Knowledge Sharing Program

## 2012 Modularization of Korea's Development Experience:

# Medical Professional Retraining Program

2013

MINISTRY OF HEALTH & WELFARE

SEOUL NATIONAL UNIVERSITY

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# Medical Professional Retraining Program

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# Medical Professional Retraining Program


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# Preface

The study of Korea's economic and social transformation offers a unique opportunity to better understand the factors that drive development. Within one generation, Korea has transformed itself from a poor agrarian society to a modern industrial nation, a feat never seen before. What makes Korea's experience so unique is that its rapid economic development was relatively broad-based, meaning that the fruits of Korea's rapid growth were shared by many. The challenge of course is unlocking the secrets behind Korea's rapid and broad-based development, which can offer invaluable insights and lessons and knowledge that can be shared with the rest of the international community.

Recognizing this, the Korean Ministry of Strategy and Finance (MOSF) and the Korea Development Institute (KDI) launched the Knowledge Sharing Program (KSP) in 2004 to share Korea's development experience and to assist its developing country partners. The body of work presented in this volume is part of a greater initiative launched in 2010 to systematically research and document Korea's development experience and to deliver standardized content as case studies. The goal of this undertaking is to offer a deeper and wider understanding of Korea's development experience with the hope that Korea's past can offer lessons for developing countries in search of sustainable and broad-based development. This is a continuation of a multi-year undertaking to study and document Korea's development experience, and it builds on the 40 case studies completed in 2011. Here, we present 41 new studies that explore various development-oriented themes such as industrialization, energy, human resource development, government administration, Information and Communication Technology (ICT), agricultural development, land development, and environment.

In presenting these new studies, I would like to take this opportunity to express my gratitude to all those involved in this great undertaking. It was through their hard work and commitment that made this possible. Foremost, I would like to thank the Ministry of Strategy and Finance for their encouragement and full support of this project. I especially would like to thank the KSP Executive Committee, composed of related ministries/departments, and the various Korean research institutes, for their involvement and the invaluable role they played in bringing this project together. I would also like to thank all the former public officials and senior practitioners for lending their time, keen insights and expertise in preparation of the case studies.

Indeed, the successful completion of the case studies was made possible by the dedication of the researchers from the public sector and academia involved in conducting the studies, which I believe will go a long way in advancing knowledge on not only Korea's own development but also development in general. Lastly, I would like to express my gratitude to Professor Joon-Kyung Kim and Professor Dong-Young Kim for his stewardship of this enterprise, and to the Development Research Team for their hard work and dedication in successfully managing and completing this project.

As always, the views and opinions expressed by the authors in the body of work presented here do not necessary represent those of the KDI School of Public Policy and Management.

**May 2013**

**Joohoon Kim**

**Acting President**

**KDI School of Public Policy and Management**

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## Chapter 1



## Chapter 2

# Abbreviation

| | |
|---|---|
| AID | Agency for International Development |
| CMB | China Medical Board |
| ECFMG | Educational Mission for Foreign Medical Graduates |
| FOA | Foreign Operations Administration |
| ICA | International Cooperation Administration |
| KAC | Korean Advisory Committee |
| KIU | Kyungsung Imperial University |
| KMC | Kyungsung Medical College |
| NTTC | National Teacher Training Center |
| OECF | Overseas Economic Cooperation Fund |
| OEC | Office of Economic Coordinators |
| RTTC | Regional Teacher Training Center |
| SNU | Seoul National University |
| UM | University of Minnesota |
| US | United States |
| UNKRA | United Nations Korean Rehabilitation Agency |
| USAMGIK | United States Army Military Government in Korea |
| USOM | United States Operations Mission for Korea |
| WHO | World Health Organization |

# Summary

This report reviewed a retraining program for medical professionals in the mid-20th century which was done by the United States (US) to help the rehabilitation and development of Korea after Liberation from Japan and the Korean War, known as the 'Seoul National University Cooperative Project' or 'Minnesota Project'. It initially began as a university reconstruction program. However, in this report, the program will be reviewed through the lens of a retraining program for medical professionals interested in health professional development in developing countries so they may gain precious insight that can be applied to their respective situations. For this purpose, the report analyzed the background, goal and objectives, implementation and adjustment strategies, and outcomes of the project.

Through the Japanese colonial era and the Korean War, the healthcare infrastructure of Korea was devastated, and the project played a pivotal role in re-establishing the health care system and medical education of Korea by reproducing the system of the US. Though there are many questions on the appropriateness of adopting the American model, it cannot be denied that this project had a profound influence on the modern healthcare and medical education of Korea.

Korea was liberated from Japan in 1945. Five years after the liberation, the Korean War broke out and lasted for three years from 1950 to 1953. Seoul National University (SNU) was established in 1946, and had to undergo severe destruction and loss of human resources from the war. In 1954, just after the end of the Korean War, SNU started to receive technical assistance from the University of Minnesota (UM) under the support of the United States International Cooperation Administration (ICA). This aid program was composed of three elements: retraining professors, dispatching advisors, and reconstructing facilities and equipment.

In Korea, it was commonly referred to as the 'Minnesota Project', whereas in the US, the official title was the 'SNU Cooperative Project'. It is important to note that the program was named after the beneficiary institution, contrary to many development programs named after the conducting organization of the donor country. Naming is critical because it can encourage ownership and commitment from the side of the beneficiary. With this consideration, this report will address the project as the 'SNU Cooperative Project' rather than the 'Minnesota Project'.

After World War II, the US started to provide technical assistance for several developing countries in which she had a diplomatic and military interest. By training professionals in urgent fields, providing essential equipment and facilities, and establishing educational institutions, the US expanded the influx of advanced knowledge, skills, and technology to developing countries.

Technical assistance[1] was carried out under agreements with professional institutions, including universities. By September 1960, the ICA made agreements with 53 American universities and was running 96 technical assistance programs in 33 countries. At the time, the ICA was running not only the SNU Cooperative Project but also other projects in Korea: the George Peabody University Project to train high school teachers, the Washington University Project to support the management program at Yonsei University and Korea University, and the Syracuse University Project to assist audiovisual programs in public information offices. Among these many programs, the SNU Cooperative Project enjoyed the biggest size of the fund, with the budget estimating 10 million USD. It was the largest program held in Asia after World War II. In this fact, the US's increased national interest in South Korea after the World War II, and the Korean War is reflected. To meet the needs of the Cold War, the US aimed to establish a strong anti-communist block in the Far East, by rehabilitating Korea and Japan.

