be reviewed.	[52] Taking advantage of the characteristics and strengths of the University, we should further consider the establishment of educational/research organizations (graduate schools) that would lead to the functional enhancement of all graduate schools, and we should also review the enrollment quotas. Establish the School of Informatics and Data Science and the Department of Integrated Global Studies, School of Integrated Arts and Sciences.	III
[53] HU should establish educational and research organizations that take advantage of the characteristics and proven educational and research resources in the fields of life and biological sciences.	[53] HU should make preparations for the establishment of the Graduate School of Integrated Life Science (tentative name) as an educational and research organization that leads to enhancement of functions of the life and biological fields and the restructuring of the Graduate School of Biomedical & Health Sciences into the Graduate School of Biomedical and Health Sciences (tentative name).	III
[54] To develop teachers who can provide excellent education in a new era and to cope with various educational problems, including diverse needs in personnel development, in AY2016, the Graduate School of Education should be reorganized and the Professional Development Program for Teachers and School Leaders should be newly established. After completion of grade progression, the curriculum, human resources to be developed, employment rates and other items should be verified, comparing them to the original purposes of the establishment of the course.	[54] The grade progression of the Professional Development Program for Teachers and School Leaders was completed. Accordingly, the statuses of the curriculum teaching, the progress of the development of students, employment rates of gradated students as teachers and other statuses should be verified. Representatives from relevant boards of education and relevant school officials should join the reviewing organization and discuss the evaluation and improvement of the education contents and methods.	III

I. Operations and financial conditions
 (1) Objectives relating to improvement of operation and efficiency
 (iii) Objectives relating to rationalization and improvement of efficiency of administrative operations

Medium-Term Objectives	[25] To rationalize and improve the efficiency of administrative operations, the administrative organizations and operations should be reviewed and restructured. The abilities of administrative staff members should also be improved.
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Medium-Term Plan	Annual Plan	Progress
[55] Ongoing inspection and review of organizations and overall operations should be conducted. Administrative operations should be rationalized to improve their efficiency, by transferring management of information currently conducted by different systems to a central management system, expanding the on-line application system, establishing an ICT system, and improving the abilities of administrative staff members by practical job training and training programs by ability level.	[55] Re-inspection and review of the entire organization and operations should be continued. The ICT system should be inspected and improved as necessary. The central information management system developed in the previous year for operating systems should be verified and revised as necessary. Various forms of practical training, level-specific training, and other kinds of training should be provided to improve the skills of administrative staff members. Their effectiveness should be verified and, if necessary, improvement measures to be taken in the following years should be developed.	III

(1) Notes relating to improvement of operation and efficiency

Strengthening of governance

- i) Improvement of operation of the organization [Project No. 44]
 - To further improve the quality of educational and research activities by enhancing the characteristics of individual departments and implementing measures to improve and eliminate identified problems, external reviewers (including one or more external members of the Administrative Council) conducted evaluation of 18 departments in September 2018. Based on the results of the evaluation by these external reviewers (including one or more external members of the Administrative Council), the results of a third party's evaluation by the Evaluation Committee of the University and the President's interviews with deans and directors, the actions that have been taken by individual departments were verified to improve the effectiveness of the PDCA cycle. As for points that require improvement in the education area in the School of Dentistry, it was pointed out that the School should set a target for the national examination pass rate and work on education to achieve this target. To address this, the School of Dentistry now keeps the self-study room open until 22:00 for all students except 6th-year students. Security cameras were newly installed in each passage to ensure the safety of students.
 - To reflect constructive opinions of young teachers (under 40) in the operation of the University as a corporation, an opinion exchange meeting was held in September between external reviewers (including one or more external members of the Administrative Council) and young teachers.
- ii) Activities to establish new operating structure [Project No. 45]

In response to "Operating Structure for New Education and Research Organizations (Report)" (May 22, 2018), HU took actions to establish a new operating structure. To conduct specific examinations, a new Working Group was formed and discussed the detailed design of the new operating structure, improvement of the educational and research environment, operating organizations, budget allocation, personnel system, and other issues. Before the discussion of the Working Group, a university-wide information exchange meeting (once) and opinion exchange meetings at individual graduate schools (four times) were also conducted to share information and listen to opinions.
- iii) Activities to review and improve the operating structure [Project No. 45]

To strategically manage the University, the Vice President in Charge of University Management Planning was reappointed as the Vice President in Charge of University Strategy. The Office of the President and the University Management Planning Office were reorganized into the Office of University Strategy. To strengthen regional collaboration and industry-academia collaboration, the posts of Vice Executive in Charge of Regional Cooperation and Vice Executive in Charge of Industry-Academia Collaboration were newly created in the Office of Industry-Academia-Government and Community Collaboration. Special assistants to the President, who can make proposal at the request of the President or autonomously, were appointed from among young teachers and the chairperson of the former committee of teachers and administrative employees. They held an opinion exchange

meeting once a month in principle, which led to the improvement of the quality of education and research activities and improvement of university management.

- iv) Strategic allocation of internal resources [Project No. 46]

Please refer to "Actions for Strategic and Ambitious Objectives and Plans" on p. 35.
- v) Acquisition of diverse and excellent human resources [Project No. 47]

Please refer to "Actions for Strategic and Ambitious Objectives and Plans" on p. 35.
- vi) Providing more career opportunities to young excellent teachers in all departments [Project No. 48]

Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on pp. 35 and 36.

Development of administrative staff members

- i) Global competency of administrative staff members [Project No. 49]

To enhance the global competency of administrative staff members, HU set a goal of increasing the percentage of administrative staff members with a TOEIC® score of 800 points or higher to 20% by May 1, 2023, under the Top Global University Project adopted by MEXT in AY2014. To achieve this goal, HU hired foreign administrative staff members, sent Japanese administrative staff members to overseas training programs, provided language training (for TOEIC) and conducted other activities. As a result, as of March 31, 2019, the percentage had increased to 16.3%.
- ii) Activities in accordance with the administrative personnel development plan [Project Nos. 49 and 55]
 - To recruit persons who enthusiastically wish to work at HU and to retain employees with diverse ambitions, since AY2013, HU has conducted its original employment examination once a year, in addition to the uniform government employment examinations. In AY2018, HU conducted its original employment examination three times a year to provide employment opportunities to students who graduate at different times from others and people who are seeking to change jobs. HU employed by its original employment examinations 15 administrative employees, including those who have foreign nationalities or have work experience at private companies (one by the end of AY2018, and 14 as of April 1, 2019).
 - To enhance the linguistic abilities and understanding of different cultures of administrative staff members, HU sent 12 employees to overseas training programs in nine countries and conducted a TOEIC®IP test skill development training program (a total of 84 employees took the test), skill development training by on-line English conversation lessons (with the participation of 41 employees) and a TOEIC® English training program (with the participation of 12 employees).

Promotion of a Work-Life Balance

- i) Activities to secure diversity in research environment [Project No. 50]
- HU implemented the following two projects under the Initiative for the Implementation of Diversity in the Research Environment (leading type) of MEXT:
 - (1) To help HU researchers to keep a balance between research activities and their life events, in AY2017, HU started a system to post a research assistant who assists research activities of a researcher of HU under the direction of the researcher when it is difficult for the researcher to take sufficient time for research activities due to pregnancy, childcare or family care. HU continued this system and posted research assistants for a total of 29 researchers in AY2018.
 - (2) HU started the Career Advancement Project (CAP) for Researchers Program to support career continuation and cohabitation of married researcher couples. A researcher (whether male or female) who has a spouse working at the University and wishes to continue or resume research is eligible for this program. Under this program, HU decided to hire two part-time researchers using its own budget.
 - From April 2018, HU started the Temporary Retirement for Spouse's Overseas Transfer system. It is a system by which an employee can take a long leave of absence while the employee accompanies his/her spouse who is transferred to an overseas location. In AY2018, one employee used this system.
 - To support the job hunting of spouses of new teachers who will be hired, HU decided to include an outline of the CAP for Researcher Program and information on jobs offered by the University in the Teacher Recruitment Guidebook.
 - To ensure that foreign teachers/administrative staff members and international students can get information on available services, including in-house childcare centers (Himawari Childcare Center and Cosmos Childcare Room) and the financial support system for post-sick child childcare fees, English versions of the application guidelines for these programs were created and posted on the HU website. As a result, five foreigners (two were international students) used the Himawari Childcare Center, and three foreigners used the Cosmos Childcare Room.
 - HU decided to operate the in-house childcare centers (Himawari Childcare Center and Cosmos Childcare Room) on the days when the National Center Test for University Admissions were conducted (two days, both are holidays) to take care of the children of the teachers and staff members who engage in operations related to the test.
 - On August 28, a seminar was held on the theme of "Gender Issues in Contemporary Academic Society in Japan - Perspective of Men's Studies and Masculinities," mainly targeting male teachers and administrative staff members to raise their awareness from the perspective of men's studies that gender equality, which is often regarded as an issue for women, is also an issue for men.
To effectively communicate the information about the childcare support system of HU, a leaflet that outlines the childcare leave system and procedures for taking leave was created and distributed within the University.
- ii) Activities to promote appointment of female managers [Project No. 51]
Please refer to "Actions for Strategic and Ambitious Objectives and Plan" on pp. 36 and 37.

