
Chapter 1 Overview of Higher Education

Higher education is education, training and research guidance that takes place after at the post-secondary level.

1-1 Definition

Higher education comprises all post-secondary education, training and research guidance at education institutions such as universities that are authorized as institutions of higher education by state authorities.¹ It includes all the activities a given country deems to be higher education - not only those that take place within ordinary universities and graduate schools, but shorter term education and training courses (polytechnics, junior colleges, and various forms of technical specialty schools) that are 2-3 years in length, and even correspondence courses that make use of information technology and are targeted at a broad population of students.

Higher education institutions - most prominently universities - have three functions in total. In addition to education, these are research and contributing to society.² The research and education functions are two sides of a coin; research makes a higher level of education possible and education, in turn, develops the human resources to do research. Recently, contributions to society have increasingly been demanded of higher education institutions. This means the higher education institutions need to have activities to ensure that accumulated knowledge is circulated directly back to society and that they do not become “ivory towers.”

All three functions are intimately connected and none can be separated out when considering higher education. Thus, in this report, we will address not only the educational activities at higher education institutions, but the research and contributions to society of these institutions.

Representative examples of JICA’s cooperation in the area of higher education are establishment or expansion of agriculture and engineering faculties/departments or graduate schools (for example, Kenya’s Jomo Kenyatta University of Agriculture and Technology, King Monkut’s Institute of Technology in Thailand, etc.) Also included in JICA’s higher education

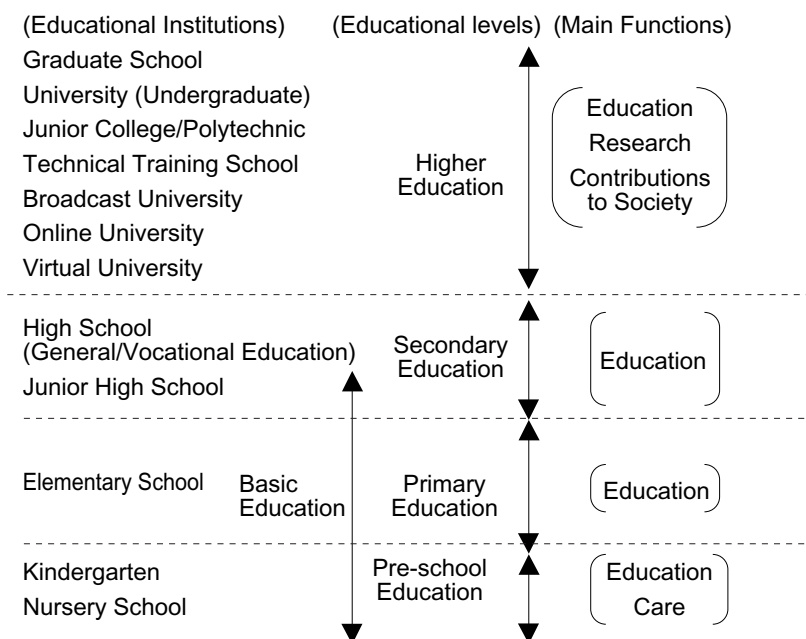
¹ In the World Declaration on Higher Education adopted by the World Conference on Higher Education in 1998, higher education was defined as: “all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent state authorities.” UNESCO, the World Bank, UNDP and others use this same basic definition.

² However, the importance placed on each of these functions varies greatly depending on the type of higher education institution. For example, large universities may have departments, graduate schools and affiliated research facilities, and there are therefore many that pursue education, research and contributions to society. However, there are many polytechnics, teacher training schools, specialized technical schools and other institutions that clearly have educational activities as their main function.

cooperation is aid to medical and nursing departments for development of specialists. Although JICA statistics place some of these examples and others in technical categories such as “Agriculture, Forestry and Fisheries” and “Public Health and Medicine” rather than education per se, in many cases during the implementation of these projects structural problems in higher education have proven to be obstacles. For this reason, we felt it necessary to examine these projects from a higher education perspective. Thus, we will also treat these cases as higher education examples. The higher education examples taken up in this report are the following concrete types of cases:³

- Projects for the establishment, expansion or reform of faculties/departments of agriculture, engineering or medicine
- Projects for the establishment, expansion or reform of graduate schools of agriculture, engineering or medicine
- Projects for the establishment, expansion or reform of short-term education institutions (less than 4 years) such as polytechnics and colleges
- Projects aimed at increasing research capacity closely related to education at departments/faculties, graduate schools and university-affiliated research institutions

Chart 1-1 Position of Higher Education within Educational Cooperation Areas (Excluding Non-formal Education)



³ Much of the teacher training is at the higher education level, but JICA’s education sector statistics categorize it as cooperation for the basic education. Therefore, for convenience, we will omit it from this report. Concerning teacher training, JICA/IFIC (2002) has detailed information and can be used as a reference.

1-2 Current Situation

1-2-1 Environment Surrounding Higher Education

Even as higher education has been based on a Western “university model,” it has developed in a way that is deeply rooted in the societies of which it is a part. However, the environment surrounding higher education is changing rapidly. The recent rise of a knowledge-based society; social, economic and information globalization; increased demand for higher education; and changes in the political and social environment of developing countries are all deeply connected and are having a significant influence on higher education.