From September 1954 to June 1961, the SNU Cooperative Project continued for six years and eight months. The project was implemented in collaboration between colleges of UM and those of SNU, comprising the College of Medicine (including Nursing), Agriculture, Engineering, and the Graduate School of Public Administration.[2] The project consisted of three major parts: Korean professors going abroad and receiving training in the US; the

1. In the methods of development aid, there are projects, programs, technical assistance, budget aid, liability deduction, food aid, emergency aid, indirect assistance through non-governmental organizations, and aid programming. Technical assistance means aid in the improvement of technology, transfer of knowledge, transfer of technology, improvement in production abilities, and development in human resources. Technical assistance is done by educational training, advisor dispatching, policy and technical consulting, and support in investigation and research.

2. For the College of Medicine, Engineering, and Agriculture, the project ended on June 30th 1961, but for the Graduate School of Public Administrations, it ended on June 30th 1962.

professors of UM traveling over to Korea and providing consultation; restoring the facilities and supplying equipment. Of the three components of the project, the exchange professor program was the core. The exchange professors were expected to apply and spread the new knowledge, skills, and organizational culture they learned in the US, and change the existing system of medicine and medical education in Korea.

The basic task of advisors was to assist the exchange professors returning from the US. They hosted seminars in each department to introduce the latest medical knowledge and performed joint research with Korean professors. The project also restored and upgraded the facilities, and the equipment that was destroyed during the Korean War. New high technologies, such as machines for radiation treatment, electrocardiogram, blood gas analyzers, tissue culture faculties, and microscopes, were supplied through the project.

Through this program, a total of 226 professors from SNU went on professor exchange programs, and 59 advisors from the US traveled to Korea. As for the College of Medicine, 77 professors were trained in the US, and 11 advisors traveled from US to Korea to provide consultation.

The impact of the project on the SNU College of Medicine was great. Major historical events in the history of medical education in Korea after the liberation happened in the project period: clinical clerkships in 1957, internships in 1958, and residency programs in 1959. Really, these programs were the gist of American medical education at the time. In 1956, as a result of the project, high-technology surgeries such as heart surgeries, began being treated in the hospital at SNU College Medical School.

The exchange professors faced many difficulties such as language barriers, cultural differences, and limited opportunities for hands-on experiences during their stay in the US. According to the American professors, many exchange professors experienced difficulties due to language barriers,[3] and relatively more passive Asian culture. Since they did not have the medical licenses, they were prohibited from participating in clinical practices. However, they were people who had experienced hardship during the colonial era and the Korean War, and were faculty members from the highest-ranking university in Korea. Despite the several difficulties, they fought their way through training with a strong sense of pride. Even when academic accomplishments faltered, time spent in the US itself was very meaningful for them. At the time, going abroad to study was unimaginable to vast majority

3. Internal Medicine Professor J. Watson from UM wrote to Dr. Gaylord W. Anderson on December 4th 1956. In his letter, he wrote. 'I think that they may have profited to some extent by their study of one year in the department. The truth is, however, that I was never able to communicate in any adequate fashion with either of them nor were other members of my staff. The language barrier was considerable.....We were all rather discouraged with our contact with these individuals. We felt that we had not been able to make any effective impact.'

of Korean people. Training in the US was not only an opportunity to see the world from the perspective of the soon-to-be most powerful nation in the world, but also one to become a leader in Korean society.

Several changes took place at the SNU College of Medicine through the project. By 1962, after the project was finished, other than three professors who decided to stay in the US, 74 professors came back to Korea. At the time, there were 106 professors in Korea in total. Therefore, the percentage of professors who went though the exchange program came out to be 70%. Korea was shaped by traditional Confucian culture and was heavily influenced by the Japanese college system at the time. The effect of having nearly 70% of the faculty influenced by new trends in medicine and education was rather significant. They scholars were able to take Korean medical sciences to the next step by diffusing the educational methods and organizational culture they learned in US. However, some of them faced many struggles in applying new knowledge and skills to traditional authoritarian university environments.[4]

The advisors for the project experienced difficulties in comprehending the culture and customs of Korea. They became anxious as the desired changes took place very slowly. The American professors also had to deal with conflicts that arose as they worked with elderly professors who had been taught and trained in the Japanese university culture. The advisors denoted several problems: (1) cramming, an authoritarian one-way teaching method that followed Japanese tradition, (2) inbreeding, which meant that only alumni were appointed to professorships, (3) authoritative culture oppressing creativeness of the younger generation, (4) inefficient management of hospitals and poor patient manners, and (5) lack of a scientific approach in medical science such as the use of autopsy, or clinical pathology conferences.[5]

Buildings destructed during the Korean War were reconstructed, and many modern ones were built. Facilities for electricity, hot-water, and heating were repaired or changed to

4. Such problems are quite common in the development of capacities in human resources. The trainee who became accustomed to advanced technology, skills, and culture often leaves the organization after not being able to adapt to the old ways of doing things. Sometime, they give up their new knowledge and go back to old ways of doing things.

5. Kim, Ok-Joo, Hwang Sang-Ik, The Minnesota Project – The Influence of American Medicine on the Development of Medical Education and Medical Research in Post-War Korea, Korean Journal of Medical History volume 9, 112-23, 2000. The problem of cramming-style lectures from the Japanese tradition, customs of hiring only alumni of the same school, and an authoritative culture that oppresses the creativity of the younger generation, still remains even after 50 years. Hence, an in-depth study on the actual changes made by the project is needed. As it was stated by Kim Kisuk, the hiring of professors, educational curriculums, and selection of students, the so-called Ideas of University has hardly changes. Kim, Ki-Suk, American Universities in the Trace of the Development of Universities in Korea: the Case of Seoul National University, American Studies Institute of Seoul National University, 2008.

brand new ones. However, Korean government could not procure matching funds at first; sometimes they suffered from the shortage of electricity, hot-water, and heating. A lot of new equipment for education, research, and clinical practice were supplied. Nevertheless, some of the equipment supplied by the project was left unused even until 1961.