Restructuring of the educational and research organizations

- i) Consideration of reinforcement of the functions of graduate schools in the humanities and social science/interdisciplinary fields and the science and engineering fields [Project No. 52]
- To strengthen the functions of the humanities and social science/interdisciplinary fields and the science and engineering fields in accordance with the Basic Policy for Restructuring of Hiroshima University Graduate Schools, the "Committee for Establishment of the Graduate School of Education, Humanities and Social Science (tentative name)" and the "Committee for Establishment of the Graduate School of Natural Science and Technical Research (tentative name)" were formed on May 16, 2017. These committees deliberated on the details of these proposed schools. HU reviewed the functions and enrollment quotas of graduate schools of the humanities and social science/interdisciplinary fields and the science and engineering fields. Under the central management of personnel affairs of teachers, by deploying teachers to strategic departments, HU considered restructuring six graduate schools in the humanities and social science/interdisciplinary fields into one graduate school, the Graduate School of Human Social Sciences (tentative name) (Enrollment quotas : 420 in the Master's Course, 135 in the Doctoral Course, 50 in the Expert Degree Course), and restructuring five graduate schools in the science and engineering into one graduate school, the Graduate School of Advanced Science and Engineering (tentative name) (enrollment quotas: 449 in the Master's Course, 128 in the Doctoral Course). Aiming to start these proposed graduate schools in April 2020, HU negotiated with MEXT. Consequently, in April 2019, HU submitted a graduate schools establishment plan to MEXT.
- This proposed restructuring removes the barriers between graduate schools and creates a large education and research organization. By taking common subjects and degree programs of a broader range, students will deepen their interest in other fields in addition to the field they major in and the subjects taught in the schools before the restructuring. Education and research are conducted to develop people who can collaborate and work together while sharing value with experts in other fields.
- ii) Establishment of new graduate schools [Project No. 53]
- Considering the diverse social needs, and based on HU's unique Achievement-motivated Key Performance Indicators (AKPI®) and other indicators that monitor the teachers' performance in education and research activities, and analysis by using the IR function, HU considered restructuring 12 courses in five graduate schools in the life and biological science fields into three courses in two graduate schools, the Graduate School of Integrated Life Science (Enrollment quotas: 170 in the Master's Course, 70 in the Doctoral Course), and establishing a new graduate school, the Graduate School of Biomedical and Health Sciences (Enrollment quotas: 76 in the Master's Course, 25 in the Doctoral Course, 97 in the Master/Doctoral Course). This proposed restructuring removes the barriers between graduate schools and creates a large education and research organization. By taking common subjects and degree programs of a broader range, students will deepen their interest in other fields in addition to the field they major in and the subjects taught in the former schools. Education and research are conducted to develop people who can collaborate and work together while sharing value with experts in other fields. Aiming to start

these courses in April 2019, HU negotiated with MEXT. As a result, HU submitted a school establishment report to MEXT on August 17. As it was accepted on August 20, the establishment of the Graduate School of Integrated Life Science and the Graduate School of Biomedical and Health Sciences in April 2019 was decided. On September 20, the Board of Directors decided to establish the Committee for Establishment of the Graduate School of Integrated Life Science and the Committee for Establishment of the Graduate School of Biomedical and Health Sciences and began specific preparations for the establishment of these two schools.

I. Operations and financial conditions
 (2) Objectives relating to improvement of financial conditions
 (i) Objectives relating to expansion of external research funds, donations and internal revenues

Medium-Term Objectives	[26] HU should improve and strengthen its financial structure in order to conduct world-level educational and research activities as a comprehensive research university.
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Medium-Term Plan	Annual Plan	Progress
[56] Conduct an investigation of the movement of competitive research funds in and outside Japan. Based on an analysis of the investigation, a more efficient funding strategy should be developed, aiming to increase the amount of external funding per teacher by about 1.5 times the amount as of the end of the Second Medium-Term Period.	[56] In accordance with the funding strategy, funding measures should be developed for each fund type. Conduct an investigation of the movement of competitive research funds in and outside Japan. Based on an analysis of the investigation, the current funding strategy should be reviewed.	III
[57] To expand the Hiroshima University Fund, the effectiveness of the donation methods and the advertisements should be continuously verified, and the solicitation strategy should be modified.	[57] To expand the Hiroshima University Fund, we should review and improve the issues identified in the verification of funding strategies, such as donation methods and public relations, which were compiled in the previous year.	IV

I. Operations and financial conditions
 (2) Objectives relating to improvement of financial conditions
 (ii) Objectives relating to cost reduction

Medium-Term Objectives	[27] Visualize the financial indicators to efficiently use and manage expenses.
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Medium-Term Plan	Annual Plan	Progress
[58] To hold down the percentage of general administrative expenses, HU should conduct financial analysis of expenses of each segment, set the cost reduction target for consumables and other items in administrative departments at -2% from the previous year, and work to continuously reduce general administrative expenses.	[58] To hold down the percentage of general administrative expenses, based on the financial analysis of expenses of each segment, HU should set the cost reduction target for consumables and other items in administrative departments at -2% from the previous year and work to reduce general administrative expenses.	III

I. Operations and financial conditions
 (2) Objectives relating to improvement of financial conditions
 (iii) Objectives relating to improvement of asset investment and management

Medium-Term Objectives	[28] Effectively use assets (facilities and equipment) of the University from a holistic viewpoint and continuously review how they should be used.
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Medium-Term Plan	Annual Plan	Progress
[59] Continue the collection and verification of information regarding the use statuses of assets (facilities and equipment), and promote their joint and shared use. Make these joint-use assets available to outside parties to promote their effective use.	[59] Promote the joint and shared use of facilities in cooperation with the organization responsible for research facility management based on the analysis of collected information regarding the use statuses of assets (facilities and equipment). Make these joint-use assets available to outside parties to promote their effective use.	III

(2) Notes relating to improvement of financial conditions

Activities to expand external research funds and internal revenues

- i) Development and implementation of an “External Funding Strategy” [Project No. 56]
 In accordance with the External Funding Strategy developed in AY2016, HU conducted various activities to generally increase funding from external sources, including the addition of joint research lectures, the expansion of the “Fund to Vitalize Hiroshima Prefecture where Hiroshima University Can Play Active Roles,” and university-wide support for the activities to be adopted as projects under the open subsidy programs of AMED, JST and others, mainly led by URAs. As a result, the amount of external funds per full-time teacher acquired in AY2018 was 7,630,000 yen, an increase to about 128% of the amount at the end of the Second Medium-Term Period (the external funds per full-time teacher in AY2015 was 5,950,000 yen).
- ii) Cost reduction [Project No. 58]
- The ratio of general administrative expenses to operating costs reported in the financial report for AY2019 was calculated for each segment (i.e. unit for accounting purposes), and financial analysis of causes for increase/decrease from the previous year and other matters was implemented. The results of the analysis were reported to all accounting controllers of departments to solidify their understanding regarding budget allocation and use of the budget to achieve reduction of the general administrative expense ratio.
 - To reduce the general administrative expense ratio, in the initial budget for AY2018, the budgets for administrative expenses (including consumable goods) and common operating expenses for the entire University (such as utilities, cleaning, security, and building maintenance expenses) were reduced by 2.5% from the budget for AY2017 (6% reduction in the Corporate Headquarters) (annual reduction by 92,648,000 yen).
 - Electricity service contracts of other universities and their actual costs were examined and analyzed. Based on the results of these examinations and analysis, HU concluded long-term (five years) service contracts for the Higashi-Hiroshima Campus and the Kasumi Campus to obtain a higher discount for long-term service and a higher discount for a large account. In AY2018, the total annual electricity charge decreased by 45,529,000 yen compared with that before the restructuring of the contracts. From AY2017, HU adopted the Management Integrated ESCO program for the entire Kashiwa Campus. Systems were updated and renovated in FY2017 and FY2018. From AY2019, an energy cost reduction of 180 million yen is expected over eight years. The energy saving effect is maintained after the project is completed. A reduction of 140 million yen is expected every year from the 9th year (FY2027).
- iii) Effective use of owned assets [Project No. 59]
 In December 2018, HU filed an application with MEXT to obtain approval for lending the former site of employee housing (the Amazuyama Apartment Complex, located in Ushida-Shinmachi, Higashi-ku, Hiroshima City) to third parties as a parking lot, in accordance with Article 34-2 of the Act of National University Corporations. If the land is used as a parking lot, revenues of approximately 30,000 thousand yen are expected in ten years.

As for revenues from lending spaces for vending machines, HU had had contracts with two vending machine operators because the execution dates of these contracts were different. Upon the renewal of these contracts, they were put together into one contract and offered for an open bidding. As a result, the commission fees received for lending spaces for vending machines increased 11% from AY2017. Revenues in AY2018 were 32,382,000 yen (an increase of 8,417,000 yen from AY2017). These revenues received for lending spaces for vending machines were appropriated to cover a part of the costs of the START overseas short-stay program for students in the first year who did not have much overseas experience and START+, a step-up study abroad program for students in the second and third years that is more focused on development of linguistic abilities of students.

Activities to solicit donations

- i) Establishment of the Office of Funding [Project No. 57]
 To expand the funds, the Office of Funding was established under the President in April 2018 and dedicated staff members were appointed.
- ii) Change in the bank transfer slip attached to the leaflet and acceptance of transfer by online banking [Project No. 57]
 The payment slip for donations attached to the leaflet enclosed with the alumni newsletter and public relations magazines has been a slip exclusively for payment via Japan Post Bank. In AY2018, HU changed the payment slip to a slip that can be used for other banks to improve the convenience for donors. As a result, HU received 37 donations of 20,718,000 yen through other banks than Japan Post Bank. HU also accepted payment of donations by online banking so that donors need not go to the teller counter of a bank. There were 17 donations of 71,385,000 yen via online banking.
- iii) Creation of a new fund, looking forward to the 75th anniversary [Project No. 57]
 In 2024, HU will celebrate its 75th anniversary. In preparation for the 75th anniversary, HU established the “Fund to Vitalize Hiroshima Prefecture where Hiroshima University Can Play Active Roles” in AY2017. It started raising start-up funds from members within the University. Subsequently, in April 2018, the fund started solicitation of donations from outside parties. In this Fund, donors can also choose to donate to the Student Support Fund. The purposes of the Fund were expanded. In addition to the existing student support and international exchange programs, the Fund added a research support program, an education and research environment improvement program, and a social contribution program. Following the general meeting for the establishment of the Fund Committee in July 2018, to promote the activities of the Committee, meetings of the Fund Committee Vice Chairman were held from November to December to call for donations. As a result, there were 14 donations of 72,030,000 yen
- iv) Establishment of a fund for Hiroshima University Satake Memorial Hall [Project No. 57]
It has been sixteen years since Satake Memorial Hall was constructed with the donation of one billion yen from Toshiko Satake, the representative of Satake Corporation. The aging of

the Hall is now conspicuous. HU founded the Hiroshima University Satake Memorial Hall Fund to maintain and manage the Hall.

- v) Conclusion of an agreement with a local bank for acceptance of donations by bequest [Project No. 57]
HU has concluded an agreement with Hiroshima Bank, a local bank in the region, to prepare for accepting donations by bequest. An open bequest seminar was held in collaboration with Hiroshima Bank, which was participated by 69 interested citizens.