The rise of a knowledge society in which the creation of new knowledge and its application are the key to economic growth

(1) Transition from an Industrial Society to a Knowledge Society

In the latter half of the 20th century we have seen **a change from economic growth led by mass production industry based on the established technology to knowledge-based growth in which hard and soft innovation (“creation of knowledge”) has a higher economic value.** In the past, material and human capital like abundant natural resources and cheap and abundant labor were the source of economic growth. However, the application of science and technology and the production and use of “knowledge” of the quality of information and management have now become the keys to economic growth. At present, there is a strong demand for the ability to create and apply this “knowledge” which is essential to economic growth.

In order to participate in this kind of knowledge-based economy, social infrastructure that will contribute to this is necessary. At the national level, access to information must be secured, and promotion of information disclosure and legal protection and management of information like patents and copyrights are needed. Also, higher education institutions must maintain their status as places for the creation of knowledge and have an intimate connection with society to ensure that the new technologies developed can be applied in economic activities.

Globalization of people, goods, money and information

(2) Globalization of Society, Economy and Information

Because of the striking development of information technology in recent years, **the movement of people, goods, money and information has become much easier and the globalization of the world economy has accelerated.** Already the information society has caused borders to cease to exist, and if one has access to an information network it is possible to get information from it and share newly created things with many people. In this way, the information revolution has provided rapid access to knowledge and spurred the creation of new knowledge. This also contributes to the production of new wealth and services. The development of information technology has diversified the forms of higher education, and on the one hand is connected to improved quality and

expansion to a wider target of students. However, the information technology gap within and among countries is causing a new gap in higher education.

At the same time with globalization of information, economic globalization is also proceeding at a rapid pace. Multinational corporations are on one hand in a dominant position. On the other, the economies of developing countries are easily affected by trends in the globalized economy. Because of the declining costs of moving and the rise of the information society, globalization of the labor market is also progressing. While this contributes to human resources exchanges necessary for the development of higher education, it is also connected to the deepening brain drain of the knowledge workers, who are the main source of the creation of knowledge, to a relatively small number of industrialized countries.

Rising demand for higher education:

- The necessary of mastering new knowledge and technology
- The rise of a society based on educational credentials

(3) Rising Demand for Higher Education

Following World War II, higher education expanded throughout the world remarkably, though there have been different degrees. If one looks at increases in enrollment rates, one sees that the increase for higher education was greater than that for primary and secondary education. From 12 million students in 1960, the number of higher education students rose to 88 million in 1997, an approximate seven-fold increase.⁴ Universities in developing countries had been small in scale and extremely intended to train elite persons, but from the time colonies became independent, higher education underwent rapid expansion.

One of the reasons for this rapid expansion was that **the demand for human resources who had underdone higher level education or training grew** with the increasingly complicated society and economy and the earlier-mentioned changes in the social environment. Furthermore, over the past 50 years, developing countries which had put their energy into expanding basic education produced a result whereby **the expansion of primary and secondary education led to an increased need for higher education**. In other words, as there is a relative increase in the schooling of a country's citizens, the middle class starts to demand a higher level of education in order to secure success in the society.

In response to this kind of increasing demand, at a global level, higher education also changed from the elite style prevalent earlier to mass higher education. Also, trends towards greater diversity among students and institutions and towards lifelong education have progressed. This movement towards mass education can be seen as a worldwide trend. However, it is not uniform; there are gaps between the situations in developing and developed countries, within urban and rural areas of the same countries, between the wealthy and the poor, males and females, and among different ethnic groups.⁵

⁴ UNESCO (2000) p.67

⁵ For example, the gross enrollment ratio for higher education in the Philippines is 30%, 20% in Egypt, and 39% in Argentina, while there are many countries in Sub-saharan Africa with a rate around 1%.

(4) Changes in the Political and Social Environment of Developing Countries

Changes in the political and social environment of developing countries:
Increasing need for building civil society and cultivating social cohesion

The political and social environment of developing countries from the 1990s and the recent international situation were not unconnected with higher education. For example, when the socialist system of the Soviet Union and other Eastern European countries collapsed, in many countries democratic movements increased and issues of governance, civil society and human rights became to be debated. On the other hand, regional conflicts disputes and frequent occurrences of terrorism led to voices demanding peace and multiculturalism. Based on this background, **higher education is expected to contribute to the development of a healthy civil society and the cultivation of social cohesion.**

1-2-2 Roles of Higher Education

While there have been great changes in social environment as above-mentioned, roles of higher education are required to be recognized anew.

Roles for higher education in society:

- Training of leaders
- Training of a wide array of human resources
- Creation and communication of knowledge
- Higher education as a common intellectual asset
- Development of a healthy civil society and cultivation of social cohesion

(1) Development of Human Resources Necessary for Economic and Social Development

For a long time higher education has fulfilled the role of producing government and private sector leaders. Developing high-level human resources with the necessary knowledge and skills for economic and social development has been the most important role of higher education.⁶ Added to this, in the current knowledge society where an entire society's knowledge level is at issue, **higher education cannot just develop a small number of leaders. It is becoming important to expand higher education so that a wide range of human resources can be developed** and the entire society's level of knowledge can be raised.