These days, many Korean people refer to the SNU Cooperative Project as a success case of a medical professional training program or university rehabilitation program. Examining the project from today's perspective, we can find several key success factors, which worked in favor of the project. The factors can be grouped into three clusters: those on the US side, the Korean side, and the program itself.

The rich experience of the US in assisting other countries was one of the most critical factors. The US had previously run the Marshall Plan from 1947 to 1951, and even during the SNU Cooperative Project, ICA ran assistance programs in 33 countries around the world simultaneously. Such abundant experience allowed more efficient design and execution of the project.

Moreover, the vast amount of data over healthcare and the medical education of Korea that the US collected after the liberation from Japan and during the Korean War need to be taken into consideration. The United States Army Military Government in Korea (USAMGIK) governed Korea from September 1945 to August 1948, when the Republic of Korea was established. During this period, one of the major policies of USAMGIK dealt with public health and health personnel education.

The selection of SNU as the beneficiary institution also reflects insight on US expectations toward Korea. SNU succeeded the one and only university of the Japanese colonial era, Kyungsung Imperial University (KIU). Having selected SNU in this context, the US aniticipated that SNU would be the leading educational institute that could produce professors who would work for other universities or colleges in Korea.

The medical community in Korea was also aware of developments in the US. After liberation in 1945, the USAMGIK dismissed Japanese officials and appointed a Korean official as the Director of the Department of Health and Welfare, alongside an American Director. The USAMGIK also arranged study abroad programs, such as preventive medicine in the US, for Korean physicians. Ten Korean physicians went on to study in the US for one or one and a half years under the sponsorship of the Rockefeller Foundation. Aside from this, there were 33 more who were studying in the US on their own. As a result, Korean physicians recognized that American medicine was far more advanced than Japanese medicine.[6]

6. In acceptance of culture or technology, familiarity and envy plays a critical role.

Korean professors also had great potential for growth. Even immediately after liberation, Korean professors in the SNU College of Medicine were praised very highly. An official of USAMGIK noted that 'with a little bit of assistance, they will lead the medical sciences with their strong will'. The scholars that had overcome humiliation and discrimination with strong will during the Japanese colonial era eventually became professors of the SNU College of Medicine, which was born by the merging of KIU and Kyungsung Medical College (KMC) in 1946.

Other than the three who decided to stay in the US, 77 professors who participated in the exchange program returned to Korea. The numbes reveal that their sense of purpose in contributing to their home country was far greater than pursuing their indivudal interests. However, as is mentioned frequently, the language barrier and the tight immigration act of US also contributed to the high return rate. Those who were educated during the Japanese period had very low levels of English. Furthermore, until the US participated in the Vietnamese War in the mid-1960's, it was not easy for a doctor from other countries to settle in the US.

The training hospital affiliated with the college under a unified system was also an important success factor. Unlike the US and some other countries that have a loose partnership between the medical college and hospitals, the SNU College of Medicine had a hospital that was under the control of the college. Thanks to this, balanced development in both basic medicine and clinical medicine was possible.[7]

The economic development of Korea after the project was another success factor. Not long after the project, Korea entered into rapid economic growth which is referred to as 'the miracle of the Han River', during which industrialization and urbanization took place. The SNU College of Medicine and its hospital also received concentrated support during this period, and benefited greatly from monopolistic development under the patronage of the government.

On top of that, the SNU College of Medicine prolonged the effects of the SNU Cooperative Project to further develop with the aid of China Medical Board (CMB) of Rockefeller Foundation, the World Health Organization (WHO) Western Pacific Regional Office, and Overseas Economic Cooperation Fund (OECF) from Japan. Though CMB's aid instigated in 1953, full-scaled aid was given from 1961, just after the project finished,

7. Although it is not be confirmed an effect of the project, there were movements of hospitals trying to get away from the influences of medical colleges, starting from the mid 1960s. The hospital attached to SNU was under the administration of the College of Medicine at SNU until 1970s, but it became an independent institution in 1978 when the new hospital building was constructed. The hospital administration's idea that the hospital could have more rapid development by working independently from the college played a large role in making such a decision.

to 1975. With the aid of CMB, texts and reference materials were stocked at the library; new buildings were built in the graduate school of public health; the fees for advisories and supervisors for new hospital construction as well as the wages for newly instructed teachers of College of Nursing were paid; repair costs for the Nursing Department building was funded; and 30 professors from the SNU College of Medicine went on the professor exchange program to the US.[8]

Aside from this, the SNU College of Medicine established the National Teaching Training Center for Health Personnel (NTTC) to train professionals and to further develop medical education with the support of WHO Western Pacific Regional Office in 1975, the year CMB's support ended. Developed from the support of SNU Cooperative Project and CMB, NTTC shared its medical education with other medical schools, and played a key role in retraining the medical professionals of Korea.

Another factor was the healthcare system of Korea. Before the national health insurance was introduced in the late 1980s, physicians earned relatively high incomes, thanks to the free-market system in medical services. Even though the monthly salary of physicians working at national hospitals was only around 100 USD[9] in the 1950s, most physicians opened private clinics that stayed open until late at night, and could earn much more money.[10] Because of this, medical colleges were able to have a continuous flow of outstanding professors and students, combined with intense enthusiasm for education in traditional Korean culture. This is contrary to the cases found in developing countries that adopted a socialist health care system.

In terms of programs, an iterative cycle of design-management evaluation was another important factor to success. The chief advisor in Korea produced reports every six months, and continuously improved the program by reflecting on the opinions of the advisors both in Korea and the US, and the Korean advisory committee at UM. The overall and specialty advisors stayed in Korea for three months to two years, and submitted a detailed report to improve the program.

8. Dean Gault N.L. who stayed in Korea as an overall advisor for the SNU Cooperative Project from August 30th 1959 to June 30th 1961, also worked as an advisor for CMB.