- vi) Application for tax exemption of specially approved deemed transfer income tax and special treatment of specified replacement assets [Project No. 57]
With the FY2018 revision of the taxation system, the scope of tax exemption for specially approved deemed transfer income tax and special treatment of specified replacement assets has been expanded to include national university corporations. In March 2019, HU applied for a certificate of approval to make the acceptance of donations in kind easier.

I. Operations and financial conditions
 (3) Objectives relating to self-check/evaluation and provision of information
 (i) Objectives relating to improvement of the evaluation system

Medium-Term Objectives	[29] To vitalize its educational and research activities as a comprehensive research university, HU should receive an evaluation of its organization by a third party, based on its self-check and evaluation.
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Medium-Term Plan	Annual Plan	Progress
<p>[60] To maintain and improve the quality of its educational and research activities, by using the evaluation items set in the previous year, HU should conduct a self-check and evaluation. Based on the results of the self-check and evaluation, an external evaluation should also be performed by the external members of the Administrative Council (including foreign members). HU should also receive an international evaluation of its educational quality assurance systems by SERU (Student Experience in the Research University), an international consortium of universities in which HU participates as a member.</p>	<p>[60] To maintain and improve the quality of its educational and research activities, by using the evaluation items set by HU, HU should conduct a self-check and evaluation. Based on the results of the self-check and evaluation, an evaluation of the organization should also be performed by outside parties (including one or more external members of the Administrative Council). The evaluation items, evaluation details, and the implementation system should also be verified, and the method of the organization evaluation should be modified as necessary. We should examine the proposals related to international evaluation of the educational quality assurance conducted last year by the Student Experience in the Research University (SERU) consortium.</p>	III

I. Operations and financial conditions

(3) Objectives relating to self-check/evaluation and provision of information

(ii) Objectives relating to disclosure and distribution of information

Medium-Term Objectives	[30] To achieve its accountability to society, HU should actively disclose correct and accurate information relating to the self-check and evaluation of its activities. [31] Implement publicity activities that contribute to enhancement of the recognition and reputation of HU in and outside Japan.
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Medium-Term Plan	Annual Plan	Progress
[61] To achieve its accountability to society, HU should actively disclose the results of the self-check and evaluation of its activities in an easy-to-understand manner via the HU website, the "Japanese College and University Portraits" website and other media.	[61] We should disclose and communicate the results of the self-check and evaluation of individual departments positively and in an easy-to-understand manner. To achieve this, we should review the effectiveness of or problems in the communication based on the results of the verification conducted in the previous year. Questionnaires for outsiders related to public relations and other methods should also be used, and their results should be verified.	III
[62] To enhance the recognition and reputation of HU in and outside Japan, HU should utilize its website, social media and other appropriate means to communicate information relating to its educational, research and medical activities, social activities, and their excellent achievements, focusing on communication from users' viewpoints.	[62] Consider and implement measures for the effective use of social media to effectively communicate information on educational and research activities of the University. The communication of research results of HU implemented in the previous year should be verified. Based on the verification, the functions of the Hiroshima University Institutional Repository should be expanded, and the publication of books by the Hiroshima University Publication Business should also be expanded.	IV
[63] Enhance the reputation of HU, by actively posting articles in foreign academic magazines and educational and research information magazines, and by releasing information to other foreign media.	[63] Verify the established information communication system in light of the purpose of disseminating information to overseas academic journals and foreign media.	III

(3) Notes relating to self-check/evaluation and provision of information

Self-check and evaluation

- i) improvement in the self-check/evaluation system to improve the quality of education [Project No. 12]
Please refer to “Actions for Strategic and Ambitious Objectives and Plan” on pp. 27 and 28.
- ii) Self-check and evaluation from a holistic viewpoint for the entire University [Project No. 60]
In September 2018, individual departments of HU received external evaluations by external reviewers (including at least one member of the Administrative Council) regarding their self-check and evaluation conducted in AY2017. In these evaluations focusing on unique characteristics of education and research activities of individual departments, 160 items that need improvement were pointed out and requests and advice were given to further enhance their characteristics. Based on the requests and advice stated in the evaluation report, individual departments developed and implemented improvement plans. Improvement actions taken by these departments were checked by the all-campus evaluation committee. In addition, from December 2018 to January 2019, the President interviewed deans and directors of individual departments to check the progress of their improvement actions, made requests, and gave advice on improvement of problems as needed to enhance the characteristics of individual departments. As for points that require improvement in the education area in the School of Dentistry, it was pointed out that the School should set a target for the national examination pass rate and work on education to achieve this target. To address this, the School of Dentistry now keeps the self-study room open until 22:00 for all students except 6th-year students. Security cameras were newly installed in each passage to ensure the safety of students.
The results of the self-check and evaluation of individual departments, the results of the external evaluations of individual departments, improvement actions taken, requests and advice given by the President at the interviews with deans/directors, and actions taken for such requests/advice were reported at the opinion exchange meeting held in March 2019 between external members of the Administrative Council and all officers, deans and directors of the University.
- iii) Activities to ensure international quality of education (student survey by SERU) [Project Nos. 12 and 60]
Regarding proposals for the evaluation conducted by the International Inter-University Consortium (SERU) in AY2017 regarding HU’s quality assurance of international education, members of major universities comprising the SERU consortium compiled the peer review results into the SERU Consortium Team Field Survey Report. We considered actions for proposals made in that report.
- iv) On-going evaluation of educational and research activities of teachers [Project No. 60]
In accordance with the “Basic Policy for Personal Evaluation of Teachers” (established by the Education and Research Council), HU implemented on-going evaluation of activities of individual teachers by expressing the performance of each individual teacher by individual scores. Aiming to stimulate and improve the quality of educational and research activities,

the Policy stipulates that all teachers should recognize their research abilities and that the University should correctly and fairly evaluate and treat excellent researchers and urge under-performing teachers to improve their performance by understanding their problems. Engagement and achievements of each teacher in educational and research activities, social activities and university management during the previous year are evaluated for items designated by the department and expressed by individual scores. The results of the evaluation are reflected in the compensation for the teacher.

Provision of information

- i) Creation of websites for new graduate schools [Project No. 61]
To enhance the recognition of the Graduate School of Integrated Life Science and the Graduate School of Biomedical and Health Sciences, new schools to be established in April 2019, websites for these schools were created in Japanese and English. (Site setup month: October 2018)
Visits to the websites were as follows:
Graduate School of Integrated Life Science: 322,918 to the Japanese site, 2,981 to the English site
Graduate School of Biomedical and Health Sciences: 13,977 to the Japanese site, 2,101 to the English site
- ii) Multilingual interface of the official website [Project Nos. 61 and 62]
To increase the volume of information provided on HU’s official website in foreign languages (English, Chinese, Arabic, and Spanish), HU updated the English web pages at least once a week, the Chinese pages about four times a month, and the Arabic and the Spanish pages about once a month.
As of March 31, 2019, visitors to the Arabic web pages were 5,964 (compared to 5,801 in AY2017) and visitors to the Spanish web pages were 6,432 (compared to 6,411 in AY2017).
- iii) Utilization of responses to questionnaires from outside the University related to public relations [Project No. 62]
HU recruited 34 people who are outsiders to the University to answer questionnaires about its public relations. Through these questionnaire surveys, HU collected outsiders’ opinions about its newsletters and official website. Hiroshima University has participated in the Web Grand Prix hosted by Japan Advertiser Association, Inc. since last year. This year, Hiroshima University was awarded the second prize of the “Corporate Grand Prix” Asakawa Award for its website accessibility.
In AY2017, HU started the Public Relations Student Directors system to reflect opinions of students in its public relations activities. In AY2018, HU appointed 24 students as Student Directors for the second year (16 in the first year).
The Public Relations Student Directors wrote articles in friendly writing styles from the viewpoints of students, such as an article targeting high school students featuring interviews with HU students, introduction of alumni (published in the “HU-PLUS” newsletter), report on HU students who play active roles in the community, and introduction of unique researchers

at HU. These articles were posted on the official website of Hiroshima University and in other publications.

- iv) Establishment of the Public Relations Advisor System [Project No. 62]
HU established the Public Relations Advisor System in AY2018. Three advisors were appointed from outside the University and had their first meeting of the Public Relations Advisors on March 11, 2019. The purpose of this system is to receive advanced knowledge and know-how of experts from outside the University in their specialized fields and their unique and non-stereotyped opinions from international and multifaceted perspectives to enhance the brand power and visibility of Hiroshima University.
- v) Active use of SNS for public relation activities [Project No. 62]
 In December 2017, HU started its official Instagram. Targeting those in their teens and early twenties, HU posted impressive photos to attract the interest of young people in the University. Followers of the HU account reached 3,047. Followers of major national universities are as follows: 7,391 followers for Osaka University (started use in August 2015), 4,668 followers for Tsukuba University (started use in February 2017), and 3,610 followers for Kyoto University (started use in July 2017). Compared with these universities, it seems that the account of Hiroshima University has attracted relatively strong interest. HU also continued usage of Twitter and Facebook (in Japanese and English) to distribute information to various users. Currently, HU has 13,131 followers on Twitter (compared to 11,753 in AY2017), 14,846 followers on Facebook (in Japanese) (compared to 8,380 in AY2017), and 1,262 followers on Facebook (in English) (compared to 1,014 in AY2017). Followers of major national universities on Twitter are as follows: 36,395 followers for Tokyo University, 21,303 followers for Osaka University, and 20,819 followers for Kyoto University. Followers of major national universities on Facebook are as follows: 34,023 followers for Tokyo University, 21,762 followers for Kyoto University, and 13,785 followers for Osaka University.
- vi) Activities to communicate information via mass media [Project No. 62]
 HU actively used radio programs and TV programs to communicate information about student activities and research and education activities at Hiroshima University. As for radio programs, HU has a new segment, "Hiroshima University Radio Campus" (twice a month, five minutes each), on a radio program whose major listeners are junior and senior high school students. Students and researchers from Hiroshima University are invited to talk about extracurricular activities, research results, and other information about the daily activities at Hiroshima University.
- vii) Public relations by using the Tokyo Office [Project No. 62]
 As one of the activities to disseminate information about the University to the public using the Tokyo office, we started an open seminar, Hiroshima University Tamachi Lab, in December. In AY2018, five seminars of "Wonderland of Information Science" were held on the theme of applications of AI and data science in collaboration with the School of Informatics and Data Science, which was newly established in April 2018.