(2) Creation and Diffusion of Knowledge

In the creation and transmission of knowledge in a knowledge society, higher education is demanded to play a central role. In particular, the ability to apply knowledge and technical skills is extremely important to economic development.⁷ Thus, higher education must not merely teach new technology, but must develop human resources who can evaluate the need for these technologies and apply them.

With the rise of a knowledge society, consciousness that higher education is no longer a luxury item and indispensable to a nation's social and economic

⁶ For example, in educational development, international society has formed a consensus around the expressed goal of universal primary education. However, in order to realize this, the development of teachers via higher education and research in the field of education are essential.

⁷ For example, Asian countries which are in the position of following the technology of more advanced countries have witnessed dramatic growth as a result of the application of their technology.

development has increased. Higher education is required to be reconceptualized as a common intellectual asset. As a common intellectual asset, higher education needs to be not an entity isolated from society, but to be connected with society and to actively respond to society's request. To make it possible, higher education is first of all required to concern itself in the development and diffusion of technology closely connected with society's needs.⁸ In addition, in order to respond to diversifying needs, one must diversify educational content and the ways to provide services. One of the examples is the realization of distance education which can accompany the development of information technology.

On the one hand, the knowledge and technology society demands are extremely varied. But at the same time, the speed of technological innovation has increased and the period of usefulness for particular knowledge and technology has shortened. Because of this, it is necessary to have a system for continually gathering and choosing among the knowledge and technology and renewing it, and further developing the opportunities for lifelong education.

(3) Development of a Healthy Civil Society and Cultivating Social Cohesion

A role in reforming the social system and cultivating social cohesion is also demanded of higher education. This may be accomplished through the production of the common asset of new knowledge, including the spread of democratic values and respect for multiculturalism, the promotion of political participation, the strengthening of civil society and promotion of democratic governance.

(4) Means of Self-realization

For a nation, higher education is a means of developing the human resources necessary for economic development. At the same time it is a means to achieve self-realization for individuals. Concretely, **people can improve their income and quality of life through increasing knowledge or skills and then expand on their own choices available in life, including those related to work life.** In addition, lifelong education, which constantly renews individual knowledge and skills, needs to be guaranteed throughout the lifetime to respond to individual learning needs. Therefore, just as one should guarantee basic education for all, one should guarantee opportunities for higher education equally, based on individuals' hopes and abilities.

Higher education's roles for individuals:

- Increase in income and improvement of quality of life
- Broadening of choices

⁸ From the 1960s, the idea of "vocationalism," which held that universities should provide appropriate curricula to master the diversification of jobs, was debated. It was a way of thinking that for industry meant an expectation that knowledge and skills necessary at a job site would be reflected in university curricula based on industry's demands (Altbach (1994)). However, in the recent debate surrounding the knowledge society, more than a focus on strengthening curricula in particular specialized fields, the main emphasis is placed on sharing knowledge and on its application.

1-2-3 Current Situation and Issues in Higher Education

Added to the need to expand higher education opportunities, with the recent change in the needs for the quality, higher education in developing countries is faced with the following issues:

Issues:

- Expansion of enrollees
- Lack of financial resources
- Declining quality
- Diversified needs

(1) Enrollment Expansion and Gaps between Groups

The number of higher education enrollees which was 12,000,000 in 1960 grew to 88,000,000 in 1997. Particularly the rate of increase in developing countries is much more remarkable than in developed countries: in Africa - a 24 fold increase, a 16 fold increase in Latin America and an 11-fold increase in Asia and Pacific. However, this did not necessarily alleviate gaps among regions, between male and female, and among ethnic groups. Improvement regarding the male-female gap can now be seen in many regions, but the countries of West Africa are notable for their remaining gap.

(2) Limited Financial Resources

Even while the demand for higher education continues to grow, higher education institutions face a constant situation of limited budgets. On the other hand, in Sub-Saharan African countries where the financial situation is most severe, the per capita public expenditure on higher education is much higher than that for other educational levels. Among sub-Saharan African countries with the exception of South Africa, per capita public expenditure on higher education (operating expenditures only) is more than 100% of the per capita GNP;⁹ there are many countries where this figure is several times the per capita GNP. Excepting India and Nepal, all countries in the Asian region have a per capita higher education expenditure that is up to 30% of per capita GNP. Comparing this, one should become conscious of just how poorly the per capita higher education expenditures in Sub-Saharan Africa match with the scale of the countries' economies. In order to respond to the rapid increase in enrollees in the future as well, it is indispensable to introduce the "user pays" principle, to diversify financial resources and to design programs with higher cost-performance by making use of information and communication technology.

In addition, in order for each country to survive in the globalized economy, it is necessary to have a clear higher education policy that is strategic about the development of human resources and the results expected of higher education, as well as strong political commitment. Because many higher education institutions are connected to the vested interested of the existing administration, in countries where the political system is unstable, the lack of political commitment can be a big obstacle to the development of higher education.

⁹ The per capita public expenditure on higher education is especially high in Francophone African countries. One cause is the provision of scholarships.

(3) Declining Quality

In many developing countries, an expansion of higher education brings about declining quality. To secure quality education while responding to continued increasing demand, it is necessary to raise the quality of various aspects, including teachers, students, facilities, equipment, educational materials and methods, and financing. The quality of teachers is particularly indispensable for raising the quality of higher education; therefore, it is an urgent task to expand the number of students who complete graduate school. In addition, when higher education rapidly expands, the gap among different higher education institutions widens. In particular, in many countries, the lower quality of private universities compared to national public universities has been noted, and there is a need to create a system that will guarantee the quality of education and research.