9. Wang-Jun Lee, The influence of Minnesota project on the Korean medical education, Doctorial dissertation, Seoul National University, appendix 1-1, record of interview with Dr. N. L. Gault Jr.

10. Even after hour clinics were banned after the military coup on May 16th 1961, they continued to exist until 1975. Therefore, a physician was one of the most popular jobs in Korea.

# Chapter 1

## Background of Seoul National University Cooperative Project

1. Health Care and Medical Education of Korea in the Early 1950s
2. Background of the Seoul National University Cooperative Project

# Background of Seoul National University Cooperative Project

## 1. Health Care and Medical Education of Korea in the Early 1950s

### 1.1. Conditions of Health Care in Korea after the Liberation

During the Japanese colonial era which persisted from 1910 to 1945, healthcare policies in Korea were distorted and biased. Seoul and some other major cities had medical facilities, but in the regions other than the major cities, the physicians were given the title 'public doctor' and were told to be responsible for the public health of the region. However, 'public doctors' only served government officials and Japanese residents. The general population could not receive services. The only administrative bureau for health, which was in charge of public health and the clinics, belonged to the police department of the central government. Yet, the head of the department was not a doctor. In the countryside, police officers were given the role of public health official.

The supply of daily necessities ran out with the outbreak of the World War II, and from the interaction with southern regions of Asia, many people died from infectious diseases such as typhoid, paratyphus, smallpox, and cholera. By the time the country had gained liberation from Japan, 8 years of war had exhausted all the resources and food in Korea. No different from the situation in other fields, public healt care policies were back to square one.

According to reports made by the US army that occupied Korea after liberation, there were provincial, municipal, and missionary hospitals by the time of their advancement in Korea. Yet, the numbers were nowhere near high enough to meet the demand. There were 10 hospitals and 1,620 beds in Seoul, and 181 hospitals (according to the records from 1940, there were 170 hospitals and 8,120 beds) throughout the country. There were 3,381

physicians (including limited area doctors), 573 dentists, 1,163 nurses, and 943 midwives. Also, there were 42 tuberculosis sanatoria that accommodated 1,238 patients, and three leprosaria that accommodated 8,000 patients.

By 1945, when the US army advanced into Korea, there was dysentery, typhoid, paratyphus, enteritis, diarrhea, diphtheria, cerebrospinal meningitis, malaria, scarlet fever, smallpox, and venereal diseases that had spread throughout the country. Though there were never reported cases of abnormal occurrences of serious infectious diseases, the US army recorded that 'there are many gaps and inaccuracies in the reports due to the absence of an administrative department during the war'. In the case of paratyphus, it continuously increased after 1942, and epidemic louse-borne paratyphus was considered most threatening to public health in winter of 1945. Accordingly, the US military formed a typhus committee to investigate and prepare a solution for the spread of the epidemic.

Water supply could not be processed due to the lack of sterilized chlorine. In the case of Pusan, the largest port city in Korea, water supply facilities could not meet the demands of the war refugees and the people returning from Japan. The construction of a water supply facility that began at the end of the Japanese colonial era was halted for quite a bit of time due to a shortage of building materials. Conditions were no better in Seoul because water supply facilities needed immediate repair. Water supply in two of the largest cities in Korea was limited.

The following is a report on Korea's healthcare conditions made after the advancement into Korea by the US military in August of 1945.

"Medical facilities in general have been inadequate. Common diseases are dysentery, typhoid, paratyphus, enteritis, common diarrhea, diphtheria, cerebrospinal meningitis, malaria, scarlet fever, and smallpox. Venereal disease has been widespread. Hospitals have been maintained under provincial, municipal, missionary, and private agencies but have not been adequate. In Seoul, there were reported to be 10 hospitals with a total capacity of 1,620 beds."

Nursing conditions in Korea were found to be inferior to those in Japan. There are only 181 hospitals, 3,381 physicians, 583 dentists, 1,163 graduate nurses, 943 midwives, 42 tuberculosis sanatoria (with 1,238 patients) and three leprosaria with 8,000 patients. The training of nurses, prefectural examination systems, and nurses' associations were under the guidance of the Japanese authorities, and were similar to those described in the report on Japanese nursing. A report on one hospital (Severance Union Hospital, Seoul) indicates that nurse training continued during the war under the direction of Korean personnel. The buildings are inadequate and teaching material, books, and clothing for nurses are lacking. The bed capacity is 200, and there are 120 patients. The Japanese language was made compulsory but is no longer required.

No abnormal occurrences of serious communicable disease have been reported to Military Government but reports so far have been meager and are considered highly inaccurate since the reporting system is not functioning properly. A more efficient system of reporting is in its planning stages and will be put into operation shortly. Epidemic louse-borne typhus is expected to be the greatest health hazard to the civilian population in the coming winter. Since 1942, this disease has been on the increase. A survey of the problem is in process by the United States Army Typhus Commission, and plans are being formulated to combat the disease.

Civilian water supplies are generally untreated due to the absence of required chemicals. Chlorine has been requisitioned for this purpose. Waterworks in Pusan are inadequate to care for the population increased by refugees and repatriates who are continually passing through. Construction of new head works began prior to the occupation, but is being held up because of lack of materials. The Seoul water system is badly in need of repair and the use of water is being restricted in both Seoul and Busan.

Sanitary facilities have been entirely inadequate. Toilets in schools in Busan were found to be in deplorable condition; this is being remedied. Public latrines have been constructed at railroad stations in Busan and Seoul to care for refugees passing through. Two thousand lepers have been reported in the province of Kyong-sang Namdo, including five hundred in its principal city, Busan. Investigation is being made of the possible use of an island for a leper colony.

Supplies seized from Japanese troops have been made available through Military Government to hospitals and for other civilian use. Additional drugs are needed. Twenty basic medical units have been requisitioned by the Bureau of Public Health for delivery every ten days, and if delivery is obtained within a reasonable time, no critical shortage should develop.

