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Exploring Potentials of a Japan-Philippines Economic Partnership in Human Resource Development

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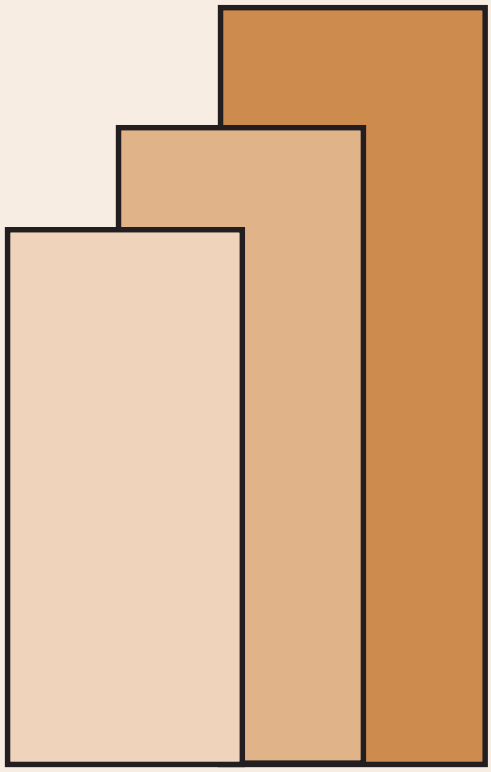

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Table of Contents

Abstract v
Executive Summary vi

Introduction 1

Trends and Patterns in Human Resource Development 2

a. Status of Human Resource Development in Japan and in the Philippines 2
b. Health and Nutrition 3
c. Education and Training 8

Potential Areas of Bilateral Cooperation in HRD between Japan and the Philippines 16

a. On Japan's Ageing Population 16
b. On Health and Medical Care 18
c. On Technical Cooperation 19
d. On Professional/ Technical Training 21
e. On Collaborative Technical Education and Training 21
f. On Education and Research Institutions 22
g. On Lifelong Learning 26
h. On Mutual Recognition of Professional Qualifications and Education 27
i. On Language Proficiency 29
j. On Information and Communication Technology 30
k. On Exchange of Government Officials for Capacity-Building 32
l. On International Youth Exchanges 33
m. On Cultural Exchange 34

References 36

Tables 39

Figures 50

List of Tables

1. Human Development Indices, Japan and the Philippines, 1975-2000 40
2. Selected Human Development Indicators, Japan and the Philippines, 2000 40
3. Per Capita Food Intake Per Day, in Ap, gm*, Philippines, Various Years 40
4. Adequacy of Energy and Nutrient Intake, Per Capita Per Day, as percent of RDA, Philippines, Various Years 41
5. Prevalence of Vitamin A Deficiency and Iron Deficiency Anemia Among Various Groups, in percent, Philippines, 1993 and 1998 41
6. Intake of National Nutrition, Japan, 1970-2000 42
7. International Comparison of Life Expectancy at Birth, in years 43
8. Number of Medical Professionals, Japan, 1984-2000 43
9. Medical Insurance Benefits Paid To The Elderly, in hundred million yen, Japan, FY 1983 43
10. Basic National Elementary Education Data, Japan, 1997-2002 44
11. Basic National Lower Secondary Education Data, Japan, 1997-2002 44
12. Basic National Upper Secondary Education Data, Japan, 1997-2002 44
13. Basic Higher Education Data, Japan, 1997-2002 45
14. Basic National Elementary Education Data, Philippines, 1997-2003 45
15. Basic National Secondary Education Data, Philippines, 1997-2003 46
16. Comparative Mean Percentage Score (MPS) of Grade VI pupils who Took the National Elementary Assessment Test (NEAT), 1997-2001 46
17. Efficiency in Performance Indicators for the Elementary School Education System, in percent, Philippines, 1997-2003 46
18. Efficiency in Performance Indicators for the Secondary School Education System, in percent, Philippines, 1997-2003 47
19. Comparative Mean Percentage Score (MPS) of Fourth Year Students who took the National Secondary Assessment Test (NSAT), 1997-2001 47
20. Japan's ODA Expenditures as Technical Cooperation to the Philippines, in $US million (% of net disbursements for current year), 1996-2000 47
21. Data on Higher Education, Japan and Philippines, 2002
22. Minimum Requirements of the Japanese Language Certification Test (JLPT) by Certification Level 48
23. Partial List of Schools and Institutions Related to Japanese Language Education and Japanese Studies 49

List of Figures

1. Population Size, in millions, Philippines and Japan, 1990-2000 51
2. Crude Birth Rate and Crude Death Rates, Philippines, 1981-1998 51
3. Selected Demographic Indicators, Japan, 1983-2001 52
4. Selected Mortality Trends, rate per 1,000 live births, Philippines, 1990-1995 52
5. Change in Population by Broad Age Groups, Japan, 1984-2002 53
6. Health Human Resources, Philippines, 1995-2000 53
7. Health Expenditures by Source of Funds, Japan, 1983-2000 54
8. Health Expenditures by Use of Funds, Philippines, 1991-2000 54
9. Health Expenditures by Source of Funds, Philippines, 1991-2000 55
10. Organization of the Philippine Education System 55
11. Organization of the Japanese Education System 56
12. Undergraduate Courses by Major Fields of Study, Japan, 2001 56

ABSTRACT

This paper explored the potentials of including the broad realm of human resource development into the proposed bilateral economic agreements between Japan and the Philippines. The authors greatly recognized that the extent and sustainability of a nation's economic development is largely anchored on the degree of development of its largest asset, the human resource, hence exploring possible areas where such asset can be developed and make the most of is essential.

An extensive review and comparison of the current human resource situation of the two countries was conducted primarily to delineate possible areas of cooperation and/or complementation, particularly on the general areas health, nutrition, and education and training. These human resource areas, according to Herrin (2002), act as a yardstick of human resource improvement. Concentrating on these areas, at least thirteen possible intervention or cooperation areas were identified and discussed by the study. These areas are: (i) the concerns on Japan's ageing population; (ii) drawing on Japan's assistance on health and medical care; (iii) channeling Japan's ODA - technical cooperation to HRD; (iv) facilitating professional and technical training; (v) collaborative technical education and training; (vi) cooperation of education and research institutions; (vii) exploiting both countries strong pronouncements on lifelong learning; (viii) mutual recognition of professional qualifications and education; (ix) mutual assistance on promoting language proficiency; (x) information and communications technology; (xi) exchange of government officials for capacity building; (xii) participation in international youth exchanges; as well as (xiii) cultural exchanges. These possible areas of cooperation were all reckoned to be imperative so as to fully harness the competitive advantages of one country (e.g. Japan) in order to fill in the specific human resource needs of the other (e.g. Philippines) and vice versa.

Keywords: human resource development, capacity-building, mutual recognition, Japan-Philippines Economic Partnership

EXECUTIVE SUMMARY

This paper aims to explore the potentials of a Japan-Philippines economic partnership in human resource development. Specifically, it aims to: (1) provide a comparison of the human resource situation of the Philippines and that of Japan; (2) pinpoint possible areas of cooperation and complementation regarding the bilateral agreement on human resource development; and (3) formulate strategies on how to improve the human resource in the Philippines and Japan on the identified areas of complementation.

Trends and Patterns in Japan-Philippines Human Resource Development

Status of Human Resource Development in Japan and in the Philippines

- Japan was listed as the 15th most competitive nation while the Philippines trailed behind at rank 54 in the World Economic Forum (WEF) Global Current Competitiveness Index Ranking in 2001. Moreover, the Human Development Index (HDI) ranks Japan as the 9th highest among the countries in world for its effort to further human development, while the Philippines placed 77th.

- Life expectancy at birth in Japan is almost 15 percent higher than the Philippines, which implies relative success of the former in expanding knowledge of causes of diseases and in the methods of prevention, treatment, and health maintenance and protection. Both countries, on the other hand, are almost at par with each other in furthering access to education in the primary, secondary, and tertiary level.

- Per capita income in the Philippines in 2000 is only 15% of the purchasing power parity of the Japanese. This has severe implications for the Philippines in terms of expanding options or choices in building human capabilities. Access to health services, education, training, and other human development initiates is constrained and limited.

Health and Nutrition

- For the Philippines, a rapidly growing population exerts pressure for the expansion of health services and a greater amount of financial and manpower resources devoted to the provision of health care. Total health expenditure (in current prices) from 1991-2000 has grown at an average annual rate of 13.7%, outpacing that of population growth (2.3%). Also, a general decreasing trend was observed on the mean one day per capita nutrient intake of the Filipinos.

- The state of the Philippines' health sector may be summarized as follows: (1) inefficient and poorly targeted hospital system; (2) ineffective mechanism for providing public health programs; (3) health human resources maldistribution; (4) inadequate regulatory mechanisms for health services and products; and (5) existing issues of health care financing and inefficient sourcing or generation of funds for healthcare.

- In Japan, an expansion of health services is brought about by the pressure from an ageing population, as older age groups are more prone to illnesses and need considerably more and longer health treatments. From 1984 -2000, the total number of health care facilities has expanded, as well as the number of medical professionals.

- With Japan's medical insurance system having a universal coverage, the ageing of the population brings about a problem as a greater percentage of the total benefits are paid out to the elderly. Thus, while health services are still virtually free, individuals have been required to make increasing co-payments which account for around 10-30% of total medical costs to mitigate expenses.

Education and Training

- Enrollment of elementary Japanese students has been decreasing through the years (7.9 million in 1997 to 7.2 million in 2002). On the other hand, 13 million pupils are enrolled in Philippine public and private elementary schools at present, with a 6.2 percent annual increase. As a result, teacher-student ratios in Japan are much lower than that of the Philippines (1:18 for Japan basic elementary level compared to 1:36 for Philippine elementary level). Similarly, teacher-student ratios are pegged at 1:40 for secondary level education in the Philippines (2003), and 1:26 for the lower secondary and 1:15 for the upper secondary level education in Japan (2002).

- Teacher shortages are not really much of an issue in Japan in contrast to the Philippines' case. In addition, provision of Philippine tertiary education suffers from almost non-existent or ill-equipped libraries and laboratories and poorly paid and trained college faculty.

- There are over 3,000 technical and vocational education and training schools and institutions in the Philippines as of 2002. TESDA is responsible for assessing and certifying people enrolled in these institutions. The highest certification rate (91%) was observed in maritime-related skills, while information and communication technology (ICT) skills received the lowest certification rate (18%).

Potential Areas of Bilateral Cooperation in HRD between Japan and the Philippines

Japan's Ageing Population

- The Japanese government is facilitating the shift in the burden of caring for the elderly back to the family, with the middle-aged women being targeted for the role of primary caregivers. However, the observed increase in the labor participation rate of Japanese women and declining co-residence patterns in Japan reflect higher opportunity costs for women and the shift in values about caring for elderly people.

- The Philippines could extend cooperation to Japan by supplying more care-giving and nursing services to Japan's ageing population. It is deemed important for

- Japan and the Philippines to reach an agreement on the requirements for entry, with language training and issues on the recognition of professions and education as primary concerns.

Health and Medical Care

- JICA's present cooperation in this aspect includes: (a) education in clinical medicine in hospitals; (b) training of medical staff; (c) project-type technical cooperation in supplying vaccines and inoculation equipment; and (d) improvement of reproductive health through provision of essential items.

- However, the difficulties associated with the devolution of health services to LGUs opens up more avenues for cooperation: (a) project-type technical cooperation to strengthen the collaboration between regional and provincial health bureaus; (b) expansion of health services to remote and poor areas, essentially by educating people on population and family planning; (c) local in-country training to promote maternal and child health; and (d) project-type assistance in improving general health and public hygiene at the grassroots level, involving the exchanges of among people from both countries.

Technical Cooperation

- Japan's ODA expenditures as technical cooperation to the Philippines totaled US$1,391.91M from 1996 to 2000, extended mainly to the agriculture, industrial technology, health, and transportation sectors. For example, the project-type technical cooperation has been continually implemented in the health sector since the 1960s. Also, project-based technical cooperation has been administered in the field of science and mathematics education in conjunction with dispatching of experts and Japan Overseas Cooperation Volunteers (JOCVs), and provision of second-country training (JICA, 1999).

- Previous technical cooperation schemes have been merged into a single cooperation known as the Technical Cooperation Project (TCP) to improve the quality and efficiency of cooperation projects. Under this new approach, the TCP could be composed of any one or a combination of the previously separate components: (a) Expert dispatch; (b) Equipment supply; (c) Overseas training in Japan; (d) In-country training/Second country training; (e) Third country training; (f) Facility development; (g) Community empowerment; and (h) Research support.

Professional and Technical Training

- Overseas training conducted in Japan provides participants motivation by seeing the utilization of technology and ideas not yet available in their own countries. Another benefit would be the fostering of friendly attitudes towards other participants; in return, Japanese have a heightened sense of international awareness.

- On the other hand, the other option of overseas training involves organizations in developing countries that provide training for their own people (second country

training) or for people in neighboring countries (third country training). The former encourages the diffusion of results of Japanese technical cooperation extended to developing countries while the latter facilitates the transfer of technology in line with the participating countries' needs and encourages implementing countries to engage in self-help efforts.

Collaborative Technical Education and Training

- Under R.A. 7796, TESDA provided for the rationalization of providing technical education in the Philippines. TESDA is mandated to provide relevant, accessible, high quality, and efficient technical education skills and development in accordance with the development goals of the government. Similarly, Japan places high premium in training individuals; for example, the government has been providing and accepting trainees to Japanese universities and industries

- Joint technical training and education can facilitate mutual recognition of manpower skills and qualification of manpower transfers from either country. The Philippine Dual Training Act (R.A.7686) provides for a training system that combines in-plant and in-school activities conducted by accredited institutions. On a side note, accreditation can be extended to Japanese firms and industries in both countries that have been providing training to Filipino workers.

- R.A.7686 also provides incentives for Japanese firms participating in the dual training system of TESDA via tax relief on the following areas: agriculture and fishery, processed food and beverages, tourism, decorative crafts, and others. Training areas can also be extended to include the emerging skills demand of Japan's industrial society as well as lifelong learning areas.

Education and Research Institutions

- Studying in Japan promotes mutual understanding, friendship and scholarly exchange in addition to fostering greater unity between the two countries. Alumni institutions build opportunities for personal networks and improve the standing of previous and current Filipino students.

- ODA are generally concentrated on elementary and secondary education; the extension of assistance to public tertiary education (e.g. to UP System) would be a big enhancement to the system's multi-tiered functions (instructions, extensions, and research).

- Further cooperation between the Philippines and Japan can be enhanced through media and modes of instruction to improve participation and completion rate in the elementary and in the secondary education. Also, a mutual agreement could be reached on the mobility of educational resources such as faculty and student exchanges, library resource exchanges, research grants, professorial lectures and publication grants to scholarly works, and joint research and development initiatives.

Lifelong Learning

- The Philippine concept of lifelong learning as identified by Conferido (1998) is focused on workplace learning and should be well within the interests and partnership agreements among the tripartite sectors (employers, employees, trade unions, and the government). On the other hand, for the Japanese society the concept of lifelong learning goes beyond the organized learning through schools and social education; it covers learning achieved through a number of social factors such as involvement in the areas of sports, outdoor activities, hobbies, recreation, and volunteer activities.

- Lifelong learning is important in order to support Japanese in coping with social (e.g. ageing population), economic, and technological changes, including the substantially increased use of higher technology, growth in information technology, internationalization, and structural changes that are taking place in the business and industry sector.

- Both countries have relatively strong policy pronouncements in promoting lifelong learning and providing a wide variety of adult educational activities as already indicated in the Lifelong Learning Law of Japan and the Education for All-PPA and the Non-Formal Alternative Learning Systems of the Philippines.
- Though there exists an obvious advantage of the lifelong learning system of Japan such as the kôminkan, the Philippines can tap and collaborate with a wide variety of challenging certification programs, on-the-job training by businesses, the University of the Air, and private enterprises that provide educational activities to adults.

Mutual Recognition of Professional Qualifications and Education

- Mutual recognition agreements are identified as the most common way to achieve mutual recognition of qualifications, allowing for the reconciliation of differences in education, examination standards, experience requirements, regulatory, influence and various other matters. This would progress and speed up the exchange of professionals and intra-corporate transfers of personnel between the two countries, considering the fact that Japan made commitments on the residency status of non-Japanese professionals such as accountants, engineers, legal and law practitioners, and specialists in humanities and international services (Tullao, 2003).

- The memorandum would facilitate the opening up of the over 600 national certifications and proficiency examination areas officially approved and recognized by Japanese government ministries to Filipino migrant workers.

Language Proficiency

- Technical cooperation on language proficiency, Japanese for Filipinos and English for Japanese, can close gaps and eliminate natural barriers to employment and movement of natural persons between the two countries. Technical assistance agreements can be made with Japan, such as language education classes, training of Japanese language teachers, financial assistance for administering language

proficiency and teaching competency tests, through the MEXT and the Japanese Agency for Cultural Affairs.

- The institution of the Japanese Language and Cultural Center is being expected to improve the capacity, capability as well as language proficiency of TESDA in preparing technical and skilled workers for Japan. On the other end, the Philippines can commit trainings, workshops, and short courses on English proficiency for Japanese workers and business people.

Information and Communications Technology

- The pool of ICT professionals from the Philippines can very well bridge the supply-demand gap especially that the Japanese government has substantially eased the requirements for the Philippine IT workers who are interested to work in Japan.

- The apparent difference in testing and certification standards is an important barrier to mobility of IT experts across borders, thus mutual recognition is important. The Japanese IT Standards Examination (JITSE) would facilitate certification of qualification of Filipino workers to the minimum ICT skill requirements for employment as implemented by the METI of Japan and the country's DTI.

- Assistance through review sessions to be conducted by Japanese IT experts and provision of review materials will improve the passing rate of examinees.

Exchange of Government Officials for Capacity Building

- Some specific assistance measures the Philippines could request from Japan could include the following: (a) Local administrative officials could seek intensive training in Japan; and (b) Japan could provide training in the Philippines to local administrative officials in order to create a network among LGUs.

- Aside from overall capacity-strengthening, it is necessary to address the problems of LGUs concerning service provision, which opens up other avenues for cooperation such as Japan providing development funds and dispatching advisory experts.

International Youth Exchanges

- JICA's Youth Invitation Program invites young people from developing countries to Japan for study in their fields of specialization. A bilateral agreement between the Philippines and Japan will strengthen the existing invitation program and can lead to more participation of Philippine youths through facilitation of the requirements needed for the Youth Invitation Program.

- In return, the Philippines could consider setting up its own invitation program such that a mutual exchange program is formed between the two countries. In this aspect, the Philippines could request assistance from Japan in setting up the requirements and activities for this youth exchange.