(4) Diversified Needs

As a result of the expansion of higher education and the increasing complexity of society and the economy, higher education has needed to target the diverse backgrounds and needs of its students. Furthermore, various skills and abilities are demanded and to master them the levels of training have also become more diversified. The development of scientists and leaders at the elite higher education institutions is necessary, but the development of generalists through mass higher education is also necessary. Still on one more hand, together with the overall spread of education, specialized education that in the past took place at specialty schools or at the secondary level is now taking place at higher education institutions,¹⁰ and higher education is expanding its scope from the academic to the professional sphere. Furthermore, demand has been not just for education for those who have completed secondary education, but to offer places of study for the general citizenry throughout the course of their lives. However, it is impossible to encompass all the functions of higher education at a single higher education institution. Thus, one will have to address the needs from now on by dividing higher education institutions by their specialties. In addition, broadcast universities and others that make use of information technology can offer many formats of education to respond to varying needs.

1-3 International Trends

1960s-1980s:
Assistance to
vocational and
technical education

1-3-1 1960s - Early 1980s

In developed countries higher education has witnessed significant changes over the past 50 years, and its positioning among donor countries has

¹⁰ Nursing education and teacher education are representative examples.

had a large influence on trends in international aid.

In developing countries which achieved independence from their colonial past, higher education expanded with an unbelievable energy. The common idea arose that higher education institutions should provide the kind of curriculum in response to the needs of jobs that had been increasingly diversified and advanced. At the same time, based on the understanding that development assistance should efficiently develop human resources to promote economic growth, investment in education as a whole increased. At the higher education level, **technical education and vocational training directly connected with economic growth** came to be emphasized.¹¹ To donor countries, it was easy to limit cooperation to technical education where the connection to economic development as clearer than it was for basic or secondary education. It was also generally through that the results of such cooperation could be seen easily over a relatively short time.

1980s:

- Government expenditures reduction through the structural adjustment
- Basic education emphasized as fundamental human rights

1-3-2 1980s - Early 1990s

Entering the 1980s, amidst the world debt problem, a framework was constructed with World Bank and International Monetary Fund (IMF) structural adjustment programs at the core. In order to stabilize the macro-economy, the IMF set on developing countries **austere policies such as loan conditionality, reduction in budget expenditures and subsidies, higher taxes, and the reduction of wages of government workers. As a result, educational expenditures were reduced drastically**, and higher education budget in which per capita public expenditure (unit cost) was high was significantly affected. Furthermore, **the movement to recognize once again the importance of basic education as fundamental rights** gained strength and the idea that primary education's social rate of return was higher than that for higher education was advanced,¹² leading to primary education becoming the main current of educational aid.

World Conference on Education for All in 1990

With this flow of events, in 1990 **“The World Conference on Education for All”** was held in Thailand and a consensus for “Education for All” (EFA) was built. Because of this, developing countries and donors united to take on the issue of expanding basic education.

¹¹ Among the works that introduced the concept of “human capital” and called for the necessity of investment in education were Schultz, T.W. (1961) and Gary S. Becker ((1964) (1975)).

¹² Main proponents for the idea that the social rate of return of higher education is low include Psacharopolous, G. (1985). However, following this, various arguments were made about this research. The World Bank in a recent report concludes: “Methods of evaluating the benefits of higher education have been traditionally quite narrow, neglecting higher education’s role in generating public goods. The rate of return to the individual has generally been measured in terms of higher salaries, with only the increased taxes these incur counted as a public benefit. By this measure, investment in higher education delivers significantly small public and private returns.” (World Bank (2000) p.39)

From the latter half of the 1990s:

- Changes in the environment surrounding higher education
- Re-evaluation of the role of higher education
- Search for a new form assistance

1-3-3 From the Latter Half of the 1990s

In the 1990s, **rapid globalization of society and the information technology revolution brought about changes in society**. The role of knowledge in economic and social development became relatively larger and **reevaluation of the role of higher education** was demanded (Refer to 1-1 for detail).

The World Bank took as its theme for its annual World Development Report 1998/99 “Knowledge for Development,” and discussed the role of knowledge in promoting economic and social development. Regarding the field of education, the report stated: “To narrow knowledge gaps, societies must ensure basic education for all and provide opportunities for people to continue to learn throughout their lives. Basic education is the foundation of a healthy, skilled, and agile labor force. Lifelong education beyond the basics enables countries to continually assess, adapt and apply new knowledge.” It also stated about necessity of lifelong learning opportunities and the role for higher education in this point. Concretely, as an effective way of using the government’s limited sources, the private education sector should be used and encouragement should be given to private and nongovernmental provision of education. Also the decentralization of educational administration was mentioned. Furthermore, if communication infrastructure could be set up, through virtual universities, increased access to higher education could be planned and the quality level of education raised.¹³

World Conference on Higher Education in 1998

In October 1998 as this movement to reevaluate the role of higher education was strengthening, **the World Conference on Higher Education (WCHE)** was held in Paris led by UNESCO and with 2500 education specialists from 162 countries in attendance. At this conference, the World Declaration on Higher Education was adopted and a consensus reached among the involved institutions on the importance of higher education and its future direction. The declaration contained 17 articles delineating a future direction for higher education reform and priority actions for change at three levels (national level, level of systems and institutions, international level). (For main points, refer to Boxes 1-1 and 1-2.)