Large amounts of vaccines are required for the extensive immunization program. Steps are being taken to inoculate Japanese repatriates in Pusan and Seoul for typhoid and smallpox. An immunization capacity of 10,000 per day at the two locations is planned presently, but it is expected to reach 30,000 per day later. Inoculations for these and other diseases will be arranged as necessary for residents of Korea. Laboratories in Pusan and Taegu are capable of producing 1,000,000 doses a year of typhoid or smallpox vaccines. The Public Health Bureau is testing the quality of these vaccines and introducing modern methods of vaccine production to improve the quality and increase production. Narcotics are found to have been poorly controlled and supervised in the past. The situation is being investigated."[11]

11. GHQ, SCAP, Summation of Non-military Activities in Japan and Korea, No.1 (Sep.-Nov. 1945), Part V Section 3; 17-25 .

According to the records reported by medical personnel, there were 3,881 Korean physicians. Of the total, 2,972 (77%) were physicians, 784 (26%) were working for the government, and 125 were working at private companies. There were 5,840 people per physician in Korea, which was quite dismal when compared to other countries: The US had 700 per physician, England 870 per physician, and Japan 1,390 per physician <Table 1-1>.[12] Compared to the population per physician of Korea today, which is about 500 people for each physician, the physicians in 1948 took care of 12 times more patients than today's physicians.

**Table 1-1 |** Comparison of Physician Density by Country, 1948

| Country | Population Per Physician |
|---|---|
| The United States | 700 |
| England | 870 |
| Denmark | 950 |
| Norway | 1,100 |
| Spain | 1,100 |
| France | 1,300 |
| Japan | 1,395 |
| Korea | 5,840 |
| China | 25,000 |

Source: Chu In-Ho, Public Health Reports in Korea, 1951

At the time, there were 4 types of physicians in Korea: (1) physicians who graduated from medical school, (2) licensed physicians who passed the exams given by either the Department of Internal Affairs of Japan or the Korean government, (3) limited area doctors (people who neither graduated from medical school nor passed exams, but were allowed to perform limited medical practices in areas with no physicians), (4) oriental herbal doctors. The following table <Table 1-2> shows the numbers of the physicians mentioned above, excluding oriental herbal doctors. In addition to the shortage of physicians, even the distribution of the physicians was a problem. There were vast amounts of areas that could not receive any medical attention. In 1949, the physician per population ratio of Seoul was 1 to 707, whereas it was 1 to 12,284 in areas other than Seoul. As the distribution of physicians in 1949 <Table 1-3> indicates, regional distribution was extremely unbalanced. Of the 1,531 towns throughout the country, 840 towns, which account for 55% of the

12. Chu In-Ho, Public Health Reports in Korea, 1951.

total, did not have licensed physicians, and the population of where these physician lived accounted for only 33% of the total population, which was 20,140,000.

Table 1-2 | Number of Physicians by Type

| Year | Total | Physicians | | | Limited Area Doctors | Physicians Per 10,000 People |
|---|---|---|---|---|---|---|
| | | Gradutes of Medical School | Qualified through Exams | Total | | |
| 1949 | 4,375 | 2,797 | 875 | 3,672 | 703 | 2.2 |
| 1950 | 4,577 | 2,994 | 877 | 3,871 | 706 | 2.3 |
| 1951 | 5,082 | 3,244 | 1,050 | 4,294 | 788 | 2.5 |
| 1952 | 5,411 | 3,600 | 1,116 | 4,716 | 695 | 2.6 |
| 1953 | 5,662 | 3,757 | 1,209 | 4,966 | 696 | 2.6 |
| 1954 | 5,899 | 3,971 | 1,230 | 5,201 | 698 | 2.7 |

Source: Statistical Yearbook of Health and Social Affairs 1954, Department of Health and Social Affairs

Table 1-3 | Distribution of Physicians by Region, 1949

| Region | Population | Physicians | Limited Area Doctors | Total | Population Per Physician |
|---|---|---|---|---|---|
| Seoul | 1,445,694 | 2,044 | 8 | 2,052 | 705 |
| Gyeonggi | 2,740,161 | 349 | 165 | 514 | 5,331 |
| Chungbuk | 1,146,706 | 74 | 48 | 122 | 9,399 |
| Chungnam | 2,027,400 | 121 | 105 | 226 | 8,970 |
| Jeonbuk | 2,050,561 | 137 | 51 | 188 | 10,907 |
| Jeonnam | 3,042,371 | 225 | 115 | 340 | 8,948 |
| Gyeongbuk | 3,204,894 | 231 | 108 | 389 | 8,239 |
| Gyeongnam | 3,134,881 | 228 | 71 | 299 | 10,484 |
| Gangwon | 1,138,405 | 102 | 53 | 155 | 7,344 |
| Jeju | 253,225 | 8 | 20 | 28 | 9,044 |
| Total | 20,148,298 | 3,569 | 744 | 4,313 | |

Source: Chu In-Ho, Public Health Reports in Korea. 1951

After the liberation, there were 18 nursing schools with 757 students enrolled, and there were 300 nurses graduating every year. During the Japanese colonial era, the nursing profession was considered a subordinate position under physicians, so it was not a popular occupation for women. Therefore, enrollment kept on decreasing even after the liberation. On the other hand, enrollment for midwives had increased because of both the shortage of physicians and the notion that it was an adequate occupation for women.

The Department of Nursing Science offered a 3-year curriculum. In the first year, students took basic training courses; in the second year, they took basic courses such as anatomy, physiology, pharmacology, as well as clinical courses such as obstetrics, pediatrics, internal medicine, and dietetics; in the third year, they took clinical courses. As for the clinical practices, first year students were given 2 hours every day, and second and third year students were given 3 to 4 hours every day. Also, the schools provided midwife courses. The students were able to earn both nursing and midwife licenses together when they observed 20 cases of normal births, and delivered 3 births. However, the majority of the nursing schools limited their curriculum to in-classes, and held the clinical practice outside the school. The number of nurses and midwives came up to only 0.8 per every 10,000 people <Table 1-4>. As shown in the table <Table 1-5>, 2,000 (58%) of the total, 3,454 were concentrated in Seoul.