- viii) Active international public relations [Project No. 63]

To actively communicate the research results and activities of Hiroshima University to the world, HU sent articles to newsletters for overseas readers. It sent articles to "QS News-2-Wow-U News Letter" and the "JSPS San Francisco Newsletter," published by the Japan Society for the Promotion of Science, on a continuous basis (QS: 12 sent, 3 published; JSPS: 10 sent, 2 published).

HU also issued HU UPDATE (Hiroshima University e-mail newsletter) twice during AY2018, which delivered information about results of research activities at HU and other latest topics in English. The HU UPDATE newsletter was sent to about 200 overseas partner universities under inter-university exchange agreements. Teachers of HU also sent HU UPDATE to their friends in the research and education fields. Through these active publicity activities, HU strove to enhance its reputation.

As an effort to strengthen its ability to communicate information to international society, HU posted English press release articles about its research activities on EurekAlert! and AlphaGalileo, which are leading online platforms for an international scientific news service, to enhance its international reputation.

(EurekAlert!: 10 releases) (AlphaGalileo: 10 releases)

I. Operations and financial conditions
 (4) Objectives relating to other operation-related matters
 (i) Objectives relating to the improvement and use of facilities

Medium-Term Objectives	[32] To create an appealing campus, facilities should be improved in accordance with the Campus Master Facility Plan and total facility management should be conducted.
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Medium-Term Plan	Annual Plan	Progress
[64] Create spaces for socializing and active learning for students, teachers and administrative staff members. Old facilities should be renovated by using the government's funding. Energy-saving measures should be taken. Facilities should be properly maintained to secure safe environments for educational and research activities.	[64] In accordance with the action plan under the Campus Master Facility Plan, HU should renovate the Engineering Education Building to improve and maintain the educational and research environment. It should also create spaces for socializing and active learning for students, teachers and administrative staff members. In accordance with the annual plan for facility management, old facilities should be renovated, energy-saving measures should be taken, and facilities should be properly maintained to secure safe environments for educational and research activities.	III
[65] To effectively use existing facilities, the allocation of space for education activities and research activities should be rearranged. The number of spaces for shared use by all departments should be increased by about 1.5 times the current number of spaces.	[65] Allocate space properly for educational activities and research activities. Shared-use spaces for all departments should be expanded based on teachers' requests for research space, an examination of the actual use statuses of facilities, and the introduction of the space charge system.	III

I. Operations and financial conditions
 (4) Objectives relating to other operation-related matters
 (ii) Objectives relating to safety management

Medium-Term Objectives	[33] To strengthen the safety management system and nurture a safety culture, enhance the awareness of teachers and administrative staff members of risk management, safety and health
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Medium-Term Plan	Annual Plan	Progress
[66] Conduct inspection and evaluation of the safety management system of HU. Enhance awareness of risk management, safety and health by offering regular training and lecture sessions about safety and health to all teachers and administrative staff members every year.	[66] Enhance safety and health management further based on the previous year's inspection and evaluation of the safety management system and confirmation of compliance with applicable laws. Provide enhanced safety education to teachers, administrative staff members, and students to strengthen their awareness of risk management, safety and health.	IV

I. Operations and financial conditions
 (4) Objectives relating to other operation-related matters
 (iii) Objectives relating to compliance

Medium-Term Objectives	[34] To achieve its accountability to society, HU should implement reliable, transparent, sound and fair operation of the organization and ensure compliance with laws and regulations.
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Medium-Term Plan	Annual Plan	Progress
[67] HU has established a system to prevent dishonest acts in research activities and measures to prevent abuse of research expenses. Persons engaged in research activities should use this system and these measures to prevent dishonest acts relating to research activities. Such measures include requiring persons who use research expenses to participate in educational programs relating to researcher ethics and compliance with laws and regulations related to research activities, to participate in educational programs relating to prevention of abuse of research expenses, and to submit acknowledgment letters each year.	[67] In accordance with its system to prevent dishonest acts in research activities and measures to prevent abuse of research expenses, HU should provide educational programs relating to researcher ethics and compliance. Collect from each person who uses research expenses an acknowledgment letter to confirm that the person recognizes that he/she is legally responsible for observing applicable laws and regulations and is subject to disciplinary punishment in the event of non-compliance.	III
[68] To perform the operation of the University lawfully and properly and gain social trust, HU should continue to provide training and education on handling of personal information. It should also conduct regular awareness activities for students, teachers and administrative staff members about compliance with laws and regulations.	[68] To secure proper management of personal information, including information that contains a personal identification number, HU should improve the effectiveness of its internal audit and training and education of students, teachers and other employees and should verify them before they will be implemented in AY2019.	III
[69] Complete the transfer of the main server for administrative operations to cloud computing, as a measure to mitigate vulnerability during normal operation and to secure continuity of the operation in the event of an emergency. HU should manage the security of information by following its Information Security Policy, which was revised during the Second Medium-Term Period, the Procedures for Information Security Management and the Guideline for Using the Cloud Service of Hiroshima University.	[69] Based on the evaluation of the transfer of the main server for administrative operations to cloud computing implemented in and before AY2017, the risks of servers for administrative operations that have not been examined for cloud computing should be evaluated and analyzed to determine whether cloud computing is necessary for them. We should implement the Hiroshima University Information Security Basic Plan, which was formulated based on the Information Security Policy, the Procedures for Information Security Management and the Guideline for Using the Cloud Service, and we should review the plan for the next year and beyond.	IV

(4) Notes relating to other operation-related matters

Activities relating to facility management

- i) Facility improvement in accordance with the Campus Master Plan [Project No. 64]
In accordance with the action plan of the Campus Master Plan, the following works were conducted to create spaces and maintain safe educational and research environments: (School of Engineering) renovation of B1 and B4 Lecture Buildings; (Higashi-Hiroshima) roof water-proof work of the Central Library; (Higashi-Hiroshima) replacement of lighting fixtures of the West Library; and other works.
The following works were also implemented:
(Midori attached junior and senior high schools) school building renovation;
(Kasumi) repair of the air-conditioning system in the animal laboratory; (Kasumi) renovation of the exercise room on the 3rd floor of the Second Basic Research Laboratory; and (School of Science) renovation of the control system for the elevator in the Research Laboratory. Through these works, HU improved its facilities to respond to the needs of more advanced and diversified education and research activities.
- ii) Improvement of facilities by utilizing diverse funding sources [Project No. 64]
We appropriated a subsidy of the Hiroshima Prefecture Medical Facility Maintenance Costs Subsidy Program, donations by the Hiroshima Prefecture Medical Association and funds from other external sources to the renovation of the first floor of the Second Clinical Research Laboratory and the maintenance of the Center for Cause of Death Investigation Research (438 m²).
- iii) Activities for environmental preservation and active energy management [Project No. 64]
On the Higashi-Hiroshima Campus, HU replaced the 200 W outdoor lights with LED lights (39 lights), renewed air conditioners to the latest energy-saving type (43 units), renewed existing fluorescent lights to LED lights (mainly in the West Library, 269 lights), and renewed the transformers in the F Building of the School of Education and the administrative building of the School of Engineering to energy-saving types. As a result of these efforts, the electricity consumption in AY2018 was reduced by about 113,242 kWh from AY2017. HU has concluded a contract for a new type of management-integrated ESCO system, including management service on the Kasumi Campus. Setting a goal of reducing CO₂ emission by 3,361 tons in AY2019, facilities and equipment were renovated.
- iv) Effective use, maintenance and management of facilities [Project No. 65]
 - (i) Activities related to the research space request/registration system
To improve the balance of areas allocated to teachers for their educational and research activities and to respond to the need for areas for new activities, the Higashi-Hiroshima Campus created a table of spaces allocated to teachers for the current year and reported it to individual departments. HU will continue this space request/registration system to improve space allocation to teachers further.
 - (ii) Examination of the actual use statuses of facilities

HU investigated the actual use statuses of the facilities of the Graduate School of Integrated Arts and Sciences (School of Integrated Arts and Science) and the Graduate School for International Development and Cooperation to identify problems. HU requested the administrators of these facilities to improve the identified problems.

- (iii) Introduction of a space charge system
To secure financial sources necessary for future facility management and maintenance, HU started a full-scale operation of the space charge system applicable to all departments. As a result, revenues to be appropriated to maintenance/repair increased in AY2018.
- (iv) Expansion of shared-use spaces for all departments
As of the end of AY2018, shared-use spaces were expanded to 12,267 m² from 7,689 m² as of the end of AY2017 (an increase of 59%).

Enhancement of the safety and health management system

No smoking in all areas on the campus [Project No. 66]
In AY2018, HU took thorough action against passive smoking as one of its safety and health goals. On August 1, 2018, HU established the Working Group on No Smoking on Campus under the Safety and Health Committee. Based on the deliberations by the Working Group, the Board of Directors decided to adopt the rule of no smoking in all areas on campus from January 2020. On January 25, 2019, HU announced inside and outside the University the "Hiroshima University Declaration of No Smoking on Campus" and a road map that outlined the activities to be taken until the effectuation of the no-smoking rule.

Improvement of the Risk Management System

Confirmation of the safety of people of Hiroshima University [Project No. 66]
HU conducted safety confirmation drills using the safety confirmation system twice for its students, teachers, and administrative staff members. The response rate within 24 hours after sending a drill e-mail improved in the second drill, indicating that people at HU understood the importance of safety confirmation and response to a confirmation e-mail.
When torrential rain hit the Chugoku Region before dawn on July 6, 2018, HU confirmed the safety of HU people using the safety confirmation system on the following day, quickly identified HU people who suffered injuries or damage to their properties, and considered what support the University could provide to them.
HU verified the safety confirmation method in the event of a torrential rainfall disaster. Moreover, to raise the awareness of risk management, HU revised the safety confirmation manual, established safety confirmation procedures, and communicated these procedures to people in HU.

Activities relating to compliance

- i) Improvement of the system to prevent dishonest acts in research activities [Project No. 67]
A research ethics education seminar, including compliance education, was conducted as a university-wide FD. From August 2018 to January 2019, the Dishonest Act Prevention Action

Office held four sessions of the research ethics education seminar for different types of research fields. HU also required all students to take the Standard Researcher Ethics Education Program when they enrolled in the University and before writing a degree paper to enhance their awareness regarding ethical standards. In AY2018, a chapter on research ethics was added to "Introduction to University Education," a requisite liberal arts subject for first-year undergraduates, to ensure that new students understand basic ethics essential for research activities.