Besides this conference, among other things, in 2000 the World Bank put out a report reviewing aid to higher education. Thus, one could see a **new movement toward higher education cooperation**.

Box 1-1 World Declaration on Higher Education for the Twenty-First Century:

Vision and Action

In every country, higher education faces great challenges and difficulties on many sides. These include financing, access, improving quality and sustainability, employment of graduates, etc. In the latter half of the 20th century, higher education expanded conspicuously, but gaps in educational opportunities between industrialized

¹³ World Bank (1999)

and developing countries and among different socio-economic classes within countries widened. Education is a basic pillar for human rights and democracy, sustainable development and peace; higher education in particular is necessary for solving the various problems we find as we approach the 21st century.

Missions and Functions of Higher Education:

- 1) Mission to educate, to train and to undertake research
- 2) Ethical role, autonomy, responsibility and anticipatory function

Shaping a New Vision of Higher Education:

- 3) Equity of access
- 4) Enhancing participation and promoting the role of women
- 5) Advancing knowledge through research in science, the arts and humanities and the dissemination of its results
- 6) Long-term orientation based on relevance
- 7) Strengthening co-operation with the world of work and analyzing and anticipating societal needs
- 8) Diversification for enhanced equity of opportunity
- 9) Innovative educational approaches: critical thinking and creativity
- 10) Higher education personnel and students as major actors

From Vision to Action:

- 11) Qualitative evaluation
- 12) The potential and the challenge of technology
- 13) Strengthening higher education management and financing
- 14) Financing of higher education as a public service
- 15) Sharing knowledge and know-how across borders and continents
- 16) From “brain drain” to “brain gain”
- 17) Partnership and alliances

Source: UNESCO (1998b)

Box 1-2 Framework for Priority Action for Change and Development of Higher Education

This part of the conference document takes the actions presented in the Declaration and shows who should pursue these actions and how, by dividing the actions into three levels: national, level of systems and institutions, and international.

Priority Actions at National Level:

- 1) Ending of discrimination, merging of research and education, student participation, academic freedom and institutional self-government
- 2) Expansion of access to higher level education in developing countries and provision of services matching needs
- 3) Linkages between secondary education and lifelong education, and implementation of assisted training
- 4) Shrinking of gaps between industrialized and developing countries through provision of cooperation from industry and national governments

Priority Actions at the Level of Systems and Institutions:

- 1) Clarifying the missions of each institution so that they meet society's needs now and in the future

- 2) Strengthening cooperation between higher education and industry
- 3) Diffusion of uses of new science and technology
- 4) Strengthening of management capacity of educational institutions (e.g. interdisciplinary academic approaches, increased access for people with motivation and enthusiasm, strengthening of activities involving the community, building of relations with industry, establishment of transparent organizations that can withstand evaluation, improvement of teachers' educational capability and understanding of learning methods, promotion of research and strengthening of research in the higher education system
- 5) Expansion of access to higher education for adult learners

Actions to be Taken at International Level and, in Particular, to be Initiated by UNESCO:

- 1) Cooperation towards a comprehensive system
- 2) Promotion of academic mobility at the international level
- 3) UNESCO initiatives connected with other international linkages, clear setting of goals
- 4) Activities to change the "brain drain" to a "brain gain"
- 5) Promotion of improved relations with other international and national institutions and NGOs. Concretely, provision of information to other donor organizations, creation of databases, etc. Assistance to the poorest countries and regions where there is conflict or natural disaster.

Source: UNESCO (1998c)

Higher education and technical education have been traditionally the priority areas for Japan's educational assistance.

1-4 Trends in Japanese Assistance

Japan's assistance to higher education, outside of the Technical Cooperation implemented by JICA, includes the grant aid by the Ministry of Foreign Affairs, loan aid from the Japanese Bank of International Cooperation (JBIC) and acceptance of foreign students and research assistance of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Under the motto "Developing a country means developing its people," **priority of Japan's ODA has been placed on human resource development in higher education and technical education areas because they are thought to contribute directly to economic activity and technological progress.** Because of this, up until the 1980s, the main area of aid was that directed to establishment and expansion of faculties/departments in technological and scientific fields. However, towards the latter half of the 1980s, assistance for improving the research capacity of graduate schools and research centers in a wider array of fields began to be implemented. Recently, the target of the aid has widened even to university management and the field of higher education administration, and targets and forms of cooperation have been diversified. Below is an overview of trends in Japan's assistance to higher education covering the recent five years between 1997 and 2001.

Technical cooperation:
Higher Education takes one of the pivotal positions among education sub-sectors by number of projects and personnel dispatched.

1-4-1 Technical Cooperation

JICA's assistance in the area of higher education amounted to 19% of its educational assistance over the period. Thus, along with vocational training/industrial and technological education and basic education, it constituted one of the central pillars of JICA's educational cooperation (Chart 1-2).