- Also, the proposed bilateral agreement between the Philippines and Japan opens up the option of requesting/accepting more JOCVs into the country.

Cultural Exchange

- The promotion of cultural exchange builds ties between nations enhancing appreciation for other cultures, and learning valuable skills for living in a global community as well as in cultivating alliances.

- The Cultural Grant Aid Program under Japan's Official Development Assistance (ODA) scheme for the Philippines is generally concentrated on the improvement of equipments in cultural and higher education institutions. The exchange of cultural persons can be stretched out to include the invitation and dispatch of national artists and specialists.

Exploring Potential of a Japan-Philippines Economic Partnership in Human Resource Development[1]

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I. INTRODUCTION

The 1993 Asia Pacific Economic Cooperation (APEC) Joint Ministerial Statement in Seattle, Washington acknowledged the people of the Asia Pacific as the region's single most important asset. APEC acknowledged that the dynamism of the region is being represented by the changing human resource needs compelled by changing trade patterns, industrial restructuring and other economic changes. Developing human resource assets is therefore imperative in at least two simple yet enormous objectives in achieving economic development: (1) to support the country's economic growth in the long run and (2) to break the transmission of poverty from one generation to the other (MTDP, 2002). Harbison (1973) noted that a country which is unable to develop its people and to utilize them effectively in the national economy would be unable to develop anything else.

The magnitude, profundity, and sustainability of a nation's economic development however are largely anchored on the extent of development of its largest asset, the human resource. Human resource development (HRD) covers a broad range of economic and social development processes that contribute to improving the physical, social, and mental capabilities of individuals and enhancing their quality of life (UN, 1993). It includes initiatives in improving health, nutrition, and basic education. Despite impressive advances in improving the quality of human resources, disparities in income, education and skills, health, and access to employment among countries continue to exist. Most of the time, this arises out of the ineffectiveness of the relevant service delivery systems to reach disadvantaged and vulnerable social groups (UN, 1993).

It is in this regard that certain issues concerning human resource development need to be identified. With the proposed Japan-Philippines Economic Partnership Agreement (JPEPA), bilateral trade agreement opens up fresh opportunities for cooperation in the realm of human resource development between the two countries. Strategies for harnessing the competitive advantages of one country in order to fill in the specific human resource needs of the other should be put in place, with the proper evaluation of the impacts of such strategies.

This paper thus aims to explore the potentials of a Japan-Philippines economic partnership in human resource development. Specifically, it aims to: (1) provide a comparison of the human resource situation of the Philippines and that of Japan; (2) pinpoint possible areas of cooperation and complementation regarding the bilateral agreement on human resource development; and (3) formulate strategies on how to

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improve the human resource in the Philippines and Japan on the identified areas of complementation.

II. TRENDS AND PATTERNS IN JAPAN-PHILIPPINES HUMAN RESOURCE DEVELOPMENT

a. STATUS OF HUMAN RESOURCE DEVELOPMENT IN JAPAN AND IN THE PHILIPPINES

In 2001, the World Economic Forum (WEF) produced the Global Current Competitiveness Index Ranking based on the extent of availability of cutting-edge production and distribution technologies, condition of human resources, and existence of institutional infrastructure necessary to make the top class competitiveness possible. In this global competitiveness ranking, Japan is listed as the 15th most competitive nation while the Philippines trails behind at rank 54. This index provides a basic assessment of the status of human resources development in each country to participate in and move smoothly with the changing manpower demand, skills, and proficiency requirements of global interdependence; and it is very apparent that the Japanese has clear-cut advantages over the Filipinos.

The Human Development Report prepared by the United Nations Development Program (UNDP) (2003), however, reported that economic growth, increased international trade and competitiveness, investment, and technological advances are all means and not the end in the realm of fostering human resource development. UNDP (2003) maintains that human development is about expanding their choices to lead lives they value. Basic to expanding choices is building human capabilities to lead a long and healthy life, being educated, having access to needed resources for a decent living, and being able to participate in the life of one's community.

In this regard, the Human Development Index (HDI) is an important indicator for assessing and evaluating the status of human resource development. The indicator is constructed basically by the weighted aggregation of human life expectancy, adult literacy and schooling gross enrolment ratios and GDP per capita. Table 1 shows the comparative indices of Japan and the Philippines from 1975 to 2000. Similar to the initial observation, human resource development in Japan is still by far more advanced than the Philippines. Classified by the UNDP as a high-income country, Japan ranked 9th among the countries in world for its effort to further human development, while the Philippines, as a middle-income country, placed 77th. Looking closely at the statistics, the latest performance indicator for the Philippines, 0.754 for 2000, even lags behind the performance of Japan 25 years ago (0.854).

The apparent disparity in the level of human development between the two countries can be seen in Table 2, showing the disaggregated components of the HDI index. Life expectancy at birth in Japan is almost 15 percent higher than the Philippines, which implies relative success of the former in expanding knowledge of causes of diseases and in the methods of prevention, treatment, and health maintenance and protection. Both countries on the other hand are almost at par with each other in furthering access to education in the primary, secondary, and tertiary level.

However, per capita income in the Philippines in 2000 is only 15% of the purchasing power parity of Japanese. This has severe implications for the Philippines in terms of expanding options or choices in building human capabilities. The latter access to health services, education, training, and other human development initiatives is now being constrained and limited.

There are obvious lessons and experiences to be learned from Japan's human development process. Though one should keep in mind that these trends do not explicitly nor implicitly suggest that human resources in the Philippines are by far inferior to Japanese standards, but rather these indicators are reminiscent of the areas or entry points for intervention in terms of policy, for development and technical assistance and for enhancing the position of health, nutrition, and education in national priority ranking.

The identification of policy entry points and/or cooperation areas of the Philippines with Japan on health, nutrition, and education are the main concentration of this study. These human resource areas, according to Herrin (2002), act as a yardstick of human resource improvement, with the interrelationships described as follows:

1. The mutually reinforcing effects of malnutrition and poor health among infants and young children reduce their survival chances;

2. Among the survivors, malnutrition and poor health will adversely affect the children's mental and physical development;

3. These mental and physical handicaps are manifested at the school age, contributing significantly to low levels of achievement and early dropping out of school;

4. Upon entering the labor force, these children who are now young adults are doubly handicapped: first by the effects of poorer mental and physical development during early childhood, and second, by less schooling and poor achievement in school;

5. Consequentially, these young adults will become less productive members of the labor force, thus significantly reducing the overall productive potential of the economy.

b. HEALTH AND NUTRITION

Structure of Health and Nutrition Systems

In the past 25 years, the Philippine health care system has been strengthened with the following milestones: adoption of Primary Health Care (1979); integration of public health and hospital services (1983) through Executive Order (EO) 851; Department of Health (DOH) reorganization (1987) in compliance with EO119; and the devolution of health services to local government units (LGUs) in 1992 as mandated by the Local Government Code of 1991 (RA 7160) (Custodio, 1999). The DOH is the lead government agency in health. It is tasked to influence and regulate accessible, quality, and affordable health care. It maintains specialty hospitals,

regional hospitals, and medical centers. It holds field offices in every region, with a health team composed of representatives to the local health boards and retained personnel for the provinces. With the devolution of health services, the provincial government manages the provincial and district hospitals while the municipal government handles the rural health units (RHUs) and *barangay* health stations (BHSs). In every province, city, or municipality, a local health board chaired by a local chief executive serves as advisory body to the local executive and the local legislative council (*sanggunian*) on health-related matters (Custodio, 1999). On the other hand, the private sector's involvement is just as enormous, and includes providing health services in clinics and hospitals, health insurance, manufacture of drugs, medicines, vaccines, medical supplies, equipment, and other health and nutrition products, research and development, and other health-related services.

The Ministry of Health, Labour and Welfare is the central agency of the Japanese government aiming to "enrich people's lives through the management of social security systems including social insurance, social welfare and health/medical care systems." Basically, information on health and related areas is a well-researched subject as the Ministry administers 6 research institutes. Apart from this, there are 12 councils, 18 national hospitals, 13 port quarantine stations, 10 national social welfare facilities, and 2 social insurance related agencies.[3]

For nutrition, the Philippines' Food and Nutrition Research Institute (FNRI) and its Japan counterpart, the National Institute of Health and Nutrition (NIHN), are responsible for research undertaken in this area for their respective countries. Since last year, NIHN has been operating as an "Independent Policy Corporation" as part of reforms undertaken by the Japanese government. Still, the Ministry of Health and Welfare defines the role of the said institution with regards to research primarily on nutritional welfare and assessment of foods in terms of to health and nutrition quality among others, which are vital to the Japanese's health and nutritional conditions. The NIHN conducts a national nutrition survey (NNS) similar to that done by the FNRI. Survey results form the basis for policy formulation with regards to the "maintenance and promotion of health as well as nutrition diet, and lifestyle" (NIHN, 2003).

General Trends in Health and Nutrition

Figure 1 shows the Philippine population trend from 1990-1999 compared with that of Japan. While Japan registered minimal growth in its population, the Philippine population has increased at an average annual rate of around 2.3 percent. This can be traced to prevailing high (but declining) crude birth rates vis-à-vis the low crude death rates for the Philippines (Figure 2). The total fertility rate (TFR) of the Philippines is considered to be the highest among Southeast Asian countries, with the 1999 TFR pegged at 3.36 children per woman (Custodio, 1999). In contrast, Japan's declining crude birth rates are converging with its crude death rates (Figure 3). This is consistent with the low fertility and population growth rates for the period 1983-2001.

High fertility adversely affects infant and child health survival, child nutritional status, and child scholastic performance, while poorer households have less

[3] The number of attached offices does not include the regional health and welfare bureaus, prefectural labor bureaus and social insurance bureaus.

capacity to obtain adequate nutrition and health care, and to provide better education for its members (Herrin, 2002). As shown in Figure 4, from 1990 to 1995 minimal improvements were noted in reducing the incidence of child mortality, infant mortality, and maternal mortality in the Philippines. Child mortality is the number of deaths at ages 1-4 years in a given year and reflects the numerous environmental factors affecting the child's health such as nutrition, sanitation, childhood communicable diseases, and accidents (Zablan, 1994). In the same manner, the incidence of infant and maternal mortality is generally influenced by socioeconomic conditions and reflects the need for improving maternal and child health care programs.

Infectious and communicable diseases continue to be the major causes of morbidity. As of 1998, diarrhea, pneumonia, bronchitis, influenza, tuberculosis, malaria, and chicken pox continue to be among the leading causes of morbidity. Custodio (1999) points out that while the prevalence of communicable diseases is still very high, that of non-communicable diseases are increasing, which places a double burden on health and the economy. Furthermore, unlike the causes of morbidity, deaths are mainly attributed to non-communicable diseases like diseases of the heart and vascular systems. Improved control of communicable diseases and increased life expectancy will shift the disease burden to non-communicable diseases in the future. Thus, strategies must be put in place to address both the current and the future situations.

Nutrition plays an important role in the health of an individual. Per capita food intake has been decreasing from 1978 to 1993 (Table 3). Thus the nutrient intake of Filipinos has not improved much over the years. Table 4 shows a general declining trend in the percent adequacy of the recommended daily allowance (RDA) of certain nutrients. Mothers and pre-school children have been especially suspect to vitamin A deficiency, and iron deficiency anemia continues to be prevalent among all age groups in general (Table 5). On a general note, malnutrition among Filipinos is a serious problem that needs to be addressed. In contrast, the Japanese nutrient intake has remained well above the RDA level (with the slight exception of calcium) despite the decline in recent years (Table 6).

While the Philippines has struggled to contain its population explosion and the negative consequences brought about by high fertility, Japan's problem concerns its ageing population. Figure 5 shows the declining proportion of the Japanese population that is 14 years old and below and the slow but continued rise in the proportion of the elderly aged 65 and above. This is attributed to low fertility rates in conjunction with low mortality rates. The improvement in mortality implies not only an increase in the proportion of the aged population, but an extension of life for the elderly as well. Between 1948 and 1995 life expectancy at birth rose from 56 to 74 years for males and from 59 to 78 years for females. Also, life expectancy at age 65 rose from 10 to 16 years for males and from 12 to 21 years for females (Ogawa and Rutherford, 1997). In fact, longevity is unarguably the distinguishing characteristic of the Japanese, with life expectancy for both males and females recognized as the highest in the world (Table 7). In a news article in the Manila Bulletin (2003), the number of people aged 100 and above is expected to exceed 20,000 by the end of September 2003.

Unarguably, older age groups experience more illness and need considerably more health services than younger age groups. Controlling for other factors, the decline of mortality among the elderly implies a greater need for financial and manpower resources devoted to the provision of health care (Ogawa, 1989). On a positive note however, not only will these benefit the aged segment of the population, but also the country as a whole. According to statistics, the total number of medical care facilities has expanded, with the rise attributed mainly to the expansion of small-time health care amenities like general clinics and dental clinics. Similarly, there has been a general increase in the number of medical professionals available to man these facilities (Table 8). Of particular interest is that the number of nurses has more than doubled from 1984-2000, with the number of male nurses increasing 5 times as much during the same period. This trend is expected to continue as the proportion of the ageing population continues and longer hospitalization and caring is required for these people.

On the other hand, a rapidly growing population also exerts pressure for the expansion of social services. Expansion in financial and manpower resources for health over the years has been inadequate to match the increase in population and the changing service demands. A UN (1993) study cited that most Philippine health facilities have inadequate space for accommodating and examining patients and for proper storage of medicines and other medical supplies.

The same study also points out that the available health facilities suffer from unbalanced use: an underutilization of facilities at the lower and local levels and an overutilization of facilities at the higher levels. As a result, the peripheral facilities established at high cost fall short of their potential use, while the hospitals and patient clinics located in large urban areas are often overcrowded. The number of hospitals has virtually remained stagnant. Furthermore, as shown in Figure 6, no apparent increases were noted regarding the availability of health professionals and para-professionals. Shortage of trained health personnel results in poor quality of basic health services, thus affecting credibility. Furthermore, this poses a serious challenge to the expansion of public health services, especially with the growing demand for maternal and child health as well as family planning services. On a side note, available personnel tend to be concentrated in urban areas and in places of very high population densities, resulting to problems in the rural areas (UN, 1993).

As a result of these trends, the two countries' health expenditures have been rising through the years. For the Philippines, the increase in total health expenditure (in current prices) at an annual average rate of 13.7%, compared to the average annual population growth (2.3%), allowed per capita health expenditures (in current prices) to increase from 575 pesos in 1991 to 1,486 pesos in 2000. In real terms (1985 prices), the increase has been from 334 pesos in 1991 to 451 pesos in 2000, the annual growth averaging at around 3.4%. Custodio (1999) points out however that spending was biased towards hospital or curative care and not towards preventive and promotive health services, an indication that health spending is still not enough nor done effectively. For Japan, the amount of medical care expenditure has been growing over the years, with each person spending 239,200 yen on average in 2000, up by 100 percent from 1982. In 2000 alone, total spending for medical care is pegged at 303,583 hundred million yen. At least three factors contribute substantially to this growth: high per person to drug costs, high hospital usage, and ageing of the

population (Li, 1995). The average length of stay in Japanese hospitals and other inpatient institutions is longer compared to other industrialized countries. Rising hospitalization costs associated with the ageing population are touted to be the main source of increase in public medical expenditure (Ogawa and Rutherford, 1997).

In addition, the public medical insurance system of Japan has had a universal coverage since 1961, granting each person virtually unlimited access to all health care facilities. Figure 7 shows that medical insurance benefits are the largest source of funds for health expenditures. According to Ogawa and Rutherford (1997), approximately 87% of the population is covered by the three largest plans: (1) the Government-managed Health Insurance Plan (GHIP) for employees in small- and medium-sized enterprises, (2) the Association-managed Health Insurance (AHIP) for employees in large enterprises, and (3) the National Health Insurance Plan (NHIP) for persons not covered by any other plans. The Japanese system guarantees equal access to medical care regardless of income, and it is managed and subsidized by the Japanese government. For example, in the NHIP local governments act as the insurers and the central government provides direct subsidies (Li, 1995). Geriatric care, which is the most expensive component of health care, is financed through contributions to the pooled fund as mandated by the Geriatric Health Act (1982). Table 9 shows that medical insurance benefits paid out to the elderly in 2000 have tripled from its 1983 level, accounting for 73 percent of all medical insurance benefits paid. Aside from this, the government subsidizes hospitals and nursing homes. Still, rising costs have prompted increasing co-payments, which amount to around 10-30 percent of the medical care costs, that all insured persons have been required to make since 1984 in order to ease the fiscal burden on health spending brought about by an ageing population.

The World Health Organization recommends that at least 5 percent of the GNP should be allotted to health services in a developing country. In 2000, only 3.25 percent of Philippine GNP (around P113.5 billion) was spent on health by the government and private sectors, way below the WHO-prescribed amount. While the proportion spent on personal health care services has declined, it is still high in absolute terms compared to the amount spent on public health care for 1991-2000 (Figure 8). Around 73.9 percent or around P84 billion went to personal health care services for 2000, with public health care services accounting for only 14 percent (P12 billion) for the same year. Overhead services needed to run the health system cost P14 billion or 12.2 percent of the total health expenditures. With respect to the sources of funds, the financial burden for individual families remains heavy, as 41% of total expenditures in 2000 were paid out-of-pocket. The trend from 1991-2000 however indicates that this share has been decreasing (Figure 9). Government spending for health has increased in absolute terms for the same period, due to diminished centralized spending and increased local government spending brought about by the devolution of the health sector in 1992. Social insurance continues to be a non-factor in providing funds for health spending. The poor performance of the National Health Insurance Program is attributed to the low benefits (22 centavos for every peso contributed), and limited coverage (Ramirez, 1999).

c. EDUCATION AND TRAINING

Structure of Education Systems

The Philippine Constitution mandated the government to maintain a system of free public elementary and secondary education where participation of school-age children is mandatory and universal, underscoring the value of education to foster patriotism and nationalism, accelerate social progress and promote human development (Article II, Section 17). The high premium being placed on education necessitates for more efficient and effective delivery approaches and learning systems. The education system of the Philippines is supervised by three institutions: the Department of Education (formerly Department of Education, Culture and Sports) managing the basic elementary and high school education; the Technical Education and Skills Development Authority (TESDA) overseeing the vocational and technical education; and the Commission on Higher Education (CHED) handling the tertiary institutions (Figure 10). This division of responsibility was a result of the "trifocalization" of the education system as part of reforms during the Aquino administration.[4]

On the other hand, the education system being adopted by Japan follows the post-WWII educational system (i.e. 6-3-3 or 6 years of formative elementary education, three years each for the lower and upper secondary schools) which was introduced by the U.S. or patterned after that of the western type (Ellington, 2001; MEXT, 2003). All policies and curriculum reforms are centralized under the leadership of the Ministry of Education, Culture, Sports, Science and Technology (*Monbukagakusho*). The organization of Japan's education system is shown in Figure 11.