- ii) Activities to prevent abuse of research expenses [Project No. 67]
To raise the awareness of teachers and administrative employees, in the new teacher/administrative employee training conducted in April and October 2018, HU provided education on "proper use of research expenses." This training on the proper use of research expenses was also provided at the accounting standard study meeting held in November 2018 for employees who would take the National University Financial Accounting Training in the Chugoku/Shikoku Region (Introductory Course).
- iii) Training on protection of personal information [Project No. 68]
The following training sessions regarding protection of personal information were provided to teachers and administrative staff members: training sessions for new employees in April and October, 189 participants; a training session on the Higashi-Hiroshima Campus in December, 95 participants; and a training session on the Kasumi Campus in December, 81 participants. Questionnaire surveys of the participants at these sessions were also implemented. The results of the survey were reflected in the planning of the contents and methods of the training programs for AY2019.
Moreover, before the QTA (Qualified Teaching Assistant) Qualification Training session, a video lecture regarding protection of personal information was given to attending students.
- iv) Audit of documents containing personal information and corporate documents [Project No. 68]
The Audit Office conducted an audit, in cooperation with relevant organizations, to confirm the statuses of management of documents containing personal information and corporate documents in individual departments (from January to February 2019, in 19 departments). Departments where improper management of personal information and corporate documents was found by this audit promptly made improvements, responding to the instructions given by the auditors.

Activities to enhance information security

- i) Operation of the rules relating to information security [Project No. 69]
 - Activities to strengthen the information security system
 - (i) HU revised the Hiroshima University Crisis Management Manual for Information Security by adding "Procedures for handling information security incidents" (flow diagram) that clearly outline the procedures from the occurrence of an incident to the closing of the procedure (March 2019).
Prior to the formal revision, proposed standard procedures were used to handle information security incidents in daily operations to verify their effectiveness.

- ii) The Hiroshima University Information Security Basic Plan 2019-2021 was formulated in March 2019. In its General Policy, we emphasize the necessity of quick actions in the event of an information security incident and the securing of financial resources to be appropriated to costs related to taking these actions.

- The individual policies and priority action plans under the Basic Plan stipulate security measures for cloud services. It is stipulated that, to understand the management status of information equipment, HU should identify information devices and services that use off-campus global IP addresses based on the checklist in the Hiroshima University Cloud Service Usage Guidelines.
- Self-check and evaluation of information security, and internal audit and external audit
 - (i) A self-check and evaluation of information security was conducted (16,103 teachers and employees, 95.4%, AY2018).
 - (ii) An internal audit of the hospital information system was implemented in December 2018. It was confirmed by this internal audit that the system has been properly and continuously operated in accordance with the applicable rules and regulations.
 - (iii) An internal audit of the financial accounting system was implemented in December 2018. It was confirmed by this internal audit that the system has been properly and continuously operated in accordance with the applicable rules and regulations.
 - (iv) An internal audit in accordance with the certification of Information Security Management System (ISMS) (ISO/IEC 27001, ISO/IEC 27017: Service Customer) was implemented in AY2018. It was confirmed that the management within the organization was greatly improved. In the certification renewal inspection of the Japan Audit and Certification Organization for Environment and Quality (JACO), it was found that HU operated ISMS effectively and continuously, and HU passed the surveillance audit in March 2019.
- ii) Enhancement of information security [Program No. 69]
 - Proper management of important information
 - (i) The "Safe Link" function of Office 365 was introduced to the accounts of all teachers, administrative staff members, and students in October 2018 (Safe Link: a function to automatically detect danger of a URL link included in the text of an email and send an alert when the user is trying to click that link). After the function was introduced, it protected users from targeted e-mail attacks and other threats by blocking about 50 links a day on average.
 - (ii) The scope of vulnerability assessment (security check) of network devices was expanded to cloud services.
 - (iii) The Educational Support Information System Review Group, which was established under the Information Technology Strategy Committee, deliberated on the policy for the Education System, which is the only system that has not been changed to a cloud-based system out of all mission-critical systems. As a result of the deliberation, it was decided to change the Educational System to a cloud-based system.
- iii) Response to information security incidents [Project No. 69]
 - Provision of education and training (activities for incident prevention)

- (i) A series of information security and compliance education programs, which have been implemented since 2011, were provided to all people within the University. As a result, we could minimize the occurrence of serious information security incidents:
 [Freshman Course (lectures)]: for students in the first year (3,463 students, 93.7% participation rate in AY2018)
 [Freshman Course (online)]: for students in the first year (4,915 students, 96.2% participation rate in AY2018)
 [Follow-up Course]: 16,106 participants, 85.7% in AY2018).

For teachers and administrative staff members, ten sessions of information security training were also provided to raise their awareness and acquire knowledge about information security (736 participants in AY2017 → 740 in AY2018).

- (ii) HU has implemented information security incident response training. The scope of participants was expanded in AY2018. As a result, the occurrence of serious information security incidents could be minimized.
Applicable employees: 3,496 full-time teachers and administrative staff members) in FY2017 → 20,184 officers, teachers and administrative staff members (excluding part-time employees and employees on leave) and students (excluding part-time students, students on leave, students studying abroad) in AY2018).
 Typical drills of this kind usually send a suspicious e-mail to users and check how many users opened the e-mail (aiming at a goal of 0%). In the training of the University, we emphasize a perfect initial response so that users can take appropriate action promptly when an information security incident occurs. We will continue to implement this training in the future, aiming to achieve 100% participation of applicable users.
 [Pre-drill education]: 1,986 teachers and administrative staff members, 56.8% in AY2017 → 2,852, 52.3% in AY2018; 2,656 students, 18.0% in AY2018
 [Drill] 1,919 teachers and administrative staff members, 54.9% in AY2017 → 4,109, 75.3% in AY2018 (*an increase of 22.2% in a comparison based on the number of applicable users in AY2017); 5,858 students, 39.8% in AY2018.
- (iii) An information website for pre-enrollees was created as the first initiative of the University to provide enrollees of undergraduate schools with various types of information that they need to know before they start their campus life at the University. The website is also equipped with the function to check the viewers and their understanding. The contents include information on requisite laptop computers and educational materials related to information security and compliance. The website was visited by 58.4% of enrollees before their first term started.
- Establishment of procedures for quick responses (activities to minimize damage)
 HU participates in the NII SECURITY OPERATION COLLABORATION SERVICES (NII-SOCS) of the National Institute of Informatics. In AY2017, HU started a system in which if HU receives a notification from NII-SOCS of suspicion of an unauthorized communication, HU cooperates with the telecommunications carrier to block communications within one hour from

receipt of the notification. In AY2018, HU received 178 notifications from NII-SOCS. It responded to all of these incidents in accordance with this system. As a result, serious information security incidents could be minimized.

In addition to the network zone-based blocking of communications from specific IP addresses implemented in the past, in March 2019, device-based blocking of communications from specific MAC addresses was started. As a result, HU could maintain information security while minimizing the impact on its education and research activities.

- (ii) HU provided the CSIRT (Computer Security Incident Response Team) members with an education and training program to refresh their understanding of the procedures to respond to a notification of unauthorized communication and to respond to an information security incident. The participation rate was 92.8% in AY2018. As a measure to minimize damage, this training will be continued in AY2019.

Actions for the Torrential Rainfall Disaster in July 2018

- i) Establishment of an organization for support and recovery led by the President [No project number]
 To cope with the torrential rainfall damage that occurred before dawn on July 6, HU established the Disaster Action Task Force led by the President on July 7, the day following the incident. It confirmed the safety of people at HU, took actions to resume classes, and made and implemented decisions on support for disaster victims, including international students. The Task Force held a total of seven meetings from July to October to share information on the damage situation and the University's response and communicated the progress on the official website of HU. On July 8, the President sent a message to all people within HU. The president sent a letter to partner schools under inter-university agreements. The president also sent a message to parents/families of current students (about 14,000 students, excluding international students).
- ii) Actions to resume classes [No project number]
 Considering the damage situation at HU and the progress of the resumption of public transportation, HU changed the school year calendar. For students and employees who had difficulty in commuting, transportation from the station was secured, such as public buses borrowed for a short period. For students who were totally unable to commute to school, student housing was urgently offered. Out of 27 applicants (9 male students, 18 female students), six students moved to the Ikenoue Dormitory (which can accommodate 54 male students), and six moved to housing with furniture provided by the co-op.
- iii) Support for international students [No project number]
 On July 9, HU offered 120 free emergency meals and 770 halal *momiji manju* (bean-jam buns) to about 150 international students. Information was quickly disseminated on the official website of HU in three languages: Japanese, English, and Chinese. HU received many comments from international students that they were satisfied with the actions of HU, such as "It was very kind of you to provide support to international students. Thank you very much for your support." and "I felt relieved as you provided disaster information in Chinese."

iv) Student volunteers [No project number]

A total of over 1,300 students participated in volunteer activities through the student volunteer groups "Operation Tsunagari (Higashi-Hiroshima)" and "COCO (Kasumi)." The University borrowed 40 buses to support their volunteer activities. It also conducted a questionnaire survey of students about their volunteer activities and compiled them into a report.

On the morning of July 7 soon after the torrential rainfall disaster, fifteen HU students, who saw postings on SNSs that cars were stuck on the road, purchased snacks and drinks, went out to the scene, handed them to the stuck drivers, and volunteered to guide traffic. The activities of these students were reported in the Chugoku Shimbun newspaper dated July 10.

v) Medical support [No project number]

The Hiroshima University Hospital established the Disaster Taskforce after the disaster on July 6 and accepted 18 patients until July 8.

The Hospital dispatched a total of 260 medical professionals to the disaster-stricken areas for 97 days, including DMAT (disaster medical assistance team), coordinators of the Hiroshima Medical Rescue Team Coordination Group, JMAT (Japan Medical Association Team), an infection control team, disaster assistance nurses, DPAT (disaster psychiatric assistance team), JRAT (Japan Rehabilitation Assistance Team), an oral care team and others.

vi) Investigation and research [No project number]

(i) Establishment of the Hiroshima University July 2018 Heavy Rain Disaster Investigation Group (July 11)

HU established a disaster investigation group headed by the President, comprising experts in the field of disaster prevention research from within the University, to contribute to the disaster management of the local governments and regional reconstruction by investigating and analyzing the damage caused by the record torrential rainfall and making proposals to reconstruct the damaged communities. The Group formed four investigation teams: debris flow/slope disaster, hydrological meteorology/flood/inundation, life infrastructure damage, and public health/medical.