Table 1-4 | Numbers of Nurses and Midwives

| Year | Midwife | | Nurse | |
|---|---|---|---|---|
| | Total | Number Per 10,000 | Total | Number Per 10,000 |
| 1949 | 1,559 | 0.8 | 1,549 | 0.8 |
| 1950 | 1,677 | 0.8 | 1,588 | 0.8 |
| 1951 | 1,700 | 0.8 | 1,723 | 0.9 |
| 1952 | 1,909 | 0.9 | 1,723 | 0.9 |
| 1953 | 2,001 | 0.9 | 2,091 | 1.0 |
| 1954 | 2,126 | 1.0 | 2,259 | 1.1 |

Source: Statistical Yearbook of Health and Social Affairs 1954, Department of Health and Social Affairs

Table 1-5 | Distribution of Nurses and Midwives, 1949

| Region | Nursing License only | Midwife License only | Licensed in both | Total |
|---|---|---|---|---|
| Seoul | 662 | 796 | 542 | 2,000 |
| Gyeonggi | 144 | 163 | 69 | 376 |
| Gangwon | 73 | 63 | 28 | 164 |
| Chungbuk | 45 | 25 | 7 | 77 |
| Chungnam | 47 | 33 | 5 | 85 |
| Gyeongbuk | 95 | 67 | 30 | 192 |
| Gyeongnam | 78 | 83 | 31 | 192 |
| Jeonbuk | 57 | 53 | 21 | 130 |
| Jeonnam | 115 | 69 | 35 | 219 |
| Jeju | 10 | 6 | 2 | 18 |
| Total | 1,326 | 1,358 | 770 | 3,454 |

Source: Chu In-Ho, Public Health Reports in Korea. 1951

Overcoming the general public's negative awareness towards healthcare, which had developed during the Japanese colonial era, was another important issue. Park Youngseo, the department head of Internal Medicine at Daedong Hospital, categorized medical maladies during the Japanese colonial era into 6 categories, and criticized them in the article, "Choseon's Current Circumstances and Physician's Duty," which he wrote for the Choseon Medical Journal.

"Derived from the faulty health care policies of Japanese colonial era, the phenomenon of fake clinics and superstitious diagnosis along with prescriptions are thriving. Ineffective and countless sales of drugs, prescriptions, and treatments by amateur physicians, self-taught medical practices, and sales of medical degrees are present everywhere."

Even under such insecure and unstable conditions of medical practices, enrollment continuously increased in medical schools. The high enrollment numbers support the widespread popularity of the occupation that was instigated by the commercialized value of medical practices. The distorted medical practices that fed on a complicated mix of subjective and objective conditions must be corrected by the efforts to raise objective social paradoxes and a subjective conscience, under ethnic conscience in times of such historical innovation.

However, prior to suggesting resolutions to the problems, thorough comprehension of the situation was necessary. First, since healthcare policies were set under colonial rules,

the residents of the governing country had an absolute advantage. Hence, they took the majority of enrollments in medical school, and monopolized healthcare facilities and medical education. Korean scholars could no longer advance to higher levels of education and sought for their own security in working as physicians. Thus, such social conditions can be pointed out as the cause of false in mission as physician rather than corruption of ideology in medical practices.

Second, since the healthcare facilities were not for the well being of Koreans, but concerned only with Japanese residents, medical facilities were placed mostly in the cities. The cost of medical care was also exploitative, so the vast majority of the population could not receive any benefits of modern medicine. Thus they pushed people to pursue unscientific and feudalistic medical treatments, and superstitious treatments.

Third, as part of colonial policy, the generalization and advancement of education was restricted, along with ignorance caused by a feudalistic government. Thus, lack of common medical knowledge was rather common modern medical practices continuously faced several obstacles.

Fourth, medical equipment and medicines were completely dependent on foreign resources. The fundamental colonial policy had its basis in making the colony a market place for their country and a source for raw materials, thus production of medicines was restricted. Therefore, wartime ban along with consumption of military medicine, which caused a depletion of medicine, was a great threat in today's medical society. Moreover, it was an important issue that could not be resolved without innovative development in pharmacological industries.

Fifth, the applicants' motivation of wanting to become a physician was for the security of one's welfare rather than the wellbeing of the people. This was due to the fact that physicians lived well when most of the country suffered from poverty. Also, medical education was considered a science, so they lacked a philosophy in taking up the vocation of a physician. The students were heavily concerned with the economic aspect that blinded the core mission of being a physician. Such things resulted in physicians becoming the target of blame by the general public.

Sixth, the quality of medical sciences dropped due to Japanese professors leaving Korea. Compared to other fields of studies, reorganization was rather simple, thus medical sciences aiming for the top level globally depended on social conditions."[13]

The above article, which asserts the reformation of Korean medical sciences, points out that: 1) Japanese were monopolizing the medical sciences and were not allowing Koreans to

13. Park Youngseo (Chief of the Internal Medicine Seoul Daedong Hospital), Current Situation of Choseon and Physician's Mission, Choseon Medical Journal No.2, 1947; 26-28.

advance, which caused the commercialization of medical care by Koreans, 2) due to uneven distribution of medical facilities and high costs for medical treatments, the vast majority of the Koreans could not receive any medical benefits, 3) lack of common medical knowledge in the general public was due to lack of general education, 4) not having the facilities or systems to produce medicine and equipment, 5) physicians were only concerned about the economic aspects rather than having a philosophy in medical practices, and 6) medical sciences as a field was lowering in quality after the departure of Japanese professors.

## 1.2. Medical Education after the Liberation

In the late 19th century, Korea first became aware of western medicine and medical education, and was ready to accept it on a national scale. However in 1910, Korea was colonized by Japan and was forced to accept the Japanese style of medical education. Japanese medical education, which had its basis in experimental medicine and theory-centered lectures from the German style of medical education, settled in Korean medical education during the Japanese colonial era of 1910 to 1945. Even until the mid 20th century, Japan retained the German style of medical education, which was considered the main stream of medical education in the 19th century.