Elementary education in the Philippines covers grades one to six for children that are 7 to 12 years old.[5] About 90 percent of the total elementary schools are public schools which is consistent with the objective of providing at least one elementary school per *barangay*. In Japan, the compulsory level (6-15 years), divided into the elementary (6 years) and lower secondary levels (3 years), is dominated by state-subsidized schools. After junior high school, students are then required to take standardized high school entrance examinations to be able to enter senior or upper secondary schools (NISCAA et al., 1998). Junior high school students who failed the entrance exams may opt to enroll in specialized schools/ vocational schools or resort to enter the labor force (NISCAA et al., 1998).[6]

Entrance examinations are not at all mandatory or required for all elementary students to enter high schools. They vary accordingly per school (public or private). On a similar note, advancement to prestigious universities and other higher institutions is essentially an ideal goal for each senior high school student. By sources

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[4] Prior to this "trifocalization", the exclusive management for the whole education sector was centralized in the Department of Education, Culture and Sports (Manasan, 2000).

[5] The original elementary entry age was 7 years old. In the early 90's, this age requirement was changed to 6 years. Thus, those who entered basic elementary level at age 6 are now in their third year in high school.

[6] However, admission to either any of the senior high schools depends upon the grade obtained from the exams being administered.

of funding, Philippine public secondary schools can be delineated as national, provincial, city, and barangay high schools. According to educational specializations and programs, public secondary schools can be marked out as comprehensive (with academic and vocational functions) and vocational/technical high schools (specializing in trade, agriculture, and fisheries which are often nationally funded).

Japan has a different story; depending on the choice of high school, the admitted senior high school student spends three or more years for public/private institutions or nationally funded high schools, respectively. Night schools and correspondence courses are also being offered. Public high schools are classified either as regular or academic (*futsu*) high schools and vocational high schools, which includes commercial (*shogyo*) and industrial (*kogyo*) high schools. A senior high school student enrolled in "highly-ranked" academic high schools has better chances of being admitted to prestigious universities (NISCAA et al., 1998). Acceptance to universities is gauged according to scores obtained from the Center Examination, which is similar to the Scholastic Aptitude Test (SAT) in the U.S. Shimizu et al. (1995) as cited in NISCAA et al. (1998) noted that not all senior high school students anticipate stepping further to higher levels of education.[7]

In 1994, reforms were introduced with the launching of integrated course programs that offer general and specialized subjects. Some schools also introduced part-time and correspondence courses to working students. Moreover, a unified lower and upper secondary school education which allows the students to choose a "six-year consistent course" was established in 1999, resulting in the spread of 73 unified secondary education schools in 2002 (MEXT, 2003).

Higher education in the Philippines is provided both by the public and private sector, with private-run universities and colleges and schools outnumbering the public tertiary education institutions in the academic year 2001-2002 (1,258 private schools constituting almost 76% of the total number of university and colleges inclusive of satellite campuses as to 407 public universities/colleges including satellite campuses). The private provision of tertiary education is classified into sectarian and non-sectarian. Within the public sector, tertiary education is further subdivided into the following: State Universities and Colleges (SUCs), CHED Supervised Institutions (CSIs), Local Universities and Colleges (LUCs), Government Schools, and Special Higher Education Institutions. Higher education in Japan is almost similar to the Philippines and comprises the following: universities and graduate schools, junior colleges, colleges of technology and specialized training colleges or specialized schools (MEXT, 2003). Universities are institutions of advanced learning which offer 4-6 year courses while students of Junior Colleges spend around 2-3 years for training in specialized courses. Colleges of Technology, on the other hand, welcome graduates of lower secondary schools. Graduates of Junior Colleges and Colleges of Technology obtain a degree as associates while graduates of universities are conferred a bachelor's degree.

[7] As an alternative to the Center Examination, senior high school students may take Certification Examinations which are designed for non-college bound students. These are ideally designed for students from vocational schools and low-ranked academic high schools (NISCAA et al., 1998).

General Trends in Education

Enrollment of elementary Japanese students has been decreasing over the years, from about 7.9 million in 1997 to nearly 7.2 million in 2002 (Table 10). In 2000, there were more public schools (23,861) than private elementary schools (172), with 73 schools funded by the government. Among the lower secondary schools, public or local schools comprised 93% (10,453) of the total 11,209 established schools in 2000. Private lower secondary schools constitute only 6% (680) while the rest (76) are nationally-funded (Table 11). The same trend is observed among upper secondary schools; as seen in Table 12, 24% of upper secondary schools belong to the private sector with public high schools comprising the majority (76%) for the year 1999, with around 15 being funded nationally. Enrollment for this schooling level decreased from 1997-2002. The common trend in terms of the elementary level and upper and lower secondary schools was the decreasing number of enrolled students and the increasing number of teachers, which is reflective of low teacher to student ratios (1:18 for basic elementary, 1:26 for lower secondary level, and 1:15 for upper secondary level as of 2002). Thus, teacher shortages are not really an issue within the Japanese education system.

Higher education in Japan has been dominated by private universities (Table 13). For the year 2000, there were 478 private universities (comprising almost 74%) while there were 99 national universities and only 72 public/local universities compared to 122 (54%) in 1955. As a result, most students obtain their degrees from them. Out of the 2,740,023 total university enrollees, 73.3% were from private universities in the year 2000. Female university students have been increasing in number from about 12% in 1955 to 36.2% in 2000. The top three undergraduate courses in terms of scale are Social Sciences (39.6%), Engineering (18.7%), and Humanities (18.6%) (Figure 12).

For the Philippines, Cortes and Lara (1994) reported that there were about 30,221 elementary schools in 1978. Since then it has expanded by 37% in 2003 to about 41,288 elementary schools, growing with approximately 443 new schools per year for the given 25 year period, though the rate of expansion is apparently much lower from 1998 onwards (Table 14). Statistics on total enrollment indicate that there are about 13 million pupils enrolled in both public and private elementary schools in the Philippines at present. From 1997 to 2003, total enrollment increased by about 125,765 new students per school year (6.2 percent annual increase), relatively higher than the 1978 to late 1980s enrollment rate of 98,873 new pupils per school year. The relatively constant teacher-student ratio of 1:36 for 2001-2003 implies two things: (1) consistent with the observation of Cortes and Lara (1994) in the late 70s and 80s, enrollment steadily increased from year to year and (2) the rate of increase in the number of elementary teachers is almost negligible. Quantity wise, the current growing international demand for Filipino teachers is not creating much cavity on the public elementary school system teaching force (what is not apparent is if the country is losing its best and most experienced teachers to the international market).

As for Philippine secondary schools, a total of 3,851 secondary schools (48.7% public) existed in 1970, when secondary education was not yet free and compulsory and relied heavily on the private sector and LGUs for funding (Cortes and Lara, 1994). By 1975, public high schools had outnumbered the private high schools, accounting for around 58.3 percent of the total 4,844 secondary schools during the

period. By 2003, 7,890 secondary schools have been established throughout the country, 60 percent of which are public high schools. Expansion of the secondary school system is pegged at an annual average of 3 percent amounting to about 200 new schools per school year since 1997 (Table 15). Total secondary school enrollment has expanded by 21 percent since SY1997-1998, growing by 176 thousand new enrollees per year. Enrollment growth, particularly in the public schools, from SY2000 to the present is more than double of its expansion rate three years earlier. Still, the increase in the number of teachers was not able to match the expansion in the number of students. The teacher-student ratio has increased from 1:34 in 1997 to an outstanding 1:40 ratio in 2003. With reference to the growing international market demand for teachers, private secondary schools appear to be at the losing end as evidenced by the contraction in the number of private school teachers.

Current data on tertiary enrollment (as of 2002) indicates that most college students enroll in the following courses: business administration and related courses (29%); education teacher and training (20%); engineering and technology (12%) and mathematics and computer science (9%). Consequently, the system had been producing graduates which are obviously from the preferred courses as revealed in the following statistics: business administration and related courses (26%); education and teacher training (18%); engineering and technology (15%) and mathematics and computer science (11%).

In the provision of tertiary education, Paderanga (1994) noted the reports from the World Bank (1988) that quantity of degrees and non-degrees being offered in the country are often at the expense of quality. Libraries and laboratories are almost non-existent or ill-equipped in most institutions, and expensive products such as science education, graduate training, and research are only minimally provided. Paderanga (1994) further noted that college faculty are poorly paid and trained. Total faculty number around 93,884 for AY2000-01; of this number, 7,777(8.25%) have doctorate degrees, 24,538(26.14%) have master's degrees, 54,863(58.44%) have baccalaureate degrees, and 6,706(7.14%) belong to other levels which include pre-baccalaureate, post-baccalaureate, and vocational-technical programs.

There are over 3,000 technical and vocational education and training schools and institutions in the Philippines as of 2002. Twenty four percent (24%) of these are higher education institutions (HEIs) or CHED-supervised institutions while the rest are comprised of the training centers, NGOs, LGUs, NGAs, and enterprises conducting training. About 1.3 million people are enrolled in technical and vocation training institutions as of 2002. The Technical Education and Skills Development Authority (TESDA) is the agency responsible for the assessment and certification of these persons.

In 2002, TESDA assessed 300,524 persons and certified 146,673. Out of the total number of persons assessed, one-third specialized in automotive, electricity, electronics, construction, welding, machine shop, refrigeration and air-conditioning and other skills. The maritime sector (covering the deck and engine ratings) shared more than one-fifth or 22.31% to the total 300,524 persons assessed and another one-fifth or 20.48% came from the Overseas Performing Artists (OPAs). The highest certification rate was observed in maritime related skills (91%), implying strong local compliance to deck and engine ratings according to maritime standards. On the other hand, the information and communication technology (ICT) skills certification received the lowest certification rate at 18 percent.

Performance of Education Systems

The International Math and Science Study conducted in 1999 by the National Center for Education Statistics in the U.S. showed that Japan ranked 5th and 4th in terms of academic achievement of its eighth grade students in the areas of math and science, respectively[8]. In the same study, the Philippines ranked 36th out of the 38 countries included in both academic areas. However, it must be noted that the study was made to compare the performance of the United States vis-à-vis 37 other countries thus the test indicators used were rather based from an American perspective.

This is despite the recorded increase of Japanese students refusing to attend elementary and lower secondary schools.[9] MEXT (2002) identified the following factors affecting such trend: anxiety, emotional disturbance, juvenile delinquency, desire to have fun or apathy, and problems in school, at home and with society. In connection with this, schools have responded by introducing counseling sessions as well as curriculum guidance. Elementary and lower secondary students who refuse to attend class form part of a negligible 0.3% out of the total number of students in both levels. However, the data (1997-1998) also indicate the increasing incidence of students' refusal to attend school in both elementary schools (25% increase) and lower secondary schools (20% increase). In 2001, there were about 112,193 lower secondary students which portrayed a 107% increase as compared with the data in 1991 (54,172). This also became true with that of the elementary level as data of 2001 indicated a rather 110% growth of these students refusing to attend school.

In 2002, 97% of Japanese junior high school students were able to enter the upper secondary schools. Over a 10-year period (1992-2002), the average advancement rate to upper secondary schools was 97%.[10] In 2001, there were about 104, 894 drop-out senior students in the upper secondary level. This figure is relatively lower than the 1990 data (123,529), which recorded the highest number of upper secondary student drop-outs. In this regard, over the 11 year period, cases of drop-outs decreased by 15%. Data on upper secondary drop-outs exhibit a decreasing trend from 1997-2001. During the same duration, a relatively constant 3% of the total upper secondary students comprise the high school drop-outs.

In 2000, out of the 599,747 graduates of upper secondary schools, 463,897 (77%) students advanced to universities, 21% attended junior colleges while only 1% studied correspondence courses and the rest (6%) enrolled in short-term courses. This shows that most high school graduates are still able to attend universities in Japan. Also, the number of junior college students had decreased over the years 1994-2002. A 12% decrease from the year 2001-2001 was recorded, which was the highest reduction in terms of percentage of enrolled students over a 17-year time frame (1985-2002). The advancement rate of junior college students to universities has been

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8 While the said rankings are uncontested, NISCAA et al. (1998) reported that teachers observe that their students may not be that good in applying the derived knowledge "creatively to new situations."

9 This refers to number of students who refuse to attend school for more than 30 days (MEXT, 2003).

10 Advancement rate refers to the number of new entrants to universities or other higher education institutions/the number of lower secondary school graduates three years ago x 100 (MEXT).

improving over time; from 1998-2002, average advancement rate was recorded at almost 49%. MEXT (2003) reported that the scale of higher education in Japan is among the world's highest since there were about two million students in 2002. However, Ellington (2001) noted that graduate education is still relatively underdeveloped compared to other developed countries. This is manifested in the low rate of undergraduates advancing to graduate courses (7%).

The efficiency and effectiveness of the Philippine elementary schooling system can be evaluated and assessed by using definitive performance indicators[11] that are standard in the public and private elementary school continuum. Effectiveness of the elementary educational system can be deduced from the performance of pupils in nationwide achievement examinations (Cortes and Lara, 1994). At present, the DepEd is administering the National Elementary Assessment Test (NEAT) to Grade VI pupils. NEAT is a battery test on Mathematics, Science, English, Hekasi, and Filipino, which aims to measure learning outcomes in the elementary level, both in the public and private domain, in response to the need of enhancing quality education as recommended by the Congressional Commission on Education. NEAT was initially implemented last 1993 and has been the premier evaluation tool of DepEd for elementary education since.

The comparative performances of pupils in the nationally administered examination are shown in Table 16. Average achievement rate from 1997 to 2001 is almost non-moving, with almost negligible yearly fluctuations. Achievement rate is more or less pegged at 50 percent from 1997 to 2001, brought about by the apparent declining performance in Mathematics, Science, and English which was compensated by the relative improvements in Hekasi and in Filipino. It is quite alarming to note that the learning areas where pupils exhibit a rather diminishing performance are the same learning areas being given with much emphasis and resolve by the current administration. Note also that the percentage of passers declined from 76.54% in SY 1999-2000 to 73.21 percent in SY 2000-2001. With the present performance of school-age children in the NEAT, there is an apparent wide room for improvement. Increasing average scores in the national achievement test prompts for innovative and state-of-the-art methods and techniques in instructions and curricular refinements. It is an obvious entry point for possible interventions on elementary education, and such interventions underscore the need for better performance of the elementary school-age children.

Efficiency in performance is the extent to which the goals of systems are attained with the resources available in the system (Cortes and Lara, 1994). For this study, six indicators of efficiency were used. These are the participation rate, the gross enrollment ratio, the cohort survival rate, the completion rate, the dropout rate, and the transition rate (Table 17).

Participation rate[12] of children in the elementary schools was about 95 to 97 percent from 1997 to 2001. The trend generally represents a very encouraging result since it explicitly demonstrates that the percentage of school-age children out-of-

[11] Performance indicators refer to several key indicators that can be computed and utilized for evaluating the educational system's performance at various levels.

[12] Participation rate is the ratio between the enrollment in the school-age range to total population of that age range (7-12 years old).

school is actually diminishing. The gross enrollment ratio[13], on the other hand, far exceeds the expected percentage of population in school-range age that should be enrolled. Based on the 7-12 years old school-age range, total gross enrollment ratio peaked to as high as 119 percent in 1999-2000 from a little over 118 percent two-school years earlier. High gross enrollment ratio is pointing out two things: (i) high proportion of early starters, enrolling before the school range age; and (ii) high proportion of late finishers. By expanding the school-range age to include the 6 years olds, total gross enrollment ratio dropped down to about 98.08 percent in 2000 – 2001. This denotes that about 15 to 18 percent of the total enrollment in the elementary school systems came from the young pre-school proportion of the population. On the other hand, by reducing maximum school-age range to 11 and starting at the age of 6, gross enrollment ratio pegged at 114 to 117 percent in the same period.

Cohort survival rate[14] shows a decreasing trend from school year 1998 – 1999 to 2001 – 2002. From a survival rate of about 70 percent in 1998 – 1999, it dropped to 67.13 after three consecutive school years. The completion rate[15] likewise follows a declining pattern from the same period onwards. This is manifested with a completion rate of about 69 percent in the school year 1998-1999 to 66.33 percent by the school year 2001-2002. The declining cohort survival and completion rate can be allied with the consistently increasing dropout rate[16] in the given 5-year evaluation period. Queries such as what might have been the cause of the relatively low cohort survival rate and completion rate? This phenomenon according the Cortes and Lara (1994) would have serious implications since so many children appear to have been affected. On a positive note however, pupils who managed to survive and complete all the required grade levels and number of years of elementary education have relatively very high transition rate[17]. In the given 5-year evaluation period, about 98 to 101 percent of pupils who completed their 6th grade education went to the secondary schools (not necessarily immediately the following year).

Using the same set indicators applied in the elementary education section, Table 18 shows the parameters that can be used to evaluate secondary school education performance. As compared with the elementary education participation rate, the secondary education system was not able to capture a relatively large proportion of high-school age children given that it is also free in the public school. Average participation for the 13 to 16 years old bracket from 1997 to 2002 is about 65 percent, 35 percent were out-of-school children. This provides an entry point for possible strategies or means that would further encourage and promote student participation.

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13 Gross enrollment ratio refers to the total enrollment in a given level of education as a percentage of the population of the school-age range that should be in enrolled. It measures the capacity of the elementary school.

14 Cohort survival rate is the proportion of enrollees at the beginning grade who reach the final grade at the end years of the required number if years of study.

15 Completion rate is the percentage of Grade 1 entrants who complete/finish the level in accordance with the required years of study (up to Grade 6).

16 Dropout rate is the proportion of pupils who leave school during the year as well as those who complete the grade level but fail to enroll in the next grade level the following school year to the total number of pupils enrolled during the previous school year.

17 Transition rate from elementary to high-school, is the percentage of pupils who graduate from Grade 6 and moved on the next higher level which is the secondary school.

Gross enrollment ratio was nearly constant from school years 1997 to 2000 at 75 percent and little more than a 4 percent increase by SY 2000–2001. It implies that nearly 25 percent of high schools students each year from 1997 to 2001 do not continue their high school education. This trend can also be observed in the cohort survival rate estimates. Based on Grade 1 enrollment, less than 50 percent reached the fourth year secondary education for the 5-year evaluation period, in spite of the fact that that the survival rate is increasing, the rate of increase is rather insignificant. With respect to the First Year enrollment, cohort survival rate increased from 71.40 percent in SY 1997-1998 to 73.16 percent by SY 2001-2002. Similar to the earlier observations, the increase in survival rate is to a certain extent relatively small (less than one percent increase per annum), although higher than the average cohort survival rate in the elementary school.