It also exchanged opinions with local governments (Hiroshima Prefecture, Hiroshima City, Higashi-Hiroshima City) regarding cooperation in disaster management.

The Investigation Group also made a proposal to the Mayor of Higashi-hiroshima, "Proposal for Traffic Administration in Higashi-Hiroshima City for July 2018 Heavy Rain Disaster - To Resolve Congestion and Confusion of Shinkansen Higashi-Hiroshima Station." It held two briefings on the progress of the investigation and future issues, contributing to the disaster management of local governments and the promotion of regional recovery.

(ii) Establishment of the Hiroshima University Resilience Research Center (September 20)

HU established a new interdisciplinary research group organization, the Hiroshima University Resilience Research Center (HRRC), to investigate and research torrential rainfall disasters that cannot be handled by conventional disaster prevention and mitigation sciences. The Center established a world-class research base centered on the synergistic torrential rainfall disaster and is conducting cutting-edge interdisciplinary research on disaster science by forming a network with leading research institutions in Japan and overseas.

On November 14, the HRRC held the Conference of the Resilience Research Center with Allied Local Governments. Forty representatives from Hiroshima Prefecture and 23 local governments in Hiroshima Prefecture and representatives from risk management departments of Kasaoka City (Okayama), Iwakuni City (Yamaguchi), and Waki Town (Yamaguchi) participated in the event and exchanged opinions.

On January 10, 2019, HU concluded a memorandum of understanding on disaster prevention and mitigation with the Chugoku Regional Development Bureau as a new disaster prevention/reduction initiative after the July 2018 torrential rainfall disaster. As a result, research collaboration between HRRC and the Chugoku Regional Development Bureau was further deepened and an environment that promotes the return of research results to the region was created.

vii) Lecturers and promotional activities [No project number]

- September 10, 2018: "Conference on Immediate Report of Torrential Rainfall Disaster in West Japan" of the Science Council of Japan
- September 15, 2018: "Lessons from West Japan Torrential Rainfall Disaster" in the MIRAI Doctor 3-Minute Competition 2018 Special Session
- October 10, 2018: 14th GIS Community Forum in Kansai
- October 27, 2018: Academic Lecture 2018 of the City Planning Institute of Japan, Chugoku/Shikoku Branch
- November 1, 2018: Construction Technology Forum 2018 in Hiroshima
- November 9, 2018: Lecture meeting of the Hiroshima Association of Real Estate Appraisers
- November 12, 2018: Lecture meeting of the Chugoku Region Disaster Control Study Group
- February 16, 2019: Open lecture of the Open University of Japan
- February 24, 2019: 36th Citizen Open Lecture of the Hiroshima Medical Inspection Conference
- March 13, 2019: Open lecture by the Hiroshima University Resilience Research Center, "Learn from the July 2018 torrential rainfall disaster - The forefront of research on synergistic torrential rainfall disaster"

II. Budgeting (including estimation of labor costs), revenue plan and funding plan

* Please refer to the financial statements and the financial report

III. Limit for short-term borrowings

Medium-Term Plan Attachment	Annual Plan based on the Medium-Term Plan Attachment	Actual Results
1. Limit for short-term borrowings 6,222,074,000 yen 2. Potential reasons Short-term borrowings may become necessary due to a delay in receipt of government subsidies or because unexpected disbursement of cash becomes necessary in order to handle an accident.	1. Limit for short-term borrowings 6,222,074,000 yen 2. Potential reasons Short-term borrowings may become necessary due to a delay in receipt of government subsidies or because unexpected disbursement of cash becomes necessary in order to handle an accident.	Not applicable

IV. Plan to assign or provide as collateral important assets

Medium-Term Plan Attachment	Annual Plan based on the Medium-Term Plan Attachment	Actual Results
1. Plan to assign or provide as collateral important assets (1) A part of the land for the Amazuyama Apartment Complex (226-101 Ushida Shin-machi 4-chome, Higashi Ward, Hiroshima City, Hiroshima, 117.63m ²) should be assigned. (2) The land for the Hatsukaichi Apartment Complex (2585-9, Jigozen 5-chome, Hatsukaichi City, Hiroshima, 332.73 m ²) should be assigned (3) A part of the land for the Kasuga Apartment Complex (5-315-1 Kasuga-cho, Fukuyama City, Hiroshima, 216.00 m ²) should be assigned. 2. Plan to provide important assets as collateral In connection with the long-term borrowing of funds used for improvement works of the facilities and equipment at Hiroshima University Hospital, certain land and buildings owned by HU should be provided as collateral for the borrowing.	Not applicable	Not applicable

V. Appropriation of surpluses

Medium-Term Plan Attachment	Annual Plan based on the Medium-Term Plan Attachment	Actual Results
<p>Any surpluses recorded in the annual account settlement should be appropriated to activities to improve the quality of educational and research activities and improve the operation of the organization of the University, subject to prior approval of the Minister of Education, Culture, Sports, Science and Technology.</p>	<p>Any surpluses recorded in the annual account settlement should be appropriated to activities to improve the quality of educational and research activities and improve the operation of the organization of the University, subject to prior approval of the Minister of Education, Culture, Sports, Science and Technology.</p>	<p>Any surpluses recorded in the annual account settlement should be appropriated to activities to improve the quality of educational and research activities and improve the operation of the organization of the University, subject to prior approval of the Minister of Education, Culture, Sports, Science, and Technology. Out of the surplus reported in AY2016 (1,053,406,030 yen), 44,586,237 yen was reversed in AY2018 and appropriated to the program to accelerate the hiring of young researchers.</p> <p>The surplus reported in AY2017 (1,579,025,689 yen) will be reversed in AY2019 and thereafter to be appropriated to a program to accelerate hiring of young researchers, a program to improve the educational and research environment, and a program to improve the clinical environment.</p>

VI Others
1. Facility and equipment plan

Medium-Term Plan Attachment			Annual Plan based on the Medium-Term Plan Attachment			Actual Results		
Description of facility/equipment	Expected amount (millions of yen)	Funding source	Description of facility/equipment	Expected amount (millions of yen)	Funding source	Description of facility/equipment	Expected amount (millions of yen)	Funding source
<ul style="list-style-type: none"> (Higashi-Hiroshima) Renovation of life-supporting facilities (including electric facilities) (Kasumi) Renovation of life-supporting facilities (disaster control facilities) (Medical) Improvement of the infrastructure and environment (renewal of disaster control systems) Minor repairs 	Total 923	MEXT Facility Improvement Subsidy (191) Long-term borrowings (72) Facility Expense Subsidy of the National Institution for Academic Degrees and Quality Enhancement of Higher Education (660)	<ul style="list-style-type: none"> (Kasumi) Renovation of the general laboratory building (dentistry) (Higashi-Hiroshima) Renovation of the general laboratory building (engineering) (Midori) (Attached junior and senior high schools) Renovation of school buildings Minor repairs 	Total 876	MEXT Facility Improvement Subsidy (804) Facility Expense Subsidy of the National Institution for Academic Degrees and Quality Enhancement of Higher Education (72)	<ul style="list-style-type: none"> (Kasumi) Renovation of the general laboratory building (dentistry) (Higashi-Hiroshima) Renovation of the general laboratory building (engineering) (Midori) (Attached junior and senior high schools) Renovation of school buildings (Higashi-Hiroshima) Disaster restoration work (Higashi-Hiroshima attached kindergarten) Life-supporting facility renovation (air-conditioning system) (Saijo Minaga and others) Maintenance of basic facilities and environment (block fence improvement) Minor repairs 	Total 871	MEXT Facility Improvement Subsidy (799) Facility Expense Subsidy of the National Institution for Academic Degrees and Quality Enhancement of Higher Education (72)
<p>(Note 1) The descriptions and values of facilities and equipment are estimations. Additional improvement or renovation works may become necessary, considering the progress of the projects necessary to achieve the Medium Term Objectives or the deterioration degree of aged facilities.</p> <p>(Note 2) Expenditures for minor repairs in and after AY2016 are estimated to remain the same as those in AY2015.</p> <p>It is expected that the amounts of the MEXT Facility Improvement Subsidy, the Facility Expense Subsidy of the National Institution for Academic Degrees and Quality Enhancement of Higher Education, and long-term borrowings for each year will vary depending on the progress of the business of the University. Therefore, concrete amounts will be determined in the budgeting for each academic year.</p>			<p>(Note) The values are estimations. Additional improvement or renovation works may become necessary, considering the progress of projects or the deterioration degree of aged facilities.</p>					

○ Progress of the Plan

- As a result of bidding, the actual cost of the renovation of the general laboratory building (dentistry) was lower than the budgeted amount by 58,609,000 yen.
- (Higashi-Hiroshima) As the renovation of the general laboratory building (engineering) was postponed to AY2019, there was a difference of 22,767,000 yen between the budget and the actual amount.
- (Midori attached junior and senior high schools) Because incidental administrative expenses were not necessary, the actual cost of the renovation of school buildings was lower than the budget by 56,000 yen.

- (Higashi-Hiroshima) The disaster restoration work was not included in the annual plan, but 746,325,000 yen was received as a supplemental budget in AY2018. A total of 669,710,000 yen was carried forward to AY2019.
- (Higashi-Hiroshima attached kindergarten) The life-supporting facility renovation (air-conditioning systems) was not included in the annual plan. But the original budget of 19,980,000 yen was received in AY2018. All this amount was carried forward to AY2019.
- (Saijo Minaga and others) The maintenance of basic facilities and the environment (block fence improvement) was not included in the annual plan, but 37,800,000 yen was received as a supplemental budget in AY2018. All of this amount was carried forward to AY2019.
- Minor repair works were completed as scheduled.