Prior to 1910, American medical education was obsolete compared to that of Germany. The Association of American Medical Colleges (AAMC) once commented that American medical education was not so different from the training that produced scrubbers for bathhouses. According to the official records of AAMC, medical schools in the US did not have a uniform term length in the 19th century. Hence, some students graduated in two years and other students graduated in three years, some schools offered the same curriculum for both 1st and 2nd years, and some schools were simply selling their diplomas.[14] In most schools, the education was mainly done inside the classroom by taking lectures. Also, most did not have the curriculum for clinical training. However, in the early 20th century, the American Medical Association (AMA) and AAMC jointly started on setting a standard for American medical education. As a result, with the support of the Carnegie Foundation, the educator Abraham Flexner visited the medical schools in the US and Canada to publish what is known as the Flexner Report. The report states that: 1) medical schools should teach medicine as an academic discipline, 2) medical schools should establish 2 years of basic medicine and 2 years of clinical medicine, 3) professors affiliated with the universities should teach basic medicine, 4) professors affiliated with the hospitals should teach clinical medicine, and 5) medical education should have its basis in learning by doing. Based on this report, which benchmarked the

14. Association of American Medical Colleges, With One Voice: The Association of American Medical Colleges 1876-2002, Association of American Medical Colleges, 2003.

educational model of the Johns Hopkins University School of Medicine, the American medical education started to reform and soon became the leader in medical education of the world.

However, since Japan was in a hostile relationship with the US, it was left behind from such changes in the world. KIU College of Medicine, influenced heavily by Japan, offered 4 years of medical education curriculums as can be seen in the following table <Table 1-6>. The anatomy laboratory class (cadaver dissection) was held only 6 sessions throughout 1st and 2nd year of the curriculum, and clinical medicine classes in the 3rd and 4th year were mostly held as clinical lectures rather than hands-on practice with patients.[15]

**Table 1-6 |** Medical Curriculum during the Japanese Colonial Era

(*: 3 hours of training, s: session)

| 1st year | | | | 2nd year | | | | 3rd year | | | | 4th year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class | 1 | 2 | 3 | Class | 1 | 2 | 3 | Class | 1 | 2 | 3 | 1 | 2 | 3 |
| Systematic Anatomy | 8 | 6 | 6 | Anatomy Lab (3) | 2 S | | | Internal Medicine /Clinical Lecture | 6 | 6 | 6 | 6 | 6 | 6 |
| Anatomy Lab (3)* | | 2 S | 2 S | Physiology Lab (3) | 2 S | | | Surgery/Clinical Lecture | 6 | 6 | 6 | 6 | 6 | 6 |
| Histology | 3 | 2 | | Microbiology | 2 | 2 | 2 | Orthopedics/ Clinical Lecture | 1 | 1 | 1 | | | |
| Histology Lab (3) | | 2 S | 2 S | Parasitology | 1 | 1 | | Obstetrics/ Gynecology | 3 | 3 | 3 | 3 | | |
| Embryology | 1 | 1 | 1 | Parasitology Lab (3) | 2 S | 2 S | 2 S | Ob/Gyn Clinical Lecture | | | | 2 | 2 | 2 |
| Physiology | 6 | 6 | 6 | Immunology Lab | | 2 | 2 | Dermatology | 2 | 2 | 2 | | | |
| Medical Chemistry | 4 | 2 | 2 | Pharmacology | 4 | 2 | 2 | Urology | 1 | 1 | 1 | | | |
| Chemistry Lab (3) | | 2 S | 2 S | Pharmacology Lab (3) | | 1 S | | Dermatological Urology/Clinical Lecture | | | | 1 | 1 | 1 |
| Microbiology | | | 2 | General Pathology | 4 | | | Ophthalmology | 3 | 3 | 3 | | | |

15. At the time, the medical school of KIU offered 3 semesters per year. The first semester was from April 1st to August 31st, 2nd semester was from Semptember 1st to December 31st, and the third semester was from January 1st to March 1st.

| 1st year | | | | 2nd year | | | | 3rd year | | | | 4th year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class | 1 | 2 | 3 | Class | 1 | 2 | 3 | Class | 1 | 2 | 3 | 1 | 2 | 3 |
| Parasitology | | | 1 | Pathology | 2 | 4 | | Ophthalmology Clinical Lecture | | | | 1 | 1 | 1 |
| Pharmacology | | | 2 | Pathology Lab (3) | | 1 S | 2 S | Otolaryngology | 2 | 2 | 2 | | | |
| General Pathology | | | 4 | Hygiene, Preventive Medicine | 2 | 2 | 2 | Otolaryngology Clinical Lecture | | | | 1 | 1 | 1 |
| | | | | Hygiene Lab (2) | | 1 S | 1 S | Neuropsychiatry | | 1 | 1 | | | |
| | | | | Diagnosis Lab | 2 | 2 | 3 | Neuropsychiatry Clinical Lecture | | | | 2 | 2 | 2 |
| | | | | Topology | 2 | | | Odontology Clinical Lecture | | | | 1 | 1 | 1 |
| | | | | Introduction to General Surgery | 3 | 3 | 3 | | | | | | | |

Source: Chang-Duk Kee, History of Western Medical Education in Korea, Academia, 1995; 243-244

Chun Jong-Hwee, a medical professor, described the situation of Korean medical education during the Japanese colonial era as follows.

"During the Japanese colonial era, curriculums were taught mostly in a downward communication, given in a lecture form. What we call discussion or seminars today, were non-existent back in those days. Students were always busy writing down notes the professors would put up on the boards. Asking even a single question during the class was unimaginable…the university libraries had a poor collection of medical texts. Finding a single book of reference was nearly impossible. The professors would have textbooks and reference materials in their offices, but they were not really available to students. From the 2nd semester of the 1st year to the 2nd semester of the 3rd year, (in case of KIU College of Medicine, it was 1st and 2nd year) students took laboratory classes in anatomy, histology, physiology, pharmacology, pathology, microbiology, parasitology, etc. From what I remember, clinical practices in clinical medicine were slightly better than laboratory practices in basic medicine. It was a custom that clinical practices were held in the mornings during the 1st and 2nd semesters of the 4th year. Contrary to the situations of these days (1970s), there were only a small number of students and many patients waiting to be treated for free, so it was somewhat better back then."[16]

16. Chun Jong-Hwee, The First Century of Modern Medicine in Korea, Inje Scholarship Foundation, 1987.

Even in later days, Dr. N. L Gault Jr., one of the advisors of the SNU Cooperative Project, also pointed out that the two major problems in teaching were the one-way communication and the lack of resources. The professors did not encourage student participation and continued to communicate one-way, without interaction. Also, the libraries not only lacked in materials, but they closed at 5 P.M.