In addition, not all students who were able to reach the last year of secondary education were able to complete the required number of years. Completion rates based on the Grade 1 and First Year enrollment were lower than those who were able to reach Fourth Year high school. Based on Grade 1 enrollment, at least 1 to 2 percent dropped out while based on the First Year enrollment, about 2 to 3 percent do not push through completion. Still, drop-out rate for the entire secondary school system started to peak up again by SY 2001-2002 after it regained its performance two school years before it. Comparing with the elementary schools' performance, dropout rate in the secondary schools were 2 to 3 percentage points higher for the last five years.

The relative performances of secondary school students in the nationally administered examination National Secondary Assessment Test (NSAT) are shown in Table 19. The NSAT is being viewed as an assessment tool to evaluate the abilities and skills of Fourth Year high school students administered in all public and private high schools. Achievement rates in the NSAT are moderately variable, following an increasing-decreasing pattern from one school year to another. Fluctuations can be attributed to the similar fluctuating patterns in the mean percentage scores in Mathematics and Science learning areas. Apparent improvements in the MPS in Filipino and English were evened out however by the fluctuating MPS in Science, Mathematics and in the Araling Panlipunan. Yet even with the high passing rate of 94 percent, there is still a big room for improvement in the NSAT mean percentage scores, specifically in the Science and Mathematics learning area. Improvements in learning modules and methods of instructing these learning areas would be a significant enhancement in the effectiveness of secondary school education.

As indicators of the performance of higher education institutions in the country, CHED uses the gross enrollment ratio/participation rate, the gross survival rate, and the graduation rate. Gross enrollment ratio/participation rate had improved from nearly 20% in 1997, to 22% in 2001. Trends in the gross survival rate, though, had shown a rather decreasing rate. The average gross survival rate from academic years 1997-2002 was estimated at 68%, which is lower than the 2002 gross survival rate of 65% (2002). Graduation rate in the country is still below 50% as shown in the 1996-2001 data.

Based from a 6-year average (1995-2001), passing rate in licensure examinations, which is supervised by the Professional Regulatory Commission (PRC), was considerably high among board passers of environmental planning (71%),

medicine (69%) and geology (68%). However, in 2001 examinees of geology garnered the top spot with the highest number of board passers (91%) followed by examinees of mining engineering (87%) and environmental planning (75.76%). The performance, though, of all professional examinees as portrayed in the national averages of all licensure examinations from 1996-2001 were kept below 50% passing rate.

III. POTENTIAL AREAS OF BILATERAL COOPERATION IN HRD BETWEEN JAPAN AND THE PHILIPPINES

A lower fertility might reduce the pressure for expanding basic health, nutrition, and education services; such reduced pressure could open up opportunities for improving the quality and coverage of such services (Herrin, 1994). For example, improving the health and nutrition status of preschoolers would be easier to achieve in a slow fertility regime compared to a high fertility scenario. Aside from the result that there will be fewer preschoolers to accommodate under the former scenario, faster fertility decline will be associated with a greater reduction in the risk of child malnutrition and health (controlling for other factors). In the end, such reduced pressure would provide opportunities to improve the quality of elementary and secondary education (Herrin, 1994).

a. On Japan's Ageing Population

In 1990, Japan launched the 10-year Golden Plan in order to improve social services for the elderly and their families. In fact, part of this Golden Plan involves improvements in institutional care, focusing on the expansion of nursing homes' capacity by some 80 percent (Ogawa and Rutherford, 1997). These nursing homes serve as "way-stations" between the hospital and the home, and the expansion and improvement of medium-term care would considerably reduce the burden on hospitals that provide costly (to the government) long-term care. Over time, medical care costs associated with hospitalization could be reduced as a result.

The most important thrust, however, is the improvement in the services for the elderly who stay at home. Japan's culture advocates a very strong filial relationship between parents and children, with the elderly parents expecting that they will be cared for by one of their children. One of these services involves the home-helpers. Another of the services in short supply are the short-term-stay facilities. A bedridden elderly needing constant care may stay up to a maximum of one week per month in a nursing home to give respite to the assigned caregiver. Lastly, the day-care centers provide rehabilitation services to elderly persons to facilitate elderly persons' independence, aside from easing the burden on the caregivers (Ogawa and Rutherford, 1997).

Thus the Japanese government is facilitating the shift in the burden of caring for the elderly back to the family, with the middle-aged women acting as the primary caregivers. It has been observed that the labor participation rate of women has increased from 62 to 70 percent between 1967 and 1995 (Ogawa and Rutherford, 1997). This may affect the ability of families to provide appropriate care for the elderly as this may conflict with work done outside the home. The opportunity costs

of caring for the elderly are high especially for women who are full-time paid employees. This is in terms of the foregone wages during the period of care, and the lower wages after returning to work. More likely, these opportunity costs would increase as wages are driven up due to the declining proportion of the total population that would create labor shortages (Ogawa and Rutherford, 1997). In response to this, a 1999 law was passed by the Japanese Diet that gives employees the right to take a maximum of three months of unpaid leave to provide care for sick family members. At the very least, this allows women to return to their jobs without breaking their service record, and it offsets the opportunity costs associated with women at work (Ogawa and Rutherford, 1997).

Also, co-residence patterns in Japan, while still quite high by international standards, have declined substantially over the years due to changing values about caring for the elderly (Ogawa and Rutherford, 1997). Highly publicized cutbacks in social security benefits probably made the "natural duty" of caring for elderly parents more burdensome. Also, there is evidence that the weakening of values about caring for elderly parents is accompanied by a parallel weakening of values about passing on assets to children. Nowadays, parents increasingly tend to bequeath their property and financial assets to whichever of their children co resides with and takes care of them, a departure from the traditional primogeniture inheritance pattern (Ogawa and Rutherford, 1997). This will undoubtedly make it more difficult to shift much of the responsibility of caring for the elderly from the social security system to the families.

Given the situation that some Japanese women may find it difficult to sacrifice their work in caring for the elderly, hiring personal caregivers might be a viable option. The Philippines could extend cooperation to Japan on this aspect by supplying more care-giving and nursing services to Japan's ageing population. The Philippines is currently one of the major sources of nurses that supply well-trained human resources to countries experiencing nursing shortages (Lorenzo et al., 2001). In addition, various tertiary schooling institutions have started to offer training in care-giving in response to the increased demand for personal care services. Japan and the Philippines should be able to reach an agreement on the requirements for entry, with language training first and foremost for Filipino health service workers eyeing work in Japan. Also, issues on the recognition of professions and education are of foremost concern. Specific strategies are discussed in sections i (On Language Proficiency), and h (On Mutual Recognition of Professional Qualifications and Education), respectively.

Looking ahead, the Philippines's population is still relatively young as reflected in a slow shift in the age structure due to slow decline of fertility. About 38 percent of the population is under 15 years old and the elderly comprise a measly 4 percent (Custodio, 1999). While this may be the present case, the proportion of the aged will inevitably continue to rise and the number of elderly will be increasing faster than those of either ages. In fact, the Philippines belongs in a group of countries that are expected to have the highest rates of increase of the elderly in the future (Domingo, 1994). The Philippines thus has the advantage of being able to plan ahead by learning from the experiences of developed nations like Japan. Existing policies and programs can be modified to respond early and effectively against this growing demographic concern. Existing health care facilities would need to be expanded and upgraded, and a review of the pension and insurance system for the

elderly is in order such that Japan's present difficulties will not repeat with the Philippines. The Philippine government can request cooperation from Japan regarding this aspect.

b. On Health and Medical Care

As embodied in the trends of human resource indicators presented earlier, the Philippines has existing issues that need to be dealt with such as fast population increase, the nutrition problem, and the spread of infectious diseases. In addition, the problems brought about by devolving health services to the LGUs present challenges in the adequate and quality provision of health and medical care. In response to these issues, Japan International Cooperation Agency (JICA) presently cooperates in the field of health and medical care through education in clinical medicine in hospitals, studies on infectious diseases, training of medical staff, quality control of pharmaceutical products, public health, and population and family planning (JICA, 2003). In conjunction with the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), JICA's project-type technical cooperation includes measures to combat infection through supply of vaccines and equipment needed for inoculations and measures to fight HIV/AIDS through the provision of inspection instruments and machines needed for safe blood supply. Furthermore, improvement of reproductive health is facilitated through the provision of essential items such as contraceptive devices, simple medical equipment, basic pharmaceutical products, and audiovisual equipment (JICA, 2003).

In view of the planned bilateral agreement on human resource development, JICA's continued assistance in these health- and medical-related matters would be sufficient. However, the unexpected difficulties with devolution of health services to LGUs open up more avenues for cooperation, namely:

1. Project-type technical cooperation should be considered in order to strengthen the collaboration between the regional and provincial health bureaus. In addition, technical training is essential for improving upon the abilities of local health administration staff, which include the midwives.

2. Where provision of health service is lacking, Japan could cooperate in expanding health and medical service for these areas, prioritizing such remote and poor areas as a model for further expansion elsewhere. The cooperation that JICA currently extends to the Philippines could be applied to these areas. In particular, educating the people on population and family planning is a first and essential step for more effective service delivery in the long run.

3. Accordingly, cooperation involving maternal and child health can be done through local in-country training (second-country training). One aspect, as mentioned previously, is education on voluntary family planning. Other activities that can be considered would be the setting up of a drug revolving fund, use of maternal and child care notebooks, and training to produce and reeducate

barangay health workers (JICA, 1999). These would enhance people's engagement in maternal and child health/family planning activities.

4. Another consideration would be project-type assistance in improving general health and public hygiene at the grassroots level. It will be necessary to enlist the participation of JOCVs in collaboration with NGOs for greater efficacy of the project. Also, participation of and exchanges among people from both countries will be encouraged, thus contributing further to human resource development.

c. On Technical Cooperation

A typical technical cooperation project is characterized by: (1) certain objectives achievable within a given budget over a specific project timeframe; (2) clearly defined inputs and quantifiable outputs; (3) direct and foreseeable input-output relationship; and (4) an evaluation method based on the project design matrix and or cost-benefit analysis (JICA, 2003). Table 20 shows Japan's ODA to the Philippines in terms of technical cooperation. Japan's ODA has mainly extended technical cooperation on agriculture, industrial technology, health, and transportation sector. The project-type technical cooperation has been continually implemented in the health sector since the 1960s. Project-based technical cooperation has been administered in the field of science and mathematics education in conjunction with dispatching of experts and Japan Overseas Cooperation Volunteers (JOCVs), and provision of second-country training (JICA, 1999).

Following the enactment of the Freedom and Information Act (Japan's law enforcing public disclosure of government as well as administrative information) and the budget cut in FY2002, the Japanese government through JICA will implement a new form of technical cooperation which seeks to improve its quality and efficiency. Termed as the "Program Approach", it was conceived in order for JICA to effectively and efficiently utilize its limited resources by focusing on the use of its resources to priority issues/areas (JICA, 2003). For the JICA Philippine Office, the new approach shall be fully implemented beginning Request Survey 2003. Previous cooperation schemes known as Individual Expert Dispatch, Equipment Supply, Expert Team Dispatch, Research Cooperation, Counterpart, Individual/Country-focused/In-Country/Third Country Training and the Project-Type Technical Cooperation (PTTC) will be merged to form a single cooperation known as the Technical Cooperation Project (TCP) (JICA, 2003).

The TCP differs from the traditional types of technical cooperation through improved flexibility in terms of project size and components. Under the old approach, technical cooperation projects are treated as mutually exclusive to each other, while under the new approach, a TCP would now be composed of any or a combination of the following previously separate components: (JICA, 2003)

1. ***Expert Dispatch*** – JICA may dispatch either a Japanese or a third country expert to perform tasks related to his or her area of

specialization and the actual requirements of the proponent agency. The latter refers to experts coming from another country besides Japan and the Philippines. Experts can either be assigned for short or long periods of time.

2. ***Equipment Supply*** – In the conduct of the project, the Japanese side may provide equipment to facilitate technology transfer but only if the request is in conjunction with other components (for example, to support the work of JICA experts assigned in the project).

3. ***Overseas Training in Japan*** – Filipino counterparts of JICA Experts may receive training from the various JICA training centers located throughout Japan to facilitate better technology transfer.

4. ***In-Country Training/Second Country Training*** – Filipino experts who have received initial overseas training in Japan will provide training in the Philippines for their fellow countrymen. Since the local technicians are trained in their own languages, problems in linguistic communication do not arise and technology transfer can take place smoothly in line with local conditions.

5. ***Third Country Training*** – This type of training is conducted in the Philippines and is mainly targeting the officials and technical people of other countries. Likewise, Filipino trainees may be trained in other nation. With this particular training, participants are able to study in an environment similar to their own and acquire appropriate technologies that can relevantly be applied in their own countries. JICA bears the training costs as well as expenses on sending instructors from Japan.

6. ***Facility Development*** – This kind of assistance in the form of construction of facility should support the technology transfer activities of a certain Technical Cooperation Project. The Japanese would then in most cases approve the request of the proponent as long as it costs less than ¥20 million.

7. ***Community Empowerment*** – This involves facilitation of technology dissemination to the grassroots level developed by a certain project. The proponent that wishes to disseminate a given technology may engage in a joint venture with an NGO. The Japanese then will support the contractual arrangement between the proponent agency and the NGO availing a total amount of ¥5-15 million as financial support.

8. ***Research Support*** – This type of support intends to financially help the research activities of Filipinos amounting to a total of ¥5 million monetary support under the condition that research topics must contribute to the social and economic development of the Philippines.

d. On Professional/Technical Training

There are two types of technical training that JICA currently supports: the first is the technical training of overseas participants that is conducted mostly in Japan, and the second is overseas training which is carried out in developing countries. The former involves technology- and knowledge-transfer to specific countries through the medium of training provided by JICA. Key administrators, technicians, and researchers are the targeted participants of this professional/technical training program. JICA (2003) notes that those who have received such technical training have contributed greatly to nation-building as national leaders, top-ranking researchers, or administrators.

Conducting the technical cooperation training in Japan is advantageous for the following reasons: (1) participants are motivated by seeing the utilization of new technology and ideas not yet available in their own countries; (2) Japan's experience is transmitted to the world through their participants; and (3) participants have the chance for intellectual exchange of ideas and experience with colleagues from other countries who are themselves facing similar issues. Aside from the benefit of the training, a secondary benefit of this program is the fostering of friendly attitudes towards other participants. In return, Japanese people have a heightened level of international awareness (JICA, 2003).

The other option of overseas training involves organizations in developing countries, fostered through Japanese technical cooperation, that provide training for their own people or for people in neighboring countries. This is a more effective training method in the sense that this type of training is conducted in a developing country with similar technical levels and social conditions. Second-country training refers to training provided to participants in their own countries. This encourages the diffusion of the results of Japanese technical cooperation extended to developing countries and is aimed at projects that bring direct benefits to the local community in fields such as the environment, population, and health and medical care.

Training targeted at participants in neighboring countries is called third-country training, which facilitates the transfer of technology in line with the participating countries' needs and encourages implementing countries to engage in self-help efforts. Also, this can be provided in areas with similar cultures, languages, climates, and customs, aside from keeping training costs low (JICA, 2003).

e. On Collaborative Technical Education and Training

The Technical Education and Skills Development Authority (TESDA) under R.A. 7796 provided for the rationalization of the provision of technical education in the Philippines by the National Manpower and Youth Council, the Bureau of Technical and Vocational Education and the Apprenticeship Program of the Bureau of Local Employment.

TESDA then was mandated to provide relevant, accessible, high quality and efficient technical education skills and development in support of the development of high quality middle level manpower responsive to and in accordance with

development goals and priorities of the government and of the changing manpower and skills demand of the international economy.

Similar to the Philippines, the Japanese economy places high premium on training individuals to realize latent potentials, and to participate fully in social and economic activities, and act against threats to livelihood (MFA, 2001). The Japanese government has been providing and accepting trainees to Japan universities and industries and has been dispatching trained personnel to developing countries as a form of assistance in support of the South-South cooperation.

To complement the technical training and education initiatives in the Philippines in general and TESDA in particular, bilateral cooperation or joint training exercises can be crafted with Japan. Joint technical training and education can facilitate mutual recognition of manpower skills and qualification of manpower transfers from either country. Potential cooperation can be embedded or supported by the Philippine Dual Training Act (R.A.7686) where the training system combines in-plant and in-school activities based on a collaborative plan designed and implemented by an accredited public or private institution and a business establishment. The accreditation can be extended to include Japanese firms and industries in the Philippines and in Japan that have been providing training to Filipino workers.

There exists an incentive for Japanese firms to participate in the dual training system of TESDA as R.A.7686 grants tax relief or deductions to firms conducting training and skills development on the following areas: (1) agriculture and fishery; (2) processed food and beverages; (3) tourism (including hotels and restaurants); (4) decorative crafts; (5) gifts, toys and house ware making; (6) metals and engineering; (7) furniture and fixture; (8) garments; (9) construction; (10) ICT; (11) maritime; (12) land transport; and (13) health, social, and other community development services. Training areas can be extended to include the emerging skills demand of Japan's industrial society as well as lifelong learning areas.

f. On Education and Research Institutions

Education

Education is one of the important requisites for human development. Most developing countries however, face problems in the provision of basic education such as inadequate facilities and teaching materials, and lack of funds and qualified teachers. Table 21 illustrates the almost equal number of students going to universities for both countries. Although Japan has relatively fewer universities compared to the Philippines the teacher-student ratio for Japan is higher (1:18) than the Philippines (1:28). On the average, professors and instructors in the Philippines rendered service for a greater number of students compared to their Japanese counterparts. This somehow reflects the primary problem of teacher shortages in the Philippines.

In its effort to assist these less-developed countries, Japan has extended support through the Official Development Assistance, helping in the construction of school buildings, improvement of educational facilities, and the provision of

equipment and materials (Japan's ODA 2001 White Paper). The Philippines is one of the developing countries that had previously and is still enjoying Japan's financial aid in education and human resource development trainings.