VI. Others	2. Personnel plan
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Medium-Term Plan Attachment	Annual Plan based on the Medium-Term Plan Attachment	Actual Results
<p>(1) Strategic allocation of internal resources Under the leadership of the President, transfer the management of labor costs of teachers from individual departments to central management in order to strengthen education and research abilities. Teachers and researchers should be strategically allocated, by using HU's unique achievement-motivated key performance indicators (AKPI®) and other methods that evaluate personal performance of teachers in educational and research activities.</p> <p>(2) Acquisition of diverse and excellent human resources (i) To strengthen its education and research abilities, HU should hire and retain excellent human resources from within and outside Japan. To realize this, more flexible personnel and compensation systems should be adopted, such as an annual compensation system or a mixed compensation system. HU should also increase teachers with foreign nationalities or with teaching or research experience in foreign countries and young teachers (under 40).</p> <p>(ii) By recruitment, transfer, promotion, training and other activities in accordance with the administrative personnel development plan, HU should increase administrative staff members with foreign nationalities or with working experience in foreign countries and develop employees who can provide stronger support to educational and research activities.</p> <p>(3) Realize gender equality (i) Based on the basic policy of the Hiroshima University Gender Equality Declaration, HU should promote a Work-Life Balance of teachers and administrative staff members. HU should strive to receive accreditation for compliance with the "General Employer Action Plan" (third period) of the Ministry of Health, Labor and Welfare under the Act on Advancement of Measures to Support Raising Next-Generation Children in AY2019.</p> <p>(ii) To actively post female teachers to decision-maker positions relating to the management of the University, the percentages of female teachers and female managers should be increased.</p>	<p>(1) Strategic allocation of internal resources Under the leadership of the President, teachers and researchers should be strategically allocated by using HU's unique Achievement-motivated Key Performance Indicators (AKPI®), Basic Effort Key Performance Indicators (BKPI®) and other methods that evaluate personal performance of teachers in educational and research activities.</p> <p>(2) Acquisition of diverse and excellent human resources (i) To strengthen its education and research abilities, HU should hire and retain excellent human resources from within and outside Japan. To realize this, more flexible personnel and compensation systems should be adopted, such as an annual compensation system or a mixed compensation system. By planning and implementing personnel deployment in accordance with the Teacher Deployment Policy, HU should increase teachers who work under the annual compensation system, teachers with foreign nationalities or with teaching or research experience in foreign countries and young teachers (under 40).</p> <p>(ii) By recruitment, transfer, promotion, training and other activities in accordance with the administrative personnel development plan, HU should develop administrative staff members. As a part of this plan, HU should also recruit foreign staff members and send Japanese staff members abroad for training to increase the number of administrative staff members with foreign nationalities or with working experience in foreign countries.</p> <p>(3) Realize gender equality (i) Based on the "General Employer Action Plan" (third period) for the period from AY2014 to AY2019, HU should promote the use of Work-Life Balance support programs for employees by actively communicating and holding seminars about these programs and should verify the use status of these programs. Based on the results of the verification, HU should also develop an environment where employees find it easy to use these programs.</p>	<p>Please refer to "3. Actions for Strategic and Ambitious Objectives and Plans" on p. 35.</p> <p>Please refer to "3. Actions for Strategic and Ambitious Objectives and Plans" on pp. 33, 35 and 36</p> <p>Please refer to "3. Actions for Strategic and Ambitious Objectives and Plans" on p. 33. Please refer to "(1) Notes relating to improvement of operation and efficiency" on p. 42.</p> <p>Please refer to "(1) Notes relating to improvement of operation and efficiency" on pp. 42 and 43</p> <p>Please refer to "3. Actions for Strategic and Ambitious Objectives and Plans" on pp. 36 and 37.</p>

	<p>(ii) To actively post female teachers to decision-maker positions relating to the management of the University, by implementing personnel deployment in accordance with the Teacher Deployment Policy, the percentage of female teachers and female managers should be increased.</p>	
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○ Attached Table 1 (Enrollments in Courses of Undergraduate and Graduate Schools)

Name of Course of Undergraduate or Graduate School	Enrollment Quota	Actual Enrollment	Enrollment Rate
[Bachelor's Courses]	(a)	(b)	(b)/(a)×100
	(students)	(students)	(%)
School of Integrated Arts and Sciences, Integrated Arts and Sciences	510	567	111.1
Department of integrated Global Studies	40	44	110.0
Total	550	611	111.0
School of Letters, Humanities	570	642	112.6
School of Education, Cluster 1 (School Education)	657	682	103.8
Cluster 2 (Science, Technology and Society Education)	346	366	105.7
Cluster 3 (Language and Culture Education)	325	349	107.3
Cluster 4 (Lifelong Activities Education)	345	375	108.6
Cluster 5 (Fundamentals for Education and Human Development)	217	235	108.2
Total	1,890	2,007	106.1
School of Law, Law Day Program	580	624	107.5
Evening Main Program	170	190	111.7
Total	750	814	108.5
School of Economics, Economics Day Program	615	675	109.7
Evening Main Program	240	272	113.3
Total	855	947	110.7
School of Science, Mathematics	188	213	113.2
Physical Science	264	302	114.3
Chemistry	236	275	116.5
Bioscience	136	146	107.3
Earth and Planet Systems Science	96	107	111.4
Transfer in the third year within the Department	20	7	35.0
Total	940	1,050	111.7
School of Medicine, Medicine	720	743	103.1
Health Sciences	480	507	105.6
Total	1,200	1,250	104.1
School of Dentistry, Dentistry	318	332	104.4
Oral Health Sciences	160	171	106.8
Total	478	503	105.2

Name of Course of Undergraduate or Graduate School	Enrollment Quota	Actual Enrollment	Enrollment Rate
[Bachelor's Courses]	(a)	(b)	(b)/(a)×100
	(students)	(students)	(%)
School of Pharmaceutical Sciences, Pharmaceutical Science	228	235	103.0
Medicinal Sciences	88	101	114.7
Total	316	336	106.3
School of Engineering, Cluster 1 (Mechanical Systems, Transportation, Materials and Energy)	150	155	103.3
Cluster 2 (Electrical, Electronic and System Engineering)	90	93	103.3
Cluster 3 (Applied Chemistry, Biotechnology and Chemical Engineering)	115	116	100.8
Cluster 4 (Civil Engineering and Architecture)	90	95	105.5
Cluster 1 (Mechanical System Engineering)	(Note 1) 315	360	114.2
Cluster 2 (Electrical, Computer and Systems Engineering)	(Note 1) 405	454	112.0
Cluster 3 (Chemistry, Biotechnology and Process Engineering)	(Note 1) 345	376	108.9
Cluster 4 (Social and Environmental Engineering)	(Note 1) 405	434	107.1
Transfer in the third year within the Department	20	37	185.0
Total	1,935	2,120	109.5
School of Applied Biological Science, Applied Biological Science	380	445	117.1
School of Informatics and Data Science	80	85	106.2
Bachelor's Course Total	9,944	10,810	108.7
[Master's Courses]			
Graduate School of Integrated Arts and Sciences, Integrated Arts and Sciences	120	136	113.3
Graduate School of Letters, Humanities	128	161	125.7
Graduate School of Education, Learning and Curriculum Development	40	59	147.5
Curriculum and Instruction Sciences	160	192	120.0
Teaching Japanese as a Second Language	28	38	135.7
Educational Studies	28	34	121.4
Psychology	38	44	115.7
Higher Education	10	9	90.0
Lifelong Activities Education	(Note 2)	1	
Higher Education Development	(Note 2)	1	
Total	304	378	124.3
Graduate School of Social Sciences, Law and Politics	48	80	166.6
Economics	56	64	114.2
Management Studies	56	45	80.3
Total	160	189	118.1

Name of Course of Undergraduate or Graduate School	Enrollment Quota		Actual Enrollment		Enrollment Rate	
	(a)	(students)	(b)	(students)	(b)/(a)×100	(%)
Graduate School of Science, Mathematics		44		34		77.2
Physical Science		60		72		120.0
Chemistry		46		87		189.1
Bioscience		48		42		87.5
Earth and Planet Systems Science		20		25		125.0
Mathematical and Life Science		46		50		108.6
Total		264		310		117.4
Graduate School of Advanced Study of Matter, Quantum Matters		50		61		122.0
Advanced Study of Molecular Biotechnology		48		77		160.4
Advanced Study in Semiconductor Electronics and Integration Science		30		33		110.0
Total		128		171		133.5
Graduate School of Biomedical & Health Sciences, Oral Health Sciences		24		33		137.5
Medicinal Sciences		36		33		91.6
Health Sciences		68		80		117.6
Medical and Dental Sciences		24		23		95.8
Total		152		169		111.1
Graduate School of Engineering, Mechanical Systems Engineering		56		75		133.9
Mechanical Science		60		115		191.6
System Cybernetics		68		109		160.2
Information Engineering		74		107		144.5
Chemical Engineering		48		64		133.3
Applied Chemistry		52		77		148.0
Civil and Environmental Engineering		40		68		170.0
Transportation and Environmental Systems		40		55		137.5
Architecture		42		58		138.0
Total		480		728		151.6
Graduate School of Biosphere Science, Bioresource Science		60		57		95.0
Biofunctional Science and Technology		48		86		179.1
Environmental Dynamics and Management		38		26		68.4
Total		146		169		115.7
Graduate School for International Development and Cooperation, Development Science		86		135		156.9
Educational Development and Cultural and Regional Studies		56		100		178.5
Total		142		235		165.4
Master's Course Total		2,024		2,646		130.7

Name of Course of Undergraduate or Graduate School	Enrollment Quota		Actual Enrollment		Enrollment Rate	
	(a)	(students)	(b)	(students)	(b)/(a)×100	(%)
[Doctoral Courses]						
Graduate School of Integrated Arts and Sciences, Integrated Arts and Sciences		60		84		140.0
Graduate School of Letters, Humanities		96		110		114.5
Graduate School of Education, Education and Learning Science		147		191		129.9
Learning Development (Note 2)				11		#DIV/0!
Cultural Education Development (Note 2)				46		#DIV/0!
Educational Human Science (Note 2)				32		#DIV/0!
Total		147		280		190.4
Graduate School of Social Sciences, Law and Politics		15		16		106.6
Economics		24		10		41.6
Management Studies		42		43		102.3
Total		81		69		85.1
Graduate School of Science, Mathematics		33		17		51.5
Physical Science		39		32		82.0
Chemistry		33		27		81.8
Bioscience		36		8		22.2
Earth and Planet Systems Science		15		7		46.6
Mathematical and Life Science		33		19		57.5
Total		189		110		58.2
Graduate School of Advanced Study of Matter, Quantum Matters		36		11		30.5
Advanced Study of Molecular Biotechnology		33		13		39.3
Advanced Study in Semiconductor Electronics and Integration Science		21		8		38.0
Total		90		32		35.5
Graduate School of Health Sciences, Health Sciences		(Note		11		
Graduate School of Biomedical & Health Sciences, Biomedical Sciences		388		535		137.8
Oral Health Sciences		12		8		66.6
Medicinal Sciences		9		16		177.7
Health Sciences		45		125		277.7
Total		454		684		150.6
Graduate School of Engineering, Mechanical Systems Engineering		27		24		88.8
Mechanical Science		30		30		100.0
System Cybernetics		33		42		127.2
Information Engineering		39		26		66.6
Chemical Engineering		24		25		104.1