Within JICA's technical cooperation, the number of higher education projects was large, second only to those in the vocational training/industrial and technological education category. In 2001, 20 of 93 education projects, or approximately 20%, were in higher education. In technical training of overseas participants, in addition to counterpart training and third-country training, from 2000 long-term courses were started where academic credits could be earned, and in 2000-2001 163 long-term trainees were accepted into the program. Among those accepted into this training scheme, trainees in science and engineering, agriculture, environmental sciences, and medicine were numerous, but recently areas in educational administration such as school management and school office administration have been included.

In the area of dispatch of technical cooperation experts, higher education accounts for about 40% of education overall, which makes for a declining trend. The number of higher education experts dispatched in 2001 was less than 80% of the number in 1998. The specialty of the experts dispatched centered on science and engineering as in the past, but the number in social development fields like politics, political participation and gender as well as IT areas has been increasing.¹⁴

On the other hand, the number of JOCV and Senior Volunteers dispatched shows an upward trend. Those dispatched in the higher education area amounted to approximately 20% share of those in education overall (2001). Nearly 40% of those dispatched were teachers of Japanese language. Next were systems engineers and math and science teachers.

Diversifying cooperation schemes and areas

Besides them, in recent years, higher education assistance through other schemes than typical Technical Cooperation Projects has been implemented, even though the number of such projects is small. For example, Student Loan Program was established by use of the **“Development Study”** and projects such as **“HIV Voluntary Counseling and Testing Center”** and **“Integrated Cooperative Research for Malaria Control”** were implemented through the **“JICA Partnership Programs.”**

In this way, the defining characteristics of JICA's technical cooperation are:

¹⁴ For example, “Participatory Rural Development Methods and Approaches” (1998) and “Participatory Rural Development University Outreach Project” (2001) in Sri Lanka, and “Educational Applications of Internet Media” (2002) in Saudi Arabia were implemented.

- 1) **Cooperation for higher education remains a significant part of JICA' overall education cooperation.**
- 2) In addition to the traditional assistance for strengthening science and technology specialties, **cooperation for educational administration or other social science areas is increasing.**
- 3) Among the target regions, Asia comprises a large part but recently **the dispatch of JOCVs and experts to Africa is gradually increasing.**

Grant Aid:
"Japan's Grant Aid for Human Resources Development Scholarship"

1-4-2 Grant Aid

Grant Aid projects continue to be used to establish and construct schools and centers and outfit such facilities with equipment - relatively large-scale assistance of "hardware" type.¹⁵ The majority of Grant Aid projects have assisted Asian countries, and grant aid to other regions has been rather limited. In addition, from 1999 "**Japan's Grant Aid for Human Resources Development Scholarship**" (JDS) was introduced. Based on the needs of developing countries, JDS would give financial assistance to Japanese universities with well-organized system for accepting foreign students. In 2001 4 of 7 Grant Aid projects in higher education were implemented under JDS, which has become a pillar of Grant Aid funding.

Loan Aid:
• Importance has been placed on Asia.
• Assistance by combination of "hardware" and "software."

1-4-3 Loan Aid

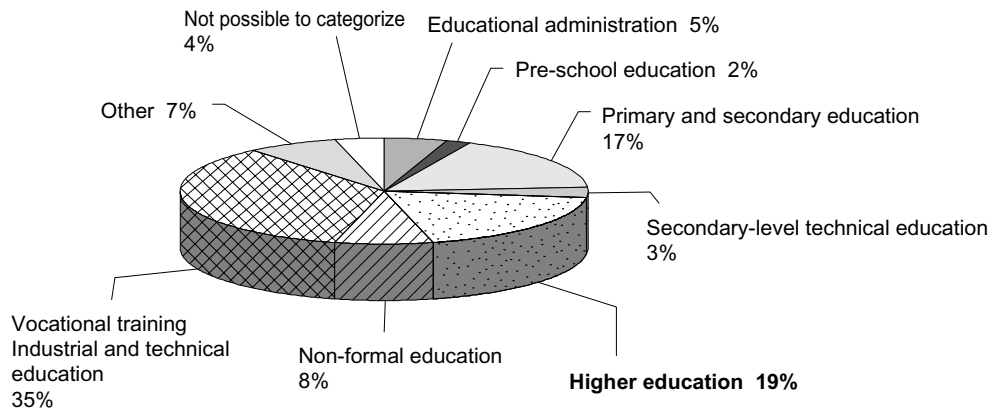
The Japanese Bank for International Cooperation (JBIC)'s yen loans to the education sector have been limited compared to loans for other sectors. Of the 2,561 yen loan projects implemented from 1977-2002, only 51 were in education and the monetary figure amounts to only 1.6% of the loan total.¹⁶ However, in the latter half of the 1990s, particularly following the Asian financial crisis, consciousness that human resource development was increasingly necessary had risen. Especially the idea that economic growth could be directly affected by higher education gave hope and became emphasized. Of the yen loans in the education area, 37 of the 51 were for higher education.

Of the loan aid projects in higher education as of 2002, all 37 were implemented in Asian countries. Of them, Indonesia had the most at 15, followed by South Korea (11). Recently, projects in China have been increasing. Fields targeted for these loans have been areas like basic science, chemistry, agriculture, and fishery and marine science. Thus, almost all have been in scientific and technical fields. Up until the mid-1980s, the main content of loan aid was provision of "hardware" for equipping facilities, and through that improving the environment for education and research. However, after the mid-

¹⁵ In 1997-2001, the content of grant aid in higher education was 7 projects (35%) for establishment and construction of education and research institutions, 5 projects (25%) for provision of equipment, 7 projects (35%) for aid for foreign students and 1 project (5%) for university faculties/departments reform programs.