Through its Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan is advancing cooperation with other countries by utilizing its experience in education. It has accepted foreign students in its major universities and had been sending its students to other countries as well. MEXT extends care for international students from other countries by developing a comprehensive system in order to promote student exchange. Examples of measures include the Japanese Government (*Monbukagakusho*) scholarship available for Asian youths, financial support to privately financed foreign students, promotion of student exchange in cutting-edge areas, assistance with living accommodations, enhancement of teaching and proper guidance for foreign students at universities, the full-scale administering of testing for foreign students wanting to study in Japan, information dissemination regarding study in Japan, and follow-up service after the students return to their home countries (MEXT, 2003). Furthermore, MEXT provides scholarships to Japanese students wishing to study abroad. It also cooperates with foreign governments in recruiting and screening Japanese students who study under their respective scholarship programs, and provides information related to study abroad. The number of Japanese students who go abroad to study has been rising annually. Based on the UNESCO Statistical Yearbook (1999), there were approximately 76,000 Japanese students studying abroad in 69 countries.

In 2001-2002 there were 27 Japanese students recorded who studied here in the Philippines. On the other hand, there were about 483 Filipino students who studied in Japan based on the most recent available data (2002). The greater disparity implies a greater contribution and influence of Japanese education to Filipinos. Another explanation for such discrepancy would be the relative abundance of the scholarship programs being offered by the Japanese government for foreign students wanting to study in Japan.

Financial assistance through scholarship programs was also made available by the Japanese government. The short description and qualifications are noted in Annex A. The list also includes private foundations offering scholarships. For 50 years, the Japanese Government has received Filipinos, among other nationals from all over the world to study in Japan. Elpidio (1986) conducted a study regarding the assessment of Monbusho scholarship program by looking into the accomplishment of Filipino grantees. She noted the feelings of Filipino grantees on Japanese education as well as on the degree. She ended by making suggestions as to how to expand the program to rationally involved Filipino perspective. For developing countries, student exchange is extremely significant as an intellectual contribution to the cooperation of cultivating human resources. An evaluation done by Chittiwatanapong (1986) in Japan pointed out the positive and valuable contribution of the scholarship to the author himself. Studying in Japan promotes mutual understanding, friendship and scholarly exchange in addition to fostering greater unity between the two countries.

However, difficulties such as language and institutional barriers have been noted by former exchange students in Japan. Arifin (1986) noted the following problems: (1) difficulty of Japanese language; (2) lack of academic and social guidance for foreign students; (3) the problem of degree; and (4) internalization of the

Japanese society. Possible areas of cooperation regarding these problems will be discussed in greater detail later under section i (On Language Proficiency).

Filipinos who were former foreign students in Japan formed Alumni Associations to promote closer relationships between these two countries. Annex B lists the different Filipino alumni associations in Japan. These associations were established in order to strengthen the alliance between those who have studied in Japan, thus building opportunities for personal networks and improving the standing of previous and current foreign students coming from the Philippines. Thus they function as important places for international exchange between the Philippines and Japan. Japan recognizes the importance of these alumni associations, with the Japanese government continually supporting and cooperating with their activities through partial subsidy of related expenses (Study Japan, 2003).

Research

Technological development and increasing trade openness present both new opportunities and risks for developing countries like the Philippines. Research is essential such that it enables the modification and use of advanced technology and provides up-to-date undergraduate and graduate education in fast developing fields (Thulstrup, 1992). Most developing countries thus have to overcome the challenges brought about by a shortage of researchers, thus contributing to low research output for these countries. Thulstrup (1992) attributes this more to a lack of proper incentives than to a lack of facilities and equipment like laboratories, modern equipment, computers, and library facilities, although the latter does limit research possibilities greatly.

Most countries cannot rely solely on research training abroad. Although it results in high quality training and international exposure for students, it is expensive and may not be targeted to national needs; furthermore, it does not directly support capacity building at home and may lead to costly brain drain (Thulstrup, 1992). Therefore, a national research capacity must be established, with universities at the forefront of such a strategy. In most countries, universities account for a substantial portion of the research spending. Scientific university research is noted to be more efficient compared with other public sector research (Thulstrup, 1992). Even though university staff spends considerable time on teaching duties aside from research work, interaction with students provides intellectual stimulation and possibly continuous quality control. Also, universities have the advantage in their access to select their research students. Educational activities become almost as important for the research as research is for university education.

An alternative option would be to allow for the exchange of researchers between countries. As pointed out in the working paper for ASEM S&T Minister's Meeting (1999), the movement of people brings transfer of knowledge that may lead to practical application across institutional barriers and national borders. In view of this, inter-regional flow of researchers must be encouraged. Japan promotes exchanges of researchers by sending Japanese researchers to international scientific conferences, inviting foreign researchers to Japan, and through researcher exchange programs implemented by the Japan Society for the Promotion of Science (JSPS) and the Japan Science and Technology Corporation (JST). MEXT also promotes global cooperation in science and technology through bilateral science and technology

cooperation agreements, multilateral international joint research, and Antarctic research projects; through UNESCO programs and cooperation with the OECD; and by providing assistance and cooperation to the United Nations University (UNU) (MEXT, 2003).

In terms of its bilateral relation with the Philippines, research scholarships are also being offered by Japan (see Annex A). The list of the Philippines' education and research institutions is also enumerated in Annex C while existing research institutions in Japan is listed in Annex D.

The issue on inadequate research incentives needs to be addressed. In its simplest form, incentives can be provided by a monitoring and evaluation process that gives recognition to outstanding researchers. Rewards for good research can also include improved research opportunities, promotion, better pay, travel opportunities, intellectual stimulation through interaction with other researchers, and fame and honor (Thulstrup, 1992). At present, the research funding system in developing countries like the Philippines is spread out thinly over a variety of activities, including travel funds and equipment, with only a small share given to researchers themselves. In addition, scientific and technological research is not likely to be funded to any great extent by industry in developing countries. The lack of incentives stemming mainly from lack of funding sources is a barrier to efficient and productive research.

Thulstrup (1992) advocates some general strategies for advancing research and research cooperation, which include the following:

1. Universities should be used as centers for quality research and research training and provided with incentives and needed resources. This will result in the double benefit of research and research-based training. Public-based research institutions will complement the universities' research thrust.

2. Provide individual incentives for active research to all researchers and secure sufficient resources for the efficient and qualified researchers; these will strengthen university education at all levels and will provide the foundation for production of research results and training. Japan's support through ODA can be utilized in this manner. In addition, research output should be monitored and evaluated, with the evaluation results influencing the distribution of research funding.

3. The thrust for a system of national research journals can strengthen research publication habits. This should also include specific requirements to publish together with financial support for dissemination in all research support schemes. There should also be support for international dissemination, being careful not to overlook the needs for local language research reviews.

4. Research activities should be promoted internationally. For example, specialized equipment and libraries may be more affordable if researchers from several countries in regional research centers can share them. Cooperation with industrialized country

research communities like Japan provides useful and inexpensive support in important fields such as instrumentation services, up-to-date information through scientific journals or informal networks, and reviews and quality control. Therefore, proper university or department twinning between Japan and Philippines should be promoted in lieu of one-sided assistance programs. With possible overseas research training, degree programs of the sandwich type, where the domestic university in cooperation with an overseas university defines a research program, are much more likely to contribute to a strengthening of local universities and to promote research of local importance.

5. In relation, the terms of exchange should be crafted with the view of reducing barriers and obstacles between countries and enhancing the on-going bilateral or multilateral personnel exchange programs (ASEM WP, 1999). Training programs, mission trips, policy dialogue and working groups, fellowship programs and joint projects must continuously be promoted.

g. On Lifelong Learning

The task confronting the Philippine and Japanese societies in promoting human resource development in education is to create an enriching and dynamic social structure in which people can freely choose learning opportunities at any time during their lives and in which a proper recognition is accorded to those learning achievements (Conferido, 1998; MONBUSHO, 1997).

In the Philippines, with increased global competition, liberalization of markets, and the introduction of state-of-the-art technologies and organization structures would have both positive and severe repercussions on employment and income prospects of unskilled and semi-skilled workers. The importance of educating Filipinos not only for academic gains but also to support economic competitiveness, cross-cultural understanding, social transformation, and the development of national identity cannot be overlooked (Conferido, 1998).

The Philippine concept of lifelong learning as identified by Conferido (1998) is focused on workplace leaning and should be well within the interests and partnership agreements among the tripartite sectors (*employers, employees, trade unions, and the government*). This explicitly defines workplace learning as concentrated on training in new and updated skills, continuing professional development, and learning the use of state-of-the-art technologies, all of them contributing to increasing competitiveness, skill employability, and the capacity to deal with change (*e.g. period of unemployment*).

Although biased in favor of the tripartite sectors, strategies for lifelong learning must not overlook the learning aspirations and confidence of people in under-represented sectors of the society such as the unskilled manual workers, part-time and temporary workers, people without qualifications, people living in isolated locations, ethnic minorities, older adults, and people with learning difficulties, among others.

On the other hand, for the Japanese society the concept of lifelong learning takes another form. Sawano (1998) defined the lifelong learning needs of Japan as encompassing not only the organized learning through schools and social education that directly improves market participation of Japanese, but also the learning achieved through a number of social factors such as involvement in the areas of sports, outdoor activities, hobbies, recreation, and volunteer activities.

These lifelong learning opportunities radiated from the need to recast Japan's diploma-oriented society (*gakureki shakai*), in which too much emphasis is placed on elementary and secondary school education (Sawano, 1998). Sawano (1998) further reiterated that Japan should place appropriate value on learning achievements in all stages of life, regardless of whether they are accompanied by formal academic credentials by providing citizens with a broad range of learning opportunities that respond to the growing demand for the type of education that enriches the mind and fulfills lives – especially for individuals with higher income, those who desire to increase leisure time, and as a response to the overall maturation of the Japanese society.

Sawano (1998) and Gordon (1998) emphasized that lifelong learning is important in order to support Japanese in coping with social (e.g. ageing population), economic, and technological changes that are taking place, including the substantially increased use of higher technology, growth in information technology, internationalization, and structural changes that are taking place in the business and industry sector.

In addition, there is an apparent increase in the number of dropouts from upper secondary schools and number of pupils refusing to go to elementary and lower secondary schools in Japan (Sawano, 1998). These phenomena might stimulate the need to increase alternative learning opportunities for such people or to establish second-chance schools. The compensatory education model of lifelong learning should be taken into consideration.

The creation of a bilateral agreement on this area is not impossible to achieve as both countries have relatively strong policy pronouncements in promoting lifelong learning and providing wide variety of adult educational activities. The Lifelong Learning Law of Japan and the EFA-PPA and the Non-Formal Alternative Learning Systems of the Philippines are already in place to provide the necessary legal structure and groundwork for a possible bilateral arrangement. Through there exists an obvious advantage of the lifelong learning system of Japan such as the *kôminkan*, Philippines can tap and collaborate with a wide variety of challenging certification programs, on-the-job training by businesses, the University of the Air, and private enterprises that provide educational activities to adults.

h. On Mutual Recognition of Professional Qualifications and Education

With the liberalization in the movement of natural persons under a free trade agreement, a continuing expansion of trend in the flow of human resources between Japan and the Philippines can be expected (Tullao, 2003). The movement can be

expected to swell further should the Philippines and Japan forge an economic partnership.

The Philippines through time has become a net exporter of labor to Japan. Majority of the migrant labor flow however are characterized as low-skilled and semi-skilled workers, recruited from the pool of unemployed (Tullao, 2003). The entry of professional, skilled, and technical persons still lags behind the sheer volume of entertainers deployed by the Philippines to Japan.

It is often argued that mutual recognition of qualifications and education is the best process to be adopted if the free movement of professionals is to be increased and is to be achieved efficiently and effectively. The whole process requires efficient communication between organizations in each country, which recognizes both the areas of professional activities undertaken by their members and the quality of the output of each of these organizations' required professional qualifications.

The General Agreement on Trade and Services (GATS) seeks to ensure "…that measures relating to qualification requirements and procedures, technical standards and licensing requirements do not constitute unnecessary barriers to trade in services… as such, mutual recognition of professional qualifications and education can be created and expanded to cover professional expertise (business, education, research and development, among others) and other services (health, care-giving) for exchange and or for deployment." (Article VI:4) Mutual recognition agreements are identified as the most common way to achieve mutual recognition of qualifications, allowing for the reconciliation of differences in education, examination standards, experience requirements, regulatory, influence and various other matters.

This would progress and speed up the exchange of professionals and intra-corporate transfers of personnel between the two countries, considering the fact that Japan made commitments on the residency status of non-Japanese professionals such as accountants, engineers, legal and law practitioners, and specialists in humanities and international services (Tullao, 2003).

The memorandum may not necessarily call in for a moratorium on the stringent proficiency and certification examination requirement for employment in Japan, but rather opening up of the over 600 national certifications and proficiency examination areas officially approved and recognized by Japanese government ministries such as the Monbushô and other public organizations to Filipino workers. This has the potential to expand employment and income options for Filipino professionals intending to work in Japan. Similarly, Japanese professionals will be able to practice in the Philippines.

However, Philippines and Japan should take note that mutual recognition of professional qualifications requires certain preconditions, including:

1. degree-level entry to the profession in both countries;

2. appropriate regulation of the profession in the "host" country;

3. a corresponding profession i.e. where a substantial number of professional activities practiced in the "home" country comprise the profession as practiced in the "host" country;

4. an adaptation mechanism to make up for any deficiencies in the content and scope of the professional education and training of migrants; and

5. a willingness on the part of the host country and its bodies which award professional qualifications/licenses to accept the principle of mutual recognition, to respect the quality of professional education and training in other countries and to trust the professionalism of migrants. (WTO, 1997)

i. On Language Proficiency

Employment, educational, and training opportunities in Japan for Filipinos are being constrained by the language proficiency requirements of Japanese universities and firms. Higher education institutions in Japan primarily conduct all their classes in Japanese language with only a few conducting in the English language. License to practice nursing of foreign nurses in Japan can be obtained only upon passing the nursing licensure examination in Japanese language and characters.

In response to this, the Japan Foundation in cooperation with Philippine cultural exchange and educational institutions implemented the Japanese Language Proficiency Test (JLPT) to evaluate and certify Japanese language proficiency of non-native speakers. The certification exam consists of four levels (1 to 4) concentrating on proficiency and covers writing-vocabulary, listening and reading-grammar (Table 22). The requirements and expectations for each level include minimum hours of study and training on Japanese language. The Japan Foundation – Manila Office (JFMO) already has a list of Philippine schools and educational institutions that can provide courses on Japanese language education and Japanese studies (Table 23).

Japanese language programs can be taken as part of the school's regular non-degree semestral course offerings or can be specially arranged depending on the number of potential participants/trainees and availability of training personnel. In addition, TESDA is currently arranging and instituting the Japanese Language and Cultural Center (JLCC) integral to their TVET offerings and is being proposed to the Japanese Embassy for Grant Assistance.

Expansion of Japanese language education program and activities would not only benefit the current and potential workforce and students to Japan, it will also transcend to Filipinos seeking employment in domestic Japanese firms. Satisfaction of the minimum language comprehension requirement of some domestic Japanese firms can be facilitated as language proficiency has the potential to help counteract the undue importance placed by Japanese people on previous academic backgrounds such as the prestige of the university attended, among others, for both Japanese and non-Japanese applicants.

On the language proficiency needs of Japan, it is interesting to note the growing demand for practical English courses, calligraphy, secretarial skills, as well as the study of Chinese characters (*kanji*) in Japan among adults. There has been a significant growth in the numbers of Japanese adults taking proficiency examinations in these fields of interest (Monbushô, 1996). However, since many certification programs give proficiency examinations at different level, the passing rate for the Level 1 (highest) for the Practical English Proficiency Test (PEFT), which is almost the equivalent of English ability at the college-graduate level (similar to Test Of English as Foreign Language or TOEFL), remains to be low at an average of 4 percent of the total examinees. Similarly, the passing rates were under 15% at the top level for the secretarial skills, abacus, bookkeeping, calligraphy, retailing, and business English (Shoten, 1997).

Technical cooperation on language proficiency, Japanese for Filipinos and English for Japanese, can close gaps and eliminate natural barriers to employment and movement of natural persons between the two countries. Technical assistance agreements can be made with Japan, such as language education classes, training of Japanese language teachers, financial assistance for administering language proficiency and teaching competency tests, through the MEXT and the Japanese Agency for Cultural Affairs. These are the key institutions in Japan that are also promoting Japanese language study by non-Japanese by offering educational grants (scholarships) to pre-college students in Japanese language institutes and implementing the Regional and Educational Exchanges for Mutual Understanding (REX) Program through which public school teachers can be dispatched to the Philippines as Japanese language teachers.

The institution of the JLCC on the other hand is being expected to improve the capacity, capability as well as language proficiency of TESDA in preparing technical and skilled workers for Japan. The JLCC can also serve as a benchmark institution for recruitment and placement agencies accredited by TESDA to provide pre-departure orientations as well as Nihongo classes.

On the other end, the Philippines can commit trainings, workshops, and short courses on English proficiency for Japanese workers and business people. The large pool of teachers and education graduates of the Philippines that can teach practical and business English course (as certified by DECS, CHE and/or TESDA) can be committed to improve the performance of the Japanese in high-level English proficiency examinations in particular and communicating business and industries in the global market in general.

j. On Information and Communication Technology

About 22 percent of the tertiary education graduates in the Philippines from 1991 to 2002 finished engineering, information, communication, and computer technology degrees. In addition, TESDA certifies more than 9,000 technical education and training (TVET) graduates specializing on ICT (*about 18 percent of the total assessed workers*) per annum. These trends create a large pool of ICT skilled workers in the Philippines available for employment in both domestic and international ICT labor markets.

Excess domestic supply of ICT workers can be channeled to the growing demand and shortage of domestic supply for ICT workers in Japan. Akol (2003) reported that Japanese industries and businesses are in need of about 1.4 million information technology (IT) engineers, software programmers and other knowledge-based skilled professionals and the available domestic supply capacity is only about 840,000 IT engineers.

The pool of ICT professionals from the Philippines can very well bridge the supply-demand gap especially that the Japanese government has substantially eased the requirements for the Philippine IT workers who are interested to work in Japan.

However, the apparent difference in testing and certification standards is an important barrier to mobility of IT experts across borders. In this regard, both countries should have an agreement on mutual recognition of test results and certification by accredited conformity assessment bodies in either country (Rajan and Sen, 2002). ICT experts can be tested and certified by accredited assessment bodies locally (a refinement of the existing assessment and certification requirements of TESDA can be made in consonance with this provision), and not have to duplicate the procedures in the importing and supply deficit country.

As an initial step to mutual recognition on ICT skills, the Ministry of Economy Trade and Industry (METI) of Japan and the Department of Trade and Industry (DTI) of the Philippines are currently implementing the Japanese IT Standards Examination (JITSE) that would facilitate certification of qualification of Filipino workers to the minimum ICT skill requirements for employment. JITSE-certified ICT professionals are guaranteed one to two years working visa in Japan while it will also improve chances of employment in Japanese companies established in the Philippines.