Name of Course of Undergraduate or Graduate School	Enrollment Quota	Actual Enrollment	Enrollment Rate
	(a)	(b)	(b)/(a)×100
	(students)	(students)	(%)
Graduate School of Engineering, Applied Chemistry	27	13	48.1
Civil and Environmental Engineering	21	31	147.6
Transportation and Environmental Systems	21	19	90.4
Architecture	21	17	80.9
Total	243	227	93.4
Graduate School of Biosphere Science, Bioresource Science	36	40	111.1
Biofunctional Science and Technology	36	26	72.2
Environmental Dynamics and Management	27	17	62.9
Total	99	83	83.8
Graduate School of Biomedical Sciences and Graduate School of Health Sciences, Biomedical Research	(Note 2)	24	
Applied Biomedicine	(Note 2)	11	
Oral Health Sciences	(Note 2)	2	
Total		37	
Graduate School for International Development and Cooperation, Development Science	66	60	90.9
Educational Development and Cultural and Regional Studies	42	49	116.6
Total	108	109	100.9
Doctoral Course Total	1,567	1,836	117.1
[Expert Degree Courses]			
Hiroshima University Law School, Law	40	39	97.5
Graduate School of Education, Professional Development Program for Teachers and School Leaders	60	38	63.3
Expert Degree Course Total	100	77	77
[Special Course]			
Special Course on Special Support Education	30	15	50.0
Special Course Total	30	15	50

Name of Course of Undergraduate or Graduate School	Enrollment Quota	Actual Enrollment	Enrollment Rate
	(a)	(b)	(b)/(a)×100
	(students)	(students)	(%)
[Attached Schools]			
Hiroshima University Elementary School --- 12 classes	384	377	98.1
Hiroshima University Elementary School, Shinonome --- 18 classes	456	429	94.0
Hiroshima University Elementary School, Mihara--- 12 classes	384	374	97.3
Hiroshima University Junior High School --- 9 classes	360	368	102.2
Hiroshima University Junior High School, Shinonome --- 9 classes	264	254	96.2
Hiroshima University Junior High School, Mihara --- 6 classes	240	236	98.3
Hiroshima University Junior High School, Fukuyama --- 9 classes	360	366	101.6
Hiroshima University Senior High School --- 15 classes	600	606	101.0
Hiroshima University Senior High School, Fukuyama --- 15 classes	600	601	100.1
Hiroshima University Kindergarten --- 3 classes	80	76	95.0
Hiroshima University Kindergarten, Mihara --- 3 classes	80	77	96.2
Attached School Total	3,808	3,764	98.8

(Note 1) Enrollments were no longer solicited for Cluster 1 (Mechanical System Engineering), Cluster 2 (Electrical, Computer and Systems Engineering), Cluster 3 (Chemistry, Biotechnology and Process Engineering), and Cluster 4 (Social and Environmental Engineering) in the School of Engineering because these courses were reorganized into Cluster 1 (Mechanical Systems, Transportation, Material and Energy), Cluster 2 (Electrical, Electronic and Systems Engineering), Cluster 3 (Applied Chemistry, Biotechnology and Chemical Engineering), and Cluster 4 (Civil Engineering and Architecture) in AY2018.

(Note 2) Courses for which quotas are not indicated no longer solicit enrollments because they were reorganized or because of some other reasons.

○ Progress of the Plan

(1) Progress of the plan relating to enrollment quotas (as of May 1)

- The overall enrollment rate of bachelor's courses was generally good at 108.7%.
- The overall enrollment rate of master's courses was generally good at 130.7%.
- The overall enrollment rate of doctoral courses was generally good at 117.1%.
- The enrollment rate of expert degree courses was 77%, far below the quota.
- The enrollment rate of the special course was 50%, far below the quota.

(2) Major reasons for enrollment rates not exceeding 90%

[Expert Degree Courses]

Hiroshima University Law School, Law

(Reasons for under-enrollment)

- (1) The bar exam success rate of students from the Law School of Hiroshima University was not high in AY2017. Due to this, the enrollment of graduates from other universities was small, and
- (2) the number of students who seek a career as legal professionals has dropped almost to the bottom at every university in the Chugoku/Shikoku Area. In particular, the number of applicants to the three-year course designed for people who did not major in law in undergraduate schools has declined due to the additional requirement to take an aptitude test.

(Actions)

With the significant improvement in the bar exam success rate of HU students in AY2018, HU conducted several joint briefings with Kobe University on the admission examination. In the briefing, we explained that HU affiliates with the Law School of Kobe University to improve the quality of education. We also explained our new scholarship system to support continuing study. As a result of these activities to provide useful information to more participants, both the numbers of applicants and examinees have increased (AY2017 entrance exam: 41 applicants, 36 examinees → AY2018 entrance exam: 60 applicants, 54 examinees).

The following specific information was provided in the briefing:

1) Improvement of the bar exam success rate and reform to improve the quality of education:

We effectively explained to the participants in the briefings that HU provides viable education by integrally implementing the following three programs, with support from the Law School of Kobe University: comprehensive programs for acquiring practical knowledge; individual study coaching taking advantage of the small number of students; and three-year follow-up seminars by young lawyers. We also communicated that HU law school students are sent to the Law School of Kobe University to study and experience the outgoing atmosphere to eliminate the inward thinking that is common in local law schools.

2) New scholarship program to support continuing study:

The new scholarship program has mitigated the economic burden for enrollees in AY2017, especially graduates of other universities. In the Law School Accreditation and Evaluation implemented by MEXT in FY2018, our scholarship program was mentioned as an activity to be highly evaluated. In fact, in the on-campus survey conducted as part of the Accreditation and Evaluation program, interviewed students expressed appreciation for this program. In the admission exam briefings, participants showed interest in the HU Law School, strongly motivated by this scholarship program.

3) By holding the joint admission examination briefings with Kobe University at various universities and in various regions, we could provide information on our Law School to more participants compared with the briefings that HU independently conducted in the past. Some students who participated in these briefings took the admission exam to the HU Law School

[Special Course]

Special Course on Special Support Education

(Reasons for under-enrollment)

(1) Due to the tight financial conditions of local governments and other reasons, the number of teachers dispatched by local education boards has been declining, (2) new graduates have more opportunities to be employed as teachers because all local governments have employed more teachers recently and local governments have employed more temporary teachers, anticipating the resignation of a large number of teachers, (3) because the promotive activities for HU's Special Course on Special Support Education have been insufficient, the information has not reached those who are interested in the teacher's license for special support schools, and (4) private universities are also providing special courses to acquire the teacher's license for special support schools (intellectually disabled, physically disabled, or sick children). Under these circumstances, special courses at other national universities are also experiencing the same problem of under-enrollment.

On the other hand, children in need of special educational support are increasing. The number of special support classes has sharply increased. Schools are requested to increase the percentage of licensed teachers among teachers who are assigned to special support classes. Special support classes in high schools started in AY2018. By AY2020, it is required that all teachers assigned to special support classes should acquire the special school teacher license. Under these circumstances, as the need for special support education has been growing, the number of applicants to this course has been gradually increasing, although the enrollment rate was lower than the quota.

(Actions)

For this Special Course on Special Support Education, the University continues lobbying with the education boards of Hiroshima Prefecture, Hiroshima City, and other cities in Hiroshima Prefecture and prefectures in western Japan to encourage them to send incumbent teachers to this special course. The University also publicized the course by renewing the special course's website, creating a leaflet to introduce the course and solicit students, and posting and distributing the leaflet within and outside the University. In addition, the University asked the cooperation of special support schools in Hiroshima Prefecture in handing out the leaflet to students who participate in caring and other experience programs. As a result of these efforts, students from other majors or from other universities have shown interest and have enrolled in the course to acquire special knowledge about special support education. In AY2018, 15 students completed this course, and 14 (including two incumbent teachers) were employed by special support schools, elementary schools or junior high schools (mainly special support classes). The employment rate of our students by special support education organizations is expected to remain high in the future.

Teachers can acquire the Type 1 License for Special Support School Teacher in one year by taking this special course. In the future, by communicating this feature thoroughly, we can improve the enrollment rate. (1) In AY2018, the course teachers frequently contacted the Hiroshima Prefecture Education Board and municipal education boards in Hiroshima Prefecture. They explained the special course and encouraged the board members to send more incumbent teachers to this course. As a result of these efforts, in AY2018, teachers dispatched by prefectural and municipal education boards took the examination for this course. By continuing the lobbying and providing information, we expect that we can encourage the education boards to send more incumbent teachers to this course. (2) For the course, we created an A-4-size leaflet to introduce the course and solicit students. The leaflet has been sent to major universities with teacher training courses in Western Japan. The University also asked all special support schools in Hiroshima Prefecture offering caring experience programs to hand out the leaflet to university students (including students from other universities) attending the experience programs. Some students who took the admission examination to the special course said that they became interested in the course because of this leaflet. Because its effectiveness was proven, we will continue to create and distribute the leaflet next year. (3) Students knew about this course by visiting its website or by talking with former students of this special course from other universities. The course will continue to improve its website and personal contacts with students studying in the course. (4) Enrollment of graduates of Hiroshima University has also increased. We will continue to ask the cooperation of other departments/courses to post posters on the walls of student research rooms, in addition to halls and bulletin boards. In AY2018, the Special Course conducted promotive activities, targeting teachers in the Graduate School of Education via a mailing list and by putting the leaflet in their letter boxes. In addition, three course explanation meetings were conducted by course teachers in December (Higashi-Hiroshima Campus and Higashi-Senda Campus). Some students who attended these meetings from outside HU took the admission examination to the course. The course explanation meetings will be provided again this year.