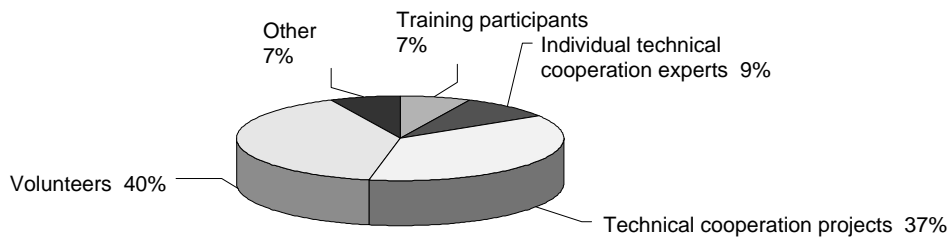
¹⁶ JBIC (2002a) p.85

Chart 1-2 Higher Education Cooperation within Overall JICA's Educational Assistance



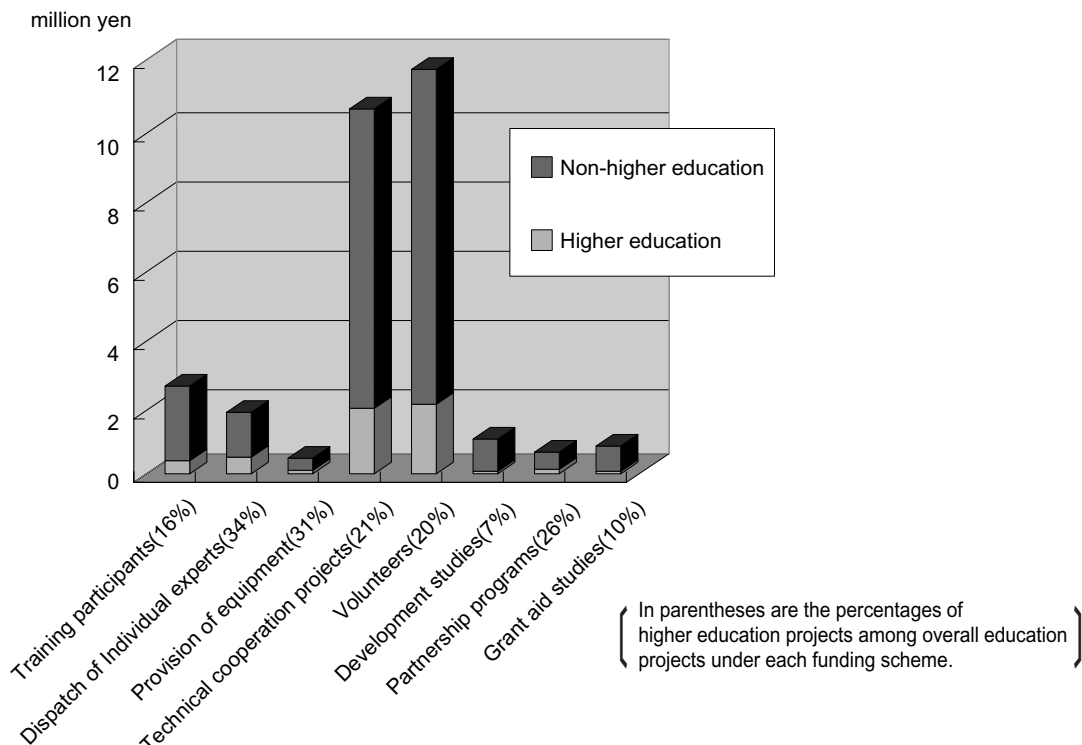
* 2001 JICA Educational Cooperation Project Expenditures by Sub-sector

Chart 1-3 JICA Higher Education Cooperation



* 2001 JICA Higher Education Cooperation Project Expenditures by Scheme Type

Chart 1-4 JICA Educational Cooperation



* 2001 JICA Educational Cooperation Project Expenditures by Scheme Type

1980s, added to this assistance for “hardware,” there was an increase in aid for “softer” things related to human resource development such as loans for foreign students and exchange programs for teachers at higher education institutions.¹⁷

Box 1-3 JBIC's Cooperation to Higher Education in China

In China, in addition to economic and social changes such as the widening gap among regions resulting from rapid economic growth and the promotion of restructuring, the spread of primary and secondary education has brought about a rapid expansion in needs for higher education. Based on this background, in 2001, JBIC provided a 30 billion yen loan to the Chinese government to rectify regional inequities and train human resources to contribute to growing a market economy and promotion of industry. There were six target regions: the five provinces of Shaanxi, Gansu, Sichuan, Yunnan, and Hunan and the municipality of Chongqing. A total of 64 universities and normal schools in these areas received both “soft” and “hard” assistance. The “hard” assistance included better provisioning of the universities for their education work, including expansion and reconstruction of facilities, establishment of language laboratories, research equipment, and the introduction of an information network. “Soft” provisions, on the other hand, included a training and research program in Japanese universities for teachers from the targeted universities as the main content of assistance.

Source: JBIC (2002b) p. 24.