Through a Memorandum of Mutual Recognition between the Japan Information Technology Engineer's Exam Center (JITEC) and the JITSE-Philippines Foundation, the latter was authorized to implement a certification program equivalent in scope of knowledge skills, with the technology to the Skills Standards provided by the Japan Information Processing Development Corporation (JIPDEC), and shall be recognized by JITEC and the Japanese Government. Arrangements are also currently being done by JITSE-Philippines to expand the certification examinations and programs such as the Computer Graphics Certification Examination from the Computer Graphics Arts Society of Japan (CGA) and other levels of examinations from JITEC.

Although the initial introduction of JITSE in the Philippines in 2002 recorded a very low passing rate (about 5.3 percent of the total 719 examinees), the JITSE-Philippines expects a higher passing rate in the succeeding examinations as the METI provides technical assistance to JITSE-Philippines by providing review materials. The review materials concentrated on introduction to computer science, information processing and security, development and operations, internal design and programming, network and database technologies and current IT topics. A possible technical assistance in the form of Japanese IT experts facilitating and conducting review sessions to complement the review materials from METI and the local pool of experts/reviewers to improve JITSE passing rate and certification procedure is of great importance.

k. On Exchange of Government Officials for Capacity-Building

As mandated by the Philippine Local Government Code of 1991, decentralization is integral in efforts to reduce poverty and disparity among regions. Local government units (LGUs) play a key role in expanding efforts to promote basic health service and education on a level close to residents, which enhances the effectiveness and sustainability of development programs implemented by the LGUs (JICA, 1999). Administrative powers, work, staff, budgets, among others, have been transferred to local government units, with the authority to initiate development plans, including distribution of budgets and staff.

Overall, though, decentralization has not been highly successful due to the lack of administration experience and abilities of the LGUs. With budget and staff distribution left to the discretion of LGUs, supply of basic social services is degraded due to the deterrent priorities of such LGUs (JICA, 1999). In addition, disparities in administrative abilities among LGUs exist, and new disparities are created due to the tendency of local grants to be concentrated in cities with larger populations. Moreover, the traditional power structure wherein councils and their members often played the leading role in local administration has partly contributed to insufficient institutional and human capacity building of LGUs (JICA, 1999). This has led to the incompetence of LGUs in planning projects and drawing up budgets by themselves.

Thus, it is important to assist LGUs in improving their management capacity through capacity building of individual local administrators, which will enable them to make the efficient use of transferred authority in order to advance regional development. The existing project-type technical cooperation extended by JICA to developing countries could be considered for this purpose. With the proposed JPEPA embodying exchange in government officials as one strategy to advance human resource development, some specific assistance measures the Philippines could request from Japan may include the following: (adopted from JICA (1999))

1. Local administrative officials could seek intensive training in Japan. In addition, some national government officials would be present which will lead to local and national officials sharing a common understanding and forming a network between them.

2. Alternatively, Japan could provide training in the Philippines to local administrative officials in order to create a network among LGUs. The primary focus will be on those who have received training in Japan (from #1 above).

With either option, promoting personnel exchanges and mutual training will enhance the communication among LGUs of different levels and with the national government. This will facilitate the exchange of information, know-how and advice. The Department of Interior and Local Government (DILG) should be strengthened in its functions to enable it to consolidate the different networks (JICA, 1999). In addition, local administrative officials will be able to deepen their knowledge and skills concerning current issues and conditions of development sectors, and improve their capacity of policy planning, coordination, implementation, and monitoring.

Aside from overall capacity-strengthening, it is necessary to address the problems of LGUs concerning service provision, which is hampered by inadequate appropriations or their insufficient implementation capacity (JICA, 1999). These open up other avenues for cooperation such as Japan continuously providing development funds through ODA, and dispatching advisory experts to help in effective implementation. With regard to the former, LGUs should be entitled to make a direct request for foreign assistance. This will enable better targeting and more effective disbursement of development funds rather than letting the national government solely decide on the appropriations of ODA to the local governments.

l. On International Youth Exchanges

JICA's Youth Invitation Program is intended to foster abilities in developing countries, to deepen mutual understanding and trust, and to build friendships (JICA, 2003). The program involves young people from developing countries who will eventually hold important positions in their countries of origin. They are invited to Japan for study in their fields of specialization. During their stay, the participants meet young Japanese people working in the same fields, and stay in private Japanese homes and experience life in ordinary Japanese households, fostering intellectual and cultural exchange. The program started in 1984 and gradually expanded to include Asia, Oceania, Africa, Latin America, Central Asia, Saudi Arabia, and the Caucasus. Around 1,700 young people from approximately 120 countries are invited every year.

The program enables participants to increase their knowledge in their respective fields of specialization such as education, economics, regional development, administration, agriculture and forestry, and social welfare. It also seeks to foster a better understanding of Japan and the Japanese people, including such aspects as culture and history. One of the main features of the program is a balance between training and exchange. Study and exchange activities in various places in Japan give participants the opportunity to see Japan as a whole and, at the same time, experience the distinctive culture and history of the area where they are staying. Both the invited participants and the Japanese participants are able to experience international cooperation and exchange through these activities, which greatly helps in encouraging development education and heightening international awareness in the regions (JICA, 2003). The program also provides for a course of Japanese language study in which Japanese volunteers show participants around the areas they are staying at the same time teaching them practical Japanese. There are also in-house seminars where the participants and young Japanese can engage in discussions and hold parties.

A bilateral agreement between the Philippines and Japan will strengthen the existing invitation program and can lead to more participation of Philippine youths. This can be achieved through the cooperation of the Philippines and Japan in disseminating information to the public. The two governments can also consider the facilitation of the requirements needed for the Youth Invitation Program. In return, the Philippines could consider setting up its own invitation program. The present arrangement with Japan is currently one-sided wherein Philippine youths are invited to Japan and engage in various activities. Hence, entering into a mutual exchange program will be doubly beneficial to both countries as Japanese youths going to the

Philippines would then be able to experience Philippine study and culture in the same manner as their Philippine counterparts going to Japan being imbibed in Japanese study and culture. In this aspect, the Philippines could request assistance from Japan in setting up the requirements and activities for this youth exchange. Educational and cultural institutions need to be organized to facilitate the implementation of the envisioned youth exchange. Depending on the initial results of the exchange program, and with proper support and funding, the Philippines can eventually expand the youth exchange program to countries other than Japan.

Another aspect of international exchange advocated by Japan is done through its Japan Overseas Cooperation Volunteers (JOCV) program, composed primarily of young people. The volunteer youths assist in the economic and social development of developing countries on the basis of requests from these countries (JICA, 2003). Cooperation is provided in seven fields: agriculture, forestry and fisheries, processing, maintenance, civil engineering, public health care, education and culture, and sports. The JOCV program began in 1965 with the dispatch of the first batch of 26 volunteers to four countries, five to Laos, four to Cambodia, twelve to the Philippines, and five to Malaysia.

Living and working with local people, JOCVs spend around two years in developing countries. Aside from the benefits that the local people receive from the volunteers, the experience also benefits the volunteers themselves as they strive to overcome the various difficulties they face in their personal relations and at work (JICA, 2003). The proposed bilateral agreement between the Philippines and Japan opens up the option of requesting/accepting more JOCVs into the country. Specifically, the acceptance of young and old Japanese volunteers would be beneficial to both countries. More elderly people can be sent to the Philippines which could help in easing the Japanese burden due to its ageing population. In April 2000, the JOCV Secretariat had set up a Senior Volunteers Division. Thus the Philippines would benefit from the experience and skills of both the senior volunteers and the young volunteers.

m. On Cultural Exchange

The promotion of cultural exchange generally strengthens bilateral relationships, understanding, and communication between countries. Exchange builds ties between nations enhancing appreciation for other cultures, and learning valuable skills for living in a global community as well as in cultivating alliances.

The Cultural Grant Aid Program under Japan's Official Development Assistance (ODA) scheme for the Philippines is generally concentrated on the improvement of equipments in cultural and higher education institutions. Recipients of the Cultural Grant Aid Program includes the Cultural Center of the Philippines (CCP), the National Historical Institute NHI), and public education institutions like the University of the Philippines (UP), Cagayan State University (CSU), Mindanao State University (MSU), Leyte Normal University (LNU), and the Philippine High School for the Arts (PHSA) among others.

Though focused on the improvements of cultural facilities, the exchange of cultural persons can be stretched out. Since the Philippines has been sending female entertainers and cultural dancers to Japan, cultural exchange agreements can be long-drawn-out to other areas that promote and foster the "real" cultural heritage between the two countries.

The cooperation can include the invitation and dispatch of national artists and specialists. Japan has been inviting outstanding artists, cultural property specialists, and others to their territory to take part in exchange projects, such as training of Japanese counterparts, joint production, and joint research. Arts fellowships through the Japanese Government Fellowship Program for Artists from abroad can be tapped where young overseas artists are invited to Japan to study and meet with young Japanese artists while the same program for Japanese artists are being sent overseas for practical training in fields of fine arts, music, dance, drama, film, stagecraft, media arts, and arts management. Japan does not only limit their assistance to artists, the Program for Asian Cooperation in Modern Performing Arts invites stage technicians to undergo training in New National Theatre, Tokyo to improve stagecraft for contemporary drama and stage arts.

Cultural exchange agreements can also figure through exhibitions and performances, among others. Bilateral exchange in modern and folk arts festivals, production of stage performances, participation in overseas film festivals, and joint exhibition of cultural properties promotes greater awareness, appreciation, and cultural understanding.

Similar to Japan's cooperation with the European Union and the United States, a joint effort for the conservation of cultural heritages is of great importance. The conduct of a joint research to clarify the mechanism of deterioration of the cultural property quality of historical buildings and investigate suitable methods of preservation will be of great use and contribution to the Philippines' effort in preserving national treasures.

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TABLES

Table 1. Human Development Indices, Japan and the Philippines, 1975-2000

Country	Rank (2002)	1975	1980	1985	1990	1995	2000
Japan	9	0.854	0.878	0.893	0.909	0.923	0.933
Philippines	77	0.652	0.684	0.688	0.716	0.733	0.754

Source: UNDP, 2003

Table 2. Selected Human Development Indicators, Japan and the Philippines, 2000

Human Development Indicators (2000)	Japan	Philippines
Life Expectancy at birth	81	69.3
Adult Literacy Rate	0	95.3
Combined gross enrollment ratio	82	82
GDP per capita (PPP in US$)	26,755	3,971
Life Expectancy Index	0.93	0.91
GDP Index	0.93	0.61
HDI Index	0.933	0.754

Source: UNDP, 2003

Table 3. Per Capita Food Intake Per Day, in Ap, gm*, Philippines, Various Years

Food Group	1978[a]	1982[b]	1987[c]	1993[e]
Energy-Giving Foods				
Cereal and cereal products	367	356	345	340
Starchy roots and tubers	37	42	22	17
Sugars and syrups	27 (19)[d]	22	24	19
Fats and oils	13	14	14	12
Body-Building Foods				
Fish, meat, and poultry	133	154	157	147
Eggs	8	9	10	12
Milk and milk products	33 (42)[d]	44	43	44
Dried beans, nuts, and seeds	8	10	10	10
Body-Regulating Foods				
Green leafy and yellow vegetables	34	37	29	30
Vitamin C-rich foods	47	36	36	21
Other fruits and vegetables	168	159	153	132
Miscellaneous	21	32	26	19
Total	396 (897)	915	869	803

Sources: [a]NSDB, FNRI. First Nationwide Nutrition Survey, Philippines 1978 (Summary Report). 2nd revision. January 1981
[b]NSTA, FNRI. Second Nationwide Nutrition Survey, Philippines 1982. October 1984
[c]Source: DOST, FNRI. Third National Nutrition Survey, Philippines 1987 Preliminary Results
[d]Number in parenthesis refers to data given in Source B (from Florencio. 1994 Nutritional Welfare of Filipinos In Population, Human Resources and Development)
[e]Philippine Nutrition Facts and Figures. FNR-DOST2001
**Raw as purchased*

Table 4. Adequacy of Energy and Nutrient Intake, Per Capita Per Day, as percent of RDA, Philippines, Various Years

Nutrient	1978[a]	1982[b]	1987[c]	1993[e]
Energy	88.6	89.0	87.1	87.8
Protein	102.9 (93.2)[d]	99.6	98.2	106.2
Iron	91.7 (88.3)	91.5	91.5	64.7
Calcium	80.4	75.0	0.42 (g)[e]	67.2
Vitamin A	68.6		389.7(mcg RE)[e]	88.1
Thiamine		71.8	66.7	68.4
Riboflavin		56.3	54.4	57.1
Niacin		119.7	119.9	88.0
Ascorbic Acid		91.1	80	73.2

Sources: [a]*NSDB, FNRI. First Nationwide Nutrition Survey, Philippines 1978 (Summary Report). 2nd revision. January 1981*
[b]*NSTA, FNRI. Second Nationwide Nutrition Survey, Philippines 1982. October 1984*
[c]*DOST , FNRI. Third National Nutrition Survey, Philippines 1987 Preliminary Results*
[d]*Number in parenthesis refers to data given in Source C (from Florencio 1994 Nutritional Welfare of Filipinos In Population, Human Resources and Development)*
[e]*Philippine Nutrition Facts and Figures. FNR-DOST. 2001*

Table 5. Prevalence of Vitamin A Deficiency and Iron Deficiency Anemia Among Various Groups, in percent, Philippines, 1993 and 1998

Vitamin A Deficiency			Iron Deficiency Anemia		
Group	1993	1998	Group	1993	1998
Children	38.0	35.3	All	28.9	30.6
Pregnant Women	22.2	16.4	6-11 months	49.2	56.6
Lactating Women	16.5	16.4	Pregnant Women	43.6	50.7
			Lactating Women	43.0	45.7
			60 years and above	45.6	43.9

Source: FNRI

Table 6. Intake of National Nutrition, Japan, 1970-2000

Year	Energy (kcal)	Protein (g)	Fats & oils (g)	Carbohydrate (g)	Calcium (mg)	Iron (mg)	Vitamin				Total
							A (i.u.)	B1 (mg)	B2 (mg)	C (mg)	
1960	2,096	69.7	24.7	399	389	13.0	1,180	1.05	0.72	75	1,128.4
1965	2,184	71.3	36.0	384	465	/ / /	1,324	0.97	0.83	78	1,160.8
1970	2,210	77.6	46.5	368	536	/ / /	1,536	1.13	1.00	96	1,270.7
1975	2,226	81.0	55.2	335	552	10.8	1,889	1.39	1.23	138	1,411.6
1980	2,119	78.7	55.6	309	539	10.4	1,986	1.37	1.21	123	1,351.9
1995	2,042	81.5	59.9	280	585	11.8	2,840	1.22	1.47	135	1,449.2
1996	2,002	80.1	58.9	274	573	11.7	2,836	1.21	1.43	131	1,417.5
1997	2,007	80.5	59.3	273	579	11.6	2,832	1.19	1.43	135	1,426.3
1998	1,979	79.2	57.9	271	568	11.4	2,701	1.16	1.42	125	1,397.1
1999	1,967	78.9	57.9	269	576	11.5	2,803	1.18	1.43	129	1,400.6
2000	1,948	77.7	57.4	266	548	11.3	2,654	1.17	1.40	128	1,379.6

1) Beginning 1985, excluding butter and animal oils and fats
2) Including butter and animal oils and fats
3) Beginning 1985, including butter and animal oils and fats
Data are based on the National Nutrition Survey. For 1970, May; and for years beginning 1975, November
Source: Health Service Bureau, Ministry of Health, Labour and Welfare, Japan

Table 7. International Comparison of Life Expectancy at Birth, in years

Country	Year	Male	Female
Japan	2001	78.07	84.93
Philippines	2000	66	69.2
USA	1999	73.9	79.4
Germany	1997-1999	74.44	80.57
France	1999	75	82.5
Italy	1999	75.8	82
UK	1998-2000	75.13	79.98
Sweden	2000	77.38	82.03

Source: Abridged Life Table; Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour and Welfare (2002)

Table 8. Number of Medical Professionals[a], Japan, 1984-2000

	Nurses	Male Nurses	Physicians	Dentists
1984	303,734	4,681	173,452	61,283
1986	333,040	6,218	183,129	64,904
1988	365,298	7,845	193,682	68,692
1990	395,496	9,268	203,797	72,087
1992	430,499	10,810	211,498	75,628
1994	479,584	12,768	220,853	79,091
1996	530,044	14,885	230,297	83,403
1998	576,640	17,807	236,933	85,669
2000	631,428	22,189	243,201	88,410

[a]Persons actually engaged in medical care facilities

Source: Sanitation Administration Report, Statistics and Information Department, Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour, and Welfare (2001)

Table 9. Medical Insurance Benefits Paid To The Elderly, in hundred million yen, Japan, FY 1983

Fiscal Year	Medical Insurance Benefits Paid	Medical Insurance Benefits Paid Out To The Elderly
1983	85,283	32,899
1984	85,828	35,889
1985	88,506	40,377
1986	94,405	43,829
1987	99,625	47,084
1988	103,279	50,002
1989	107,868	54,097
1990	112,543	57,646
1991	118,695	62,305
1992	128,206	67,343
1993	131,632	71,778
1994	136,548	78,412
1995	140,042	84,877
1996	145,156	92,898
1997	140,159	96,762
1998	137,823	101,737
1999	138,456	110,275
2000	140,214	102,399

Source: Kokumin Iryohi no Gaikyo, Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour, and Welfare (2002)

Table 10. Basic National Elementary Education Data, Japan, 1997-2002

Basic Data	1997	1998	1999	2000	2001	2002
Number of Schools	24,376	24,295	24,188	24,106	na	na
National	73	73	73	73	na	na
Public	24,132	24,051	23,944	23,861	na	na
Private	171	171	171	172	na	na
Total Enrollment	7,855,387	7,663,533	7,500,317	7,366,079	7,296,920	7,239,333
Number of Teachers	420,901	415,680	411,439	407,598	407,829	410,526
Teacher-Student Ratio	*1:19*	*1:18*	*1:18*	*1:18*	*1:18*	*1:18*

Source: Japan Information Network Statistics; MEXT

Table 11. Basic National Lower Secondary Education Data, Japan, 1997-2002

Basic Data	1997	1998	1999	2000	2001	2002
Number of Schools	11,257	11,236	11,220	11,209	na	na
Total Enrollment	4,481,480	4,380,604	4,243,762	4,103,717	3,991,911	3,862,851
Number of Teachers	161,485	158,757	155,865	153,290	151,714	150,496
Teacher-Student Ratio	*1:28*	*1:28*	*1:27*	*1:27*	*1:26*	*1:26*

Source: Japan Information Network Statistics; MEXT

Table 12. Basic National Upper Secondary Education Data, Japan, 1997-2002

Basic Data	1997	1998	1999	2000	2001	2002
Number of Schools	5,496	5,493	5,478	na	na	na
Total Enrollment	4,371,360	4,258,385	4,211,826	4,165,434	4,061,761	3,929,359
Annual Growth rate		*-2.60%*	*-1.09%*	*-1.10%*	*-2.49%*	*-3.26%*
Number of Teachers	276,108	273,307	271,210	269,027	266,548	262,439
Teacher-Student Ratio	*1:16*	*1:16*	*1:16*	*1:15*	*1:15*	*1:15*

Source: JIN Statistics; MEXT

Table 13. Basic Higher Education Data, Japan, 1997-2002

Basic Data	1997	1998	1999	2000	2001	2002
Number of Colleges/Universities						
Junior Colleges	595	588	585	572	na	na
Universities	586	604	622	649	na	na
Total Enrollment						
Junior Colleges	446,750	416,825	377,852	327,680	289,198	267,114
Universities	2,633,790	2,668,086	2,701,104	2,740,023	2,765,705	2,786,078
Number of Colleges/Universities						
Junior Colleges	19,885	19,040	18,206	16,752	15,638	14,491
Universities	141,782	144,310	147,579	150,563	152,572	155,048

Source: JIN Statistics; MEXT

Table 14. Basic National Elementary Education Data, Philippines, 1997-2003

Basic Data	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
Number of Schools	38,395	39,071	39,529	40,284	40,763	41,288
Public	35,272	35,587	35,857	36,013	36,234	36,759
Private	3,123	3,484	3,672	4,271	4,529	4,529
Annual Growth rate		*1.17*	*1.17*	*1.91*	*1.19*	*1.29*
Total Enrollment	12,225,038	12,502,524	12,707,788	12,759,900	12,826,218	12,979,628
Public	11,295,982	11,562,181	11,786,622	11,832,611	11,916,686	12,050,450
Private	929,056	940,343	921,166	927,289	909,532	929,178
Annual Growth rate		*2.27*	*1.64*	*0.41*	*0.52*	*1.20*
Number of Teachers	354,063	359,964	359,798	331,827	331,448	337,082
Public	324,039	329,198	329,198	331,827	331,448	337,082
Private	30,024	30,766	30,600	-	-	-
Teacher-Pupil Ratio (Public Schools)	*1:34*	*1:35*	*1:35*	*1:36*	*1:36*	*1:36*

Source: Department of Education, 2003

Table 15. Basic National Secondary Education Data, Philippines, 1997-2003

Basic Data	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003
Number of Schools	6,690	7,017	7,197	7,509	7,683	7,890
Public	3,956	4,116	4,214	4,336	4,422	4,629
Private	2,734	2,901	2,983	3,173	3,261	3,261
Annual Growth rate		*4.89*	*2.57*	*4.34*	*2.32*	*2.69*
Total Enrollment	5,022,830	5,115,251	5,207,446	5,378,735	5,813,879	6,077,851
Public	3,616,612	3,767,159	3,933,210	4,157,889	4,562,317	4,793,511
Private	2,734	2,901	2,983	3,173	3,261	3,261
Annual Growth rate		*1.84*	*1.80*	*3.29*	*8.09*	*4.54*
Number of Teachers	144,662	145,977	145,561	109,845	112,210	119,235
Public	105,240	107,706	107,706	109,845	112,210	119,235
Private	39,422	38,271	37,855			
Teacher-Pupil Ratio (Public Schools)	*1:34*	*1:35*	*1:35*	*1:36*	*1:39*	*1:40*

Source: Department of Education, 2003

Table 16. Comparative Mean Percentage Score (MPS[1]) of Grade VI pupils who took the National Elementary Assessment Test (NEAT), 1997-2001

Effectiveness Indicators	1997-1998	1998-1999	1999-2000	2000-2001
Achievement Rate	50.78	50.08	49.19	51.73
Mathematics	51.75	52.45	45.69	49.75
Science	52.68	49.93	48.61	49.75
English	49.13	46.40	46.32	47.70
Hekasi	49.58	51.55	55.21	53.93
Filipino			50.13	57.49
Percentage of Passers			76.54	73.21

Source: Department of Education, 2003

Table 17. Efficiency in Performance Indicators for the Elementary School Education System, in percent, Philippines, 1997-2003

Efficiency Indicators	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002
Participation Rate	95.09	95.73	96.95	96.77	nd
Gross Enrollment Ratio					
Based on 7-12 population	118.28	118.16	119.15	113.45	nd
Based on 6-12 population	99.62	101.08	101.20	98.08	nd
Based on 6-11 population	115.23	116.97	117.15	113.57	nd
Cohort Survival Rate	68.56	69.79	69.48	67.21	67.13
Completion Rate	67.67	68.99	68.38	66.13	66.33
Dropout Rate	7.39	7.57	7.72	9.03	nd
Transition Rate	100.23	99.39	98.21	98.02	100.75

n d- No Data

Source: Department of Education, 2003

[1] Mean Percentage Score (MPS) indicates the ratio between the number of correctly answered items and the total number of test questions or the percentage of the correctly answered items in the test

Table 18. Efficiency in Performance Indicators for the Secondary School Education System, in percent, Philippines, 1997-2003

Efficiency Indicators	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002
Participation Rate	64.04	65.22	65.43	66.06	nd
Gross Enrollment Ratio	75.79	75.32	75.34	79.49	nd
Cohort Survival Rate					
Based on Grade 1	46.47	47.50	48.66	49.76	49.86
Based on First Year	71.40	72.18	72.08	73.05	73.16
Completion Rate					66.33
Based on Grade 1	44.97	45.12	47.20	48.10	nd
Based on First Year	69.09	69.98	69.89	70.62	nd
Dropout Rate	9.93	9.08	9.55	10.63	nd

n d- No Data
Source: Department of Education, 2003

Table 19. Comparative Mean Percentage Score (MPS) of Fourth Year Students who took the National Secondary Assessment Test (NSAT), 1997-2001

Effectiveness Indicators	1997-1998	1998-1999	1999-2000	2000-2001
Achievement Rate	48.66	46.12	54.34	53.39
Mathematics	49.65	44.49	49.99	51.83
Science	45.63	42.99	46.29	45.68
English	47.07	44.19	50.43	51.00
Filipino	57.50	62.50	66.14	61.26
Araling Panlipunan			58.64	57.19
Percentage of Passers	94.40	94.76		

Source: Department of Education, 2003

Table 20. Japan's ODA Expenditures as Technical Cooperation to the Philippines, in $US million (% of net disbursements for current year), 1996-2000

Year	Expenditures
1996	94.34 (23)
1997	89.25 (28)
1998	80.68 (27)
1999	92.08 (22)
2000	99.52 (33)
Total	1,391.91 (15)

Source: Japan's ODA, White Paper 2001

Table 21. Data on Higher Education, Japan and Philippines, 2002

	Universities	University Professors and Instructors	University Students
Japan	686	155,048	2,786,078
Philippines	1,479[1]	93,884[2]	2,637,039[2]

[1] *2003*
[2] *2000-01*
Source: JIN statistics; Commission on Higher Education (CHED)

Table 22. Minimum Requirements of the Japanese Language Certification Test (JLPT) by Certification Level

Certification Level	Minimum Certification Requirements
Level 1	Mastered grammar to a high level, knows about 2,000 Kanji and 10,000 words, and has an integrated command of the language sufficient for life in Japanese society and providing a useful base for study at a Japanese university. This level is normally reached after studying Japanese for about 900 hours.
Level 2	Mastered grammar to a relatively high level, knows about 1,000 Kanji and 6,000 words, and has the ability to converse, read and write about matters of a general nature. This level is normally reached after studying Japanese for about 600 hours and after completion of an intermediate course.
Level 3	Mastered grammar to a limited level and knows about 300 Kanji and 1, 500 words, has the ability to take part in everyday conversation and to read and write simple sentences. This level is normally reached after studying Japanese for around 300 hours and after completion of an elementary course.
Level 4	Mastered the basic elements of grammar, knows about 100 Kanji and 800 words and has the ability to engage in simple conversation and to read and write short, simple sentences. This level is normally reached after studying Japanese for about 150 hours and finishing the first half of the elementary course.

Source: JFMO, 2003

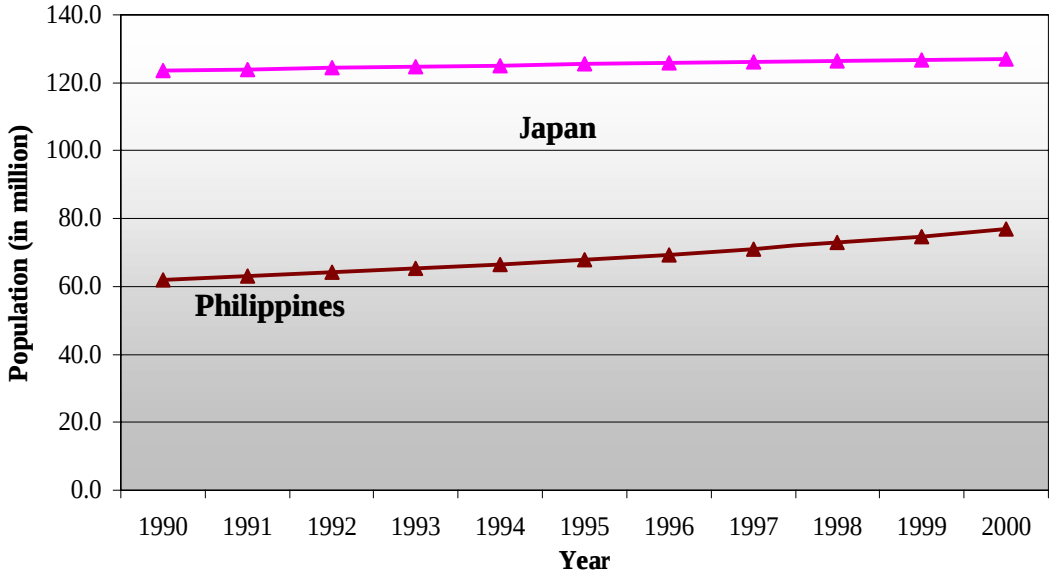
Table 23. Partial List of Schools and Institutions Related to Japanese Language Education and Japanese Studies

Metro Manila Centers / HEI	Provincial Centers / HEI
1. International Studies Center Adamson University	1. Filipino-Japanese Foundation of Northern Luzon, Inc. ABONG
2. Japanese Studies Program Ateneo de Manila University	2. Cagayan Capitol College
3. Foreign Service Institute	3. Philippine Nikkei-Jin Kai, Inc.
4. College of Nutrition, H.E. & Tourism - Centro Escolar University	4. Caritas Don Bosco School, Incorporated
5. Philippine- Japan Cultural Institute	5. Basic Arts and Sciences Department - Technological University of the Philippines
6. Philippine Trade Training Center	6. Center for Japanese Studies - University of Cebu
7. Nihongo Center & PIJLC	7. College of Arts and Sciences - University of San Jose-Recoletos
8. C.P. Garcia High School	8. The U.P. Mindanao
9. International Center, Institute of HRM (Angelo King) College of Saint Benilde	9. Japanese Language Center - Sorsogon State College
10. Japan Studies Center - Trinity College of Quezon City	10. Department of English and Literature - Silliman University
11. Technological University of the Philippines	11. Department of Literature and Languages - University of San Carlos
12. St. Benedict College	12. College of Hotel and Restaurant Management - University of Baguio
13. Asia Pacific Language Center - University of Asia and the Pacific	13. Southwestern University
14. Japanese Language Division - De Ocampo Memorial College	14. Leyte Normal University
15. High School Department - La Salle Greenhills	15. HRM-Tourism Department - Colegio de San Agusitn
16. Foreign Language Department - Miriam College	16. College of Arts and Sciences - Leyte Colleges
17. Marikina Institute of Science and Technology	17. International Studies Center, College of Arts and Sciences - University of the Philippines in the Visayas
18. Santiago Zobel High School - De La Salle Zobel	18. Bohol Institute of Technology
19. N. Araullo High School	19. Social Sciences Division University of the Philippines-Cebu
20. College of Foreign Service - Lyceum of the Philippines	20. University of the Philippines-Tacloban
21. International Studies Department - De La Salle University	21. Department of Economics - University of the Philippines-Los Banos
22. Institute of Foreign Languages - National Defense College of the Philippines	22. Office for Development, External Relations and Alumni Affairs (DERA) University of St. La Salle
23. Career Development and Continuing Education Center (CDCEC) Philippine Women's University	23. College of Arts and Sciences West Visayas State University
24. Modern Languages, High School - International School Manila	24. Tourism Department University of San Jose- Recoletos
25. Asian Center - University of the Philippines	
26. College of Education - University of Sto. Tomas	

Source: JFMO, 2003

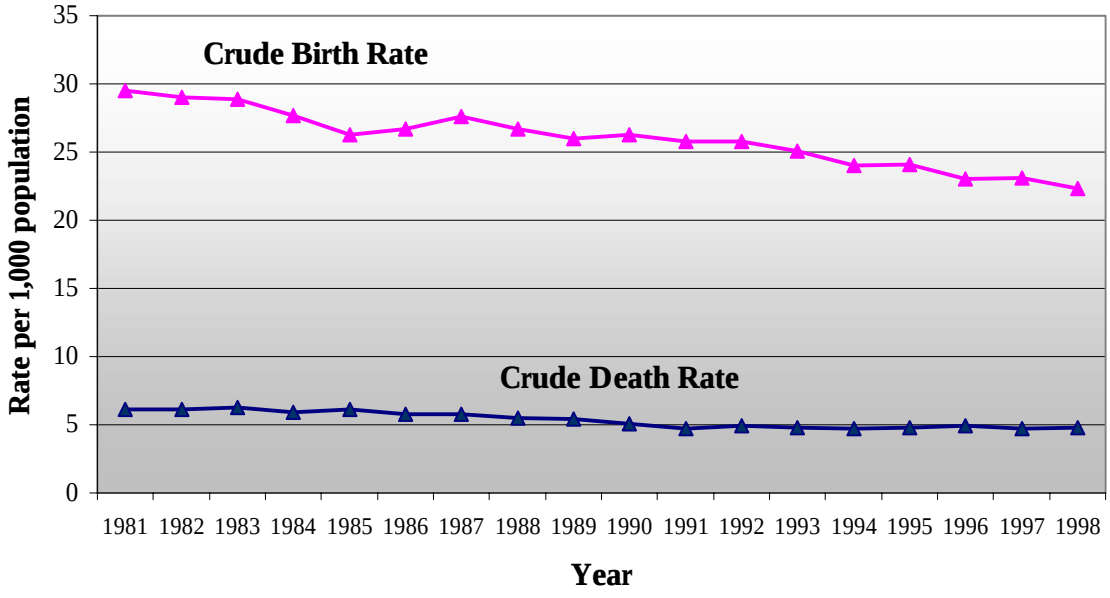
FIGURES

Figure 1. Population Size, in millions, Philippines and Japan, 1990-2000



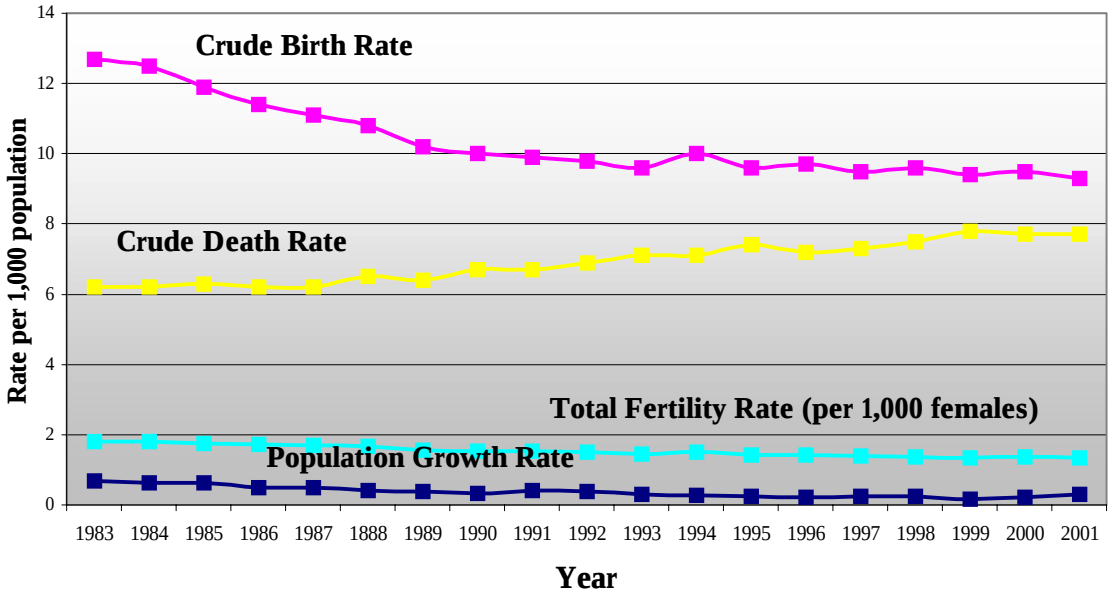
Source:: *Philippine Statistical Yearbook (various years), National Statistics Office; Annual Report on Current Population Estimates as of October 1st, 2002, Statistics Bureau and Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications*