Assistance based on the “Plan to Accept 100,000 Foreign Students.”

1-4-4 Acceptance of Foreign Students

The Ministry of Education, Culture, Sports, Science and Technology (MEXT or Monbukagakusho), based on the “**Plan to Accept 100,000 Foreign Students**”¹⁸ by the beginning of the 21st century, has actively developed a system to support foreign students in Japan. The measures include the “Japanese Government Scholarship” (“Monbukagakusho Scholarship”), financial aid to privately financed students, assistance for foreign government-sponsored students with university preparatory course and living accommodation.¹⁹ 45% of all the foreign students in Japan and 14% of Monbukagakusho Scholarship students studied at universities (undergraduate) while 80% of them were enrolled in graduate schools. In addition, 30% of Monbukagakusho Scholarship students majored sciences and engineering.²⁰ Thus, the assistance has been welcoming to graduate students and those in the sciences and engineering.²¹

However, if one compares these numbers with those of other

¹⁷ JBIC Institute (2002) p.23

¹⁸ MEXT (2001)

¹⁹ The number of foreign students in 2001 was approximately 79,000.

²⁰ MEXT (2001)

²¹ The costs for accepting the Japanese Government Scholarship (Monbukagakusho Scholarship) students amount to between one half and one-third of educational ODA. JICA’s educational assistance is hoped to have systematic cooperation with MEXT.

industrialized countries, as in the past, the number of foreign students is still small. Thus, it is an urgent task to revolutionize the qualitative structure of universities by developing and expanding educational programs, taking care to address the obstacles faced by foreign students, and improving the systems and preparation for foreign students.

Bilateral scientific exchanges and Core University Programs in Asian countries

1-4-5 Promotion of Scientific and Academic Research

In order to plan for the promotion of scientific and academic research through international research exchanges, MEXT of Japan is implementing through the Japan Society for the Promotion of Science (JSPS) technical cooperation such as **bilateral scientific exchanges** and **Asian Science Seminars**. JSPS gives financial support for joint research projects and scientific seminars organized by Japanese and foreign researchers. JSPS also implements the **Core University Programs** providing a framework for international cooperative research in specific fields and topics at universities in Japan, ASEAN 6 countries, China and South Korea.²² The Asian Science Seminars are held several times a year in Japan or other countries and introduce of the latest scientific advances and promote exchanges with between Asian researchers.

Cooperation through UNESCO – UNITWIN/UNESCO Chairs

1-4-6 Cooperation through International Institutions

MEXT of Japan cooperates with UNESCO and United Nations University in higher education. For UNESCO's educational projects, approximately 200 million yen of MEXT's ODA budget was appropriated (FY2003), and in the higher education area, cooperation was given for the establishment of **UNITWIN (University Twinning) / UNESCO Chairs**.²³ UNITWIN aims to build **networks of higher education institutions** between and among regions and has as its goal developing collaborative relationships among various schools and universities, between developing and industrialized countries. At present, Japan's Bunkyo University is participating in the Asia-Pacific Distance and Multimedia Education Network (APDEM), and is linking with universities in Australia, China, Indonesia, South Korea, Malaysia, the Philippines, Viet Nam and Thailand and developing a distance and multimedia education research network within the region. UNESCO Chairs program aims to promote interuniversity cooperation between high-level, internationally recognized and researchers and to develop Centers of Excellence (COE) in the region. At present, activities in several fields are taking place: 1) environmental management and development and design of infrastructure; 2) shipbuilding design; 3) sociology of comparative agriculture; 4) information and communications, and so on.

²² JSPS (<http://www.jsps.go.jp/english/index.html>)

²³ MEXT "International Cooperation" (<http://www.mext.go.jp/english/org/exchange/65.htm>)

Box 1-4 Report of the Committee for International Cooperation in Education

The Committee for International Cooperation in Education, set up as a private advisory body for Japan's Minister of Education, Culture, Sports, Science and Technology submitted a final report concerning the Ministry's future policy for international educational cooperation on July 30, 2002. In the first part of the two-part report, based on current situation of the global tide towards Education for All evident at the Kananaskis Summit (2002) and the importance of educational cooperation for nation-building in Afghanistan, measures for "strengthening the structure of MEXT for the promotion of international cooperation," and "International cooperation system in primary and secondary education sectors" were recommended. In the second part of the report, "conversion of the international development cooperation system at Japanese universities" and "solidification of research and analysis system for ODA strategy" were included. In particular, a proposal was made for improving organization of Japanese universities for the development assistance.

The concrete recommendations about "conversion of the international development cooperation system at Japanese universities" include the shifting from the "individual" cooperation by university experts to the "organizational" cooperation in order to promote international development cooperation through universities. Also proposed were ideas like the establishment of a support center to strengthen mutual relationships between Japanese universities, international organizations and consulting companies, as well as overseas universities.

Source: MEXT (2002)

Besides above-mentioned cooperation, in order to promote academic cooperation between Japanese universities, academic associations and United Nations University (UNU), from 1992 MEXT provides assistance to the Japan-UNU Joint Research and cooperates for its effective and efficient management.²⁴

²⁴ MEXT "International Exchange and Cooperation"
(<http://www.mext.go.jp/english/org/eshisaku/ekokusai.htm>)
JICA/IFIC (2000) p.120