Figure 2. Crude Birth Rate and Crude Death Rates, Philippines, 1981-1998



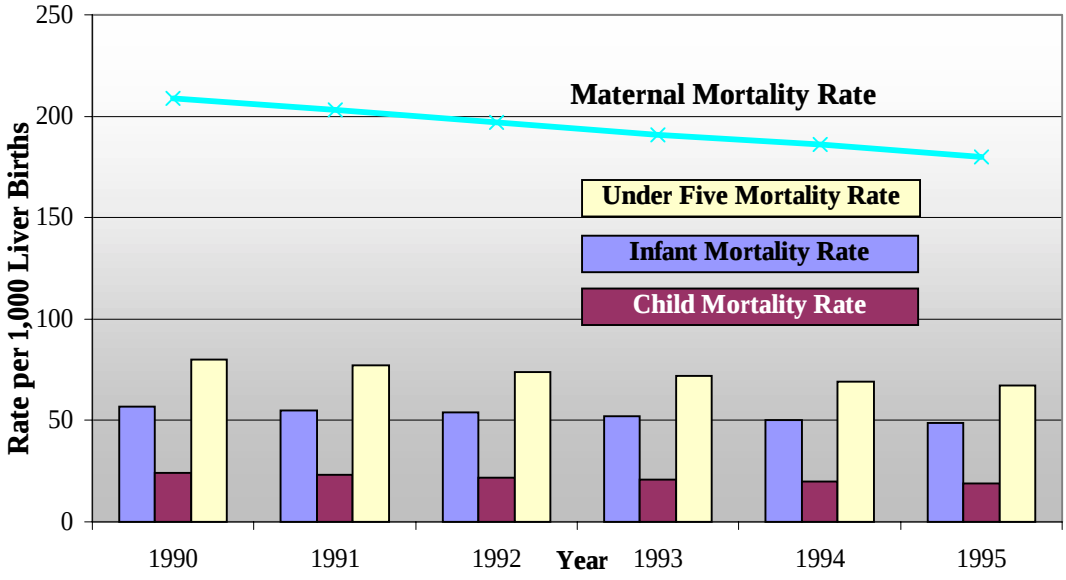
Source: *Philippine Statistical Yearbook (2002), National Statistical Coordination Board (NSCB); National Statistics Office (NSO)*

Figure 3. Selected Demographic Indicators, Japan, 1983-2001



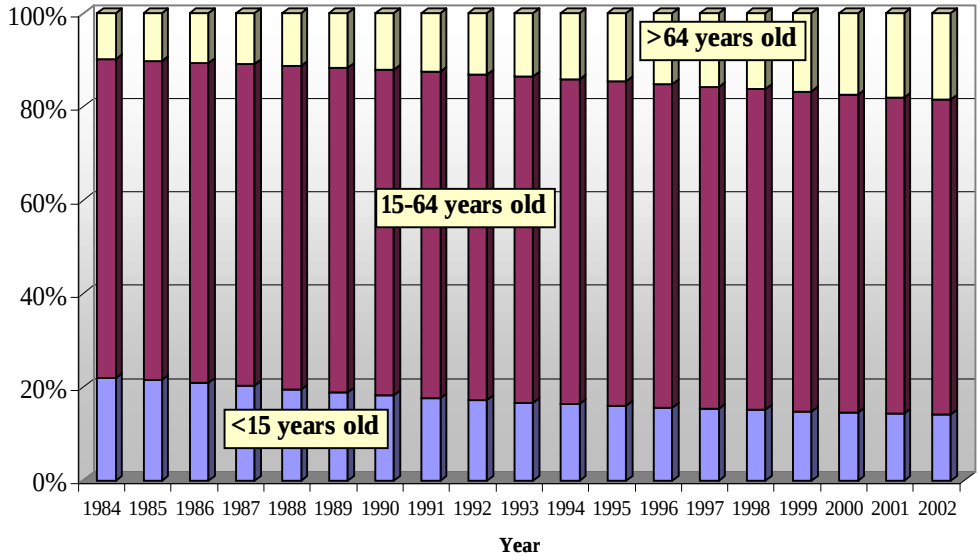
Source: *Statistical Survey Department, Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications; Summary of Vital Statistics, Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour and Welfare (2002)*

Figure 4. Selected Mortality Trends, rate per 1,000 live births, Philippines, 1990-1995



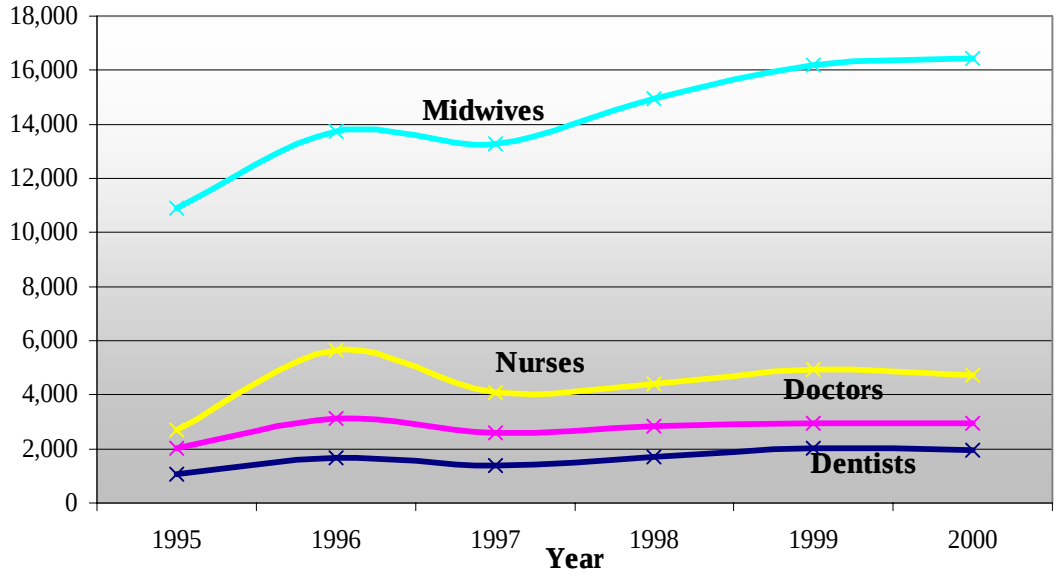
Source: *Philippine Statistical Yearbook (2002), NSCB Technical Working Group on Maternal and Child Mortality*

Figure 5. Change in Population by Broad Age Groups, Japan, 1984-2002



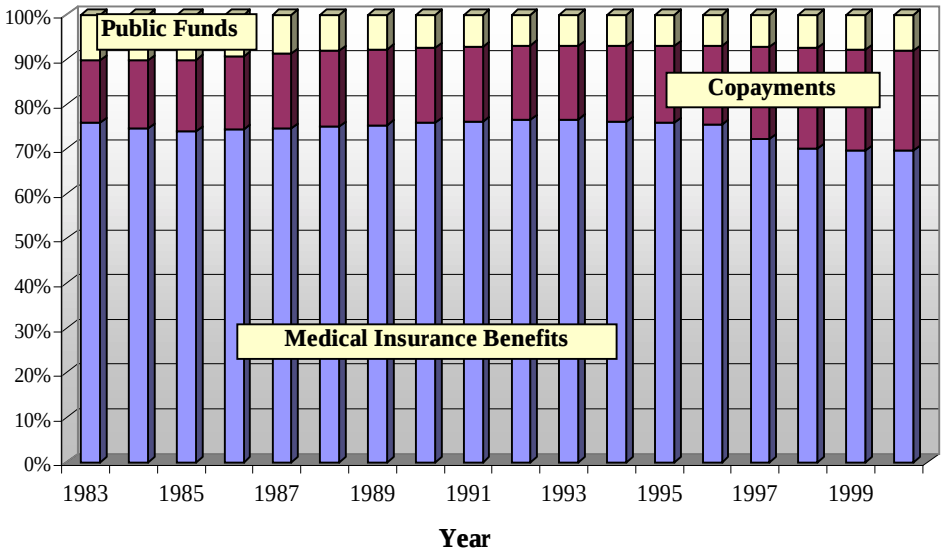
Source: *Annual Report on Current Population Estimates As of October 1, 2002, Statistics Bureau and Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications (2003)*

Figure 6. Health Human Resources, Philippines, 1995-2000



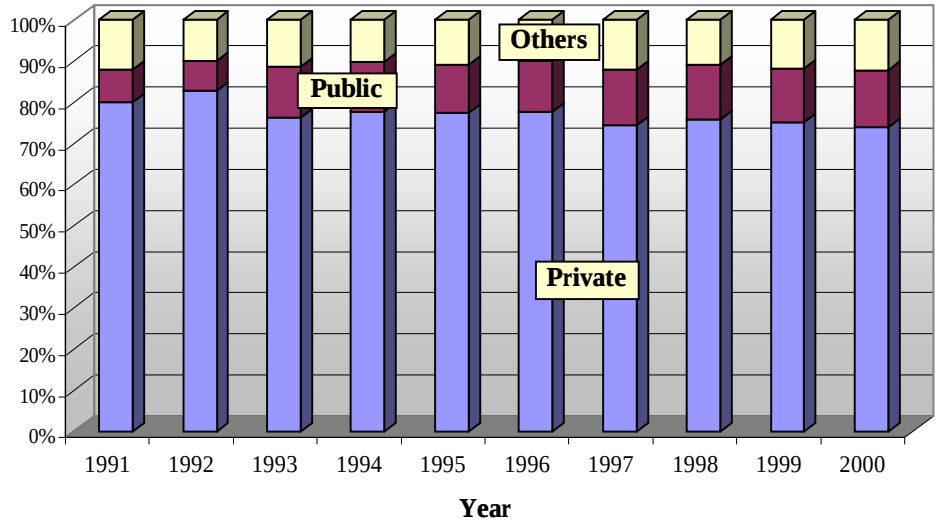
Source: *Department of Health, 2OO3*

Figure 7. Health Expenditures by Source of Funds, Japan, 1983-2000



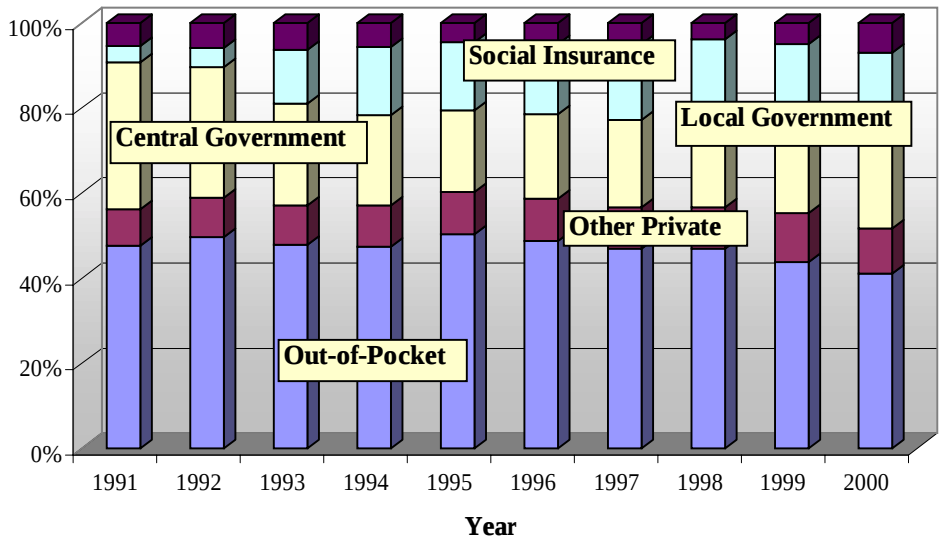
Source: Kokumin Iryohi no Gaikyo, Statistics and Information Department, Minister's Secretariat, Ministry of Health, Labour, and Welfare (2002)

Figure 8. Health Expenditures by Use of Funds, Philippines, 1991-2000



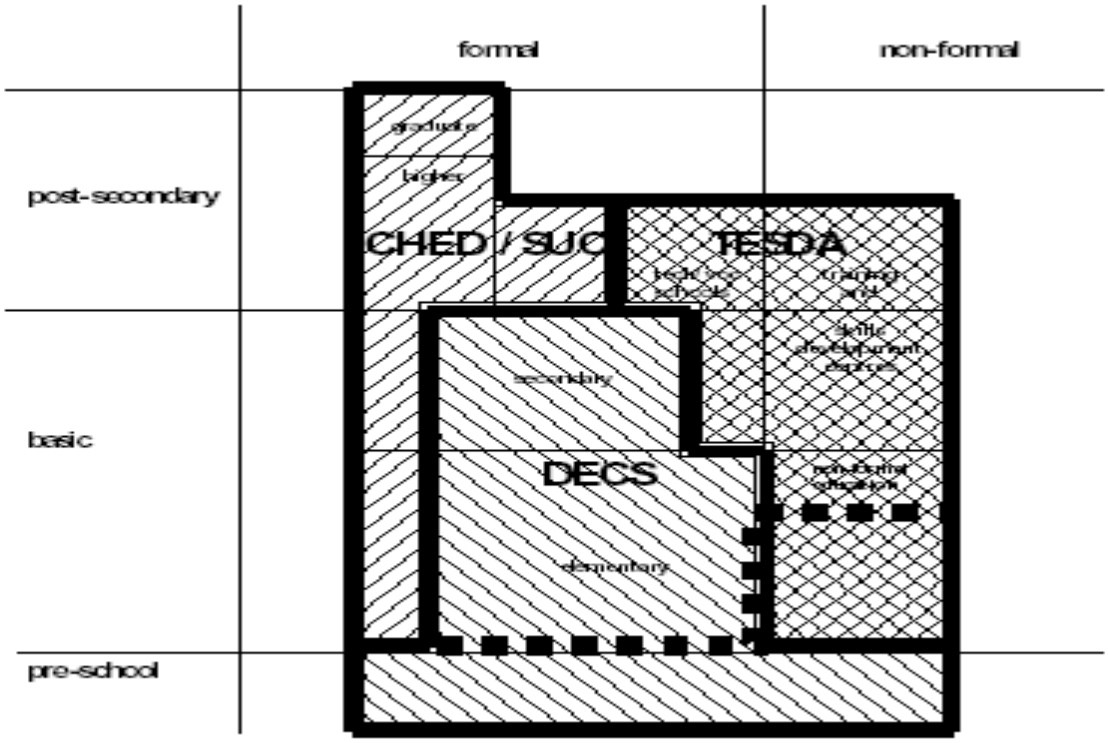
Source:: National Statistical Coordination Board, 2003

Figure 9. Health Expenditures by Source of Funds, Philippines, 1991-2000



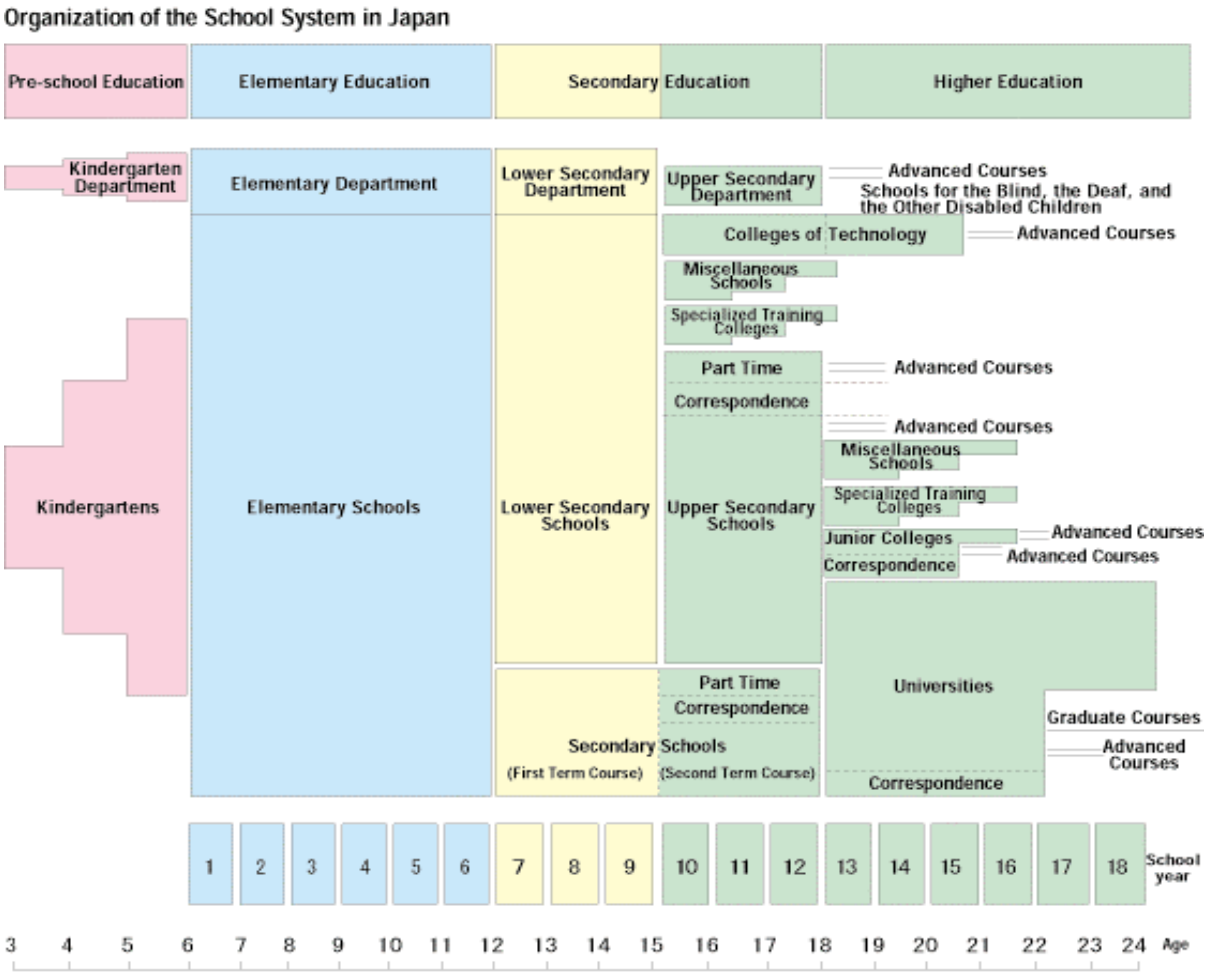
Source: National Statistical Coordination Board, 2003

Figure 10. Organization of the Philippine Education System



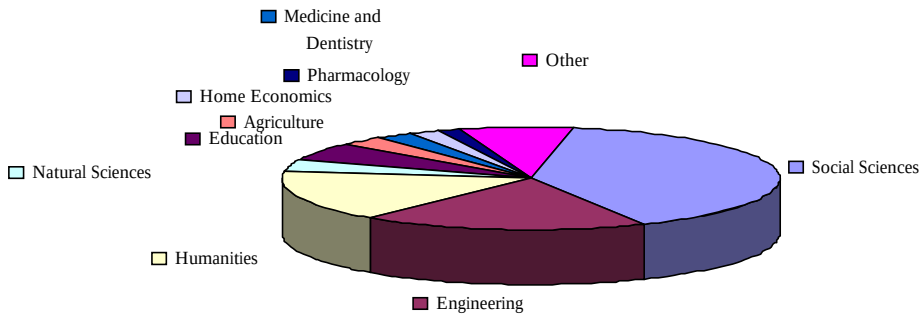
Source: Adapted from Maglen and Manasan (1999) in Manasan (2000)

Figure 11. Organization of the Japanese Education System



Source: *Adapted from Ministry of Education, Culture, Sports, Science and Technology (MEXT), 2003*

Figure 12. Undergraduate Courses by Major Fields of Study, Japan, 2001



Source: *MEXT (2003)*