The biggest difficulty was the absence of adequate professors. During the Japanese colonial era, Koreans were given only limited opportunities for education, and after the liberation, Koreans lacked professionals for teaching. Before the liberation from Japan, there was KMC, Kyunsung Womans Medical College, Gwangju Medical College, Taegu Medical College, and Severance Medical College located in South Korea, and there weas Pyongyang Womans Medical College and Hamheung Medical College in North Korea. They all provided 4-year medical curriculums. The College of Medicine at KIU was the only school that offered a 6-year curriculum, a 2-year premedical course and a 4-year medical course. Other than the Christian schools: Severance and Kyungsung Womens Medical College, the majority of the professors and students were Japanese.

The USAMGIK elevated 4 medical colleges from 4-year colleges to 6-year medical colleges. In 1945, the College of Medicine at Ewha Womans University opened, and brought the number of the medical schools up to 6 in the southern part of Korea. The size of medical colleges, affiliated hospitals, beds, and enrollment are shown in table <Table 1-7>.

Table 1-7 | Medical Colleges in Korea after the Liberation

| Medical College | Foundation | Location | Capacity of affiliated Hospitals (number of bed) | Size of Entering Class |
|---|---|---|---|---|
| Seoul National University College of Medicine | Public | Seoul | 700 | 120 |
| Kyungbuk University College of Medicine | Public | Taegu | 180 | 80 |
| Cheonnam University College of Medicine | Public | Gwangju | 240 | 100 |
| Severance Medical College | Private | Seoul | 150 | 70 |
| Ehwa Women's University College of Medicine | Private | Seoul | 60 | 50 |
| Seoul Womans University College of Medicine | Private | Seoul | 200 | 80 |
| Total | | | 1,530 | 500 |

Source: National Institute of Health, WHO-UNKRA Delegation Report of Public Health Program, 1961

SNU was founded by the merging of the KIU College of Medicine and Kyungsung Medical College in 1946. Although there were around 200 professors at KIU since it was first founded in 1926, there were only 5 Korean assistant professors. With the outbreak of the Pacific War in the early 1940s, 6 Korean lecturers were hired to make up for the shortage of professors.[17] Despite such discriminations, there were around 30 Korean teaching assistants and associate teaching assistants who achieved great accomplishments even through tough times and the animosity that existed.[18] Also, there was word that there might have been 1 or 2 Korean professors at KMC. Hence, there was a critical shortage of professors at KIU College of Medicine and KMC after the Japanese professors left once Japanese occupation in Korea ended.

The number of Korean physicians who received Ph.D degrees steeply increased around the time of liberation. From 1933 to 1944, the number of Korean physicians who received a Ph.D was 65. However, in the single year of 1945, 75 Korean physicians received a Ph.D degree. It was because there were many who had been waiting even after they have completed their coursework, and the colleges also pressed graduates who had graduated more than 3 years ago to finish their thesis.[19] Most of these people became the professors of the SNU College of Medicine later. On September 1945, 56 Korean professors were hired at the KIU College of Medicine, and 39 Korean professors replaced Japanese professors at KMC.

In 1946, USAMGIK proposed a plan to establish SNU and combine the KIU College of Medicine and KMC to establish the SNU College of Medicine. There were many objections in promoting 4-year colleges to 6-year systems and combining KMC with SNU. These objections arose mainly because of the shortage of physicians. In order to meet the urgent demands for physicians, they needed a shorter-term training system. Among the many who opposed in creating SNU, Professor Choi Eungsuk argued that it was unreasonable to promote 4-year colleges to 6-year colleges in times of shortage of medical doctors. He also asserted that they should rather turn the KIU College of Medicine into a 4-year system.[20]

17. Ever since the first graduates started to appear in 1930s, 887 students graduated from the KIU College of Medicine up until 1943. Of the 887, 647 were Japanese, 237(26.7%) were Koreans, and 3 were Taiwanese. Kyungsung Imperial University Commemoration Foundation, A Long Way off Blue Sky, 1974.
18. Seoul National University College of Medicine, History of Seoul National University College of Medicne: 1885-1978, Seoul National University Press. 1978.
19. Chang-Duk Kee, History of Western Medical Education in Korea, Academia, 1995; 243-244.
20. Choi Eungsuk, Critical Tasks to be Done in this Stage of Public Health Administration, Journal of Chosun Medical Science, volume 2, 1947. 5; 17-20.

It it assumed that the plan to establish SNU was stimulated by the plan to establish Kim Ilsung University in North Korea.[21] However, the merging of the College of Medicine at KIU and KMC was pushed ahead, despite strong resistance. During this political crisis regarding the establishment of SNU, 15 senior professors, including Professor Choi Eungsuk, left the KIU College of Medicine. However, 24 professors from KMC decided to join the new SNU College of Medicine. Also, the professors returning from their studies abroad joined the SNU College of Medicine. As a result, it was founded with 84 professors in October of 1946.

Although the circumstances were no better at the beginning compared to the times of Japanese colonial era, things started to change with USAMGIK in charge. The healthcare, the medical education, and the entire Korean society were influenced by the US. As for medical education though, converting to the medical education system of Japan to America was not easy at all. Newly recruited professors had been trained under the Japanese medical system, and they had no choice but to rely on Japanese and German textbooks. Hence, the medical education was no different from that during the Japanese colonial era, and was taught in the manner of traditional downward communication.

Since the liberation of August 1945 to the establishment of South Korea in 1948, Korean society underwent reformation from a Japanese system to an American one. There were two major political goals set by the USAMGIK between 1945 and 1948. At the beginning of occupation in Korea, they focused on separating Korea from Japanese legacy, and later they concentrated on establishing a government that would meet the strategic goals of the US in Far East Asia. Accordingly, the USAMGIK took over the healthcare facilities and fired Japanese officials who stayed behind in Korea. They also prevented epidemics and concentrated on limited activities to protect the health of the military. However, in order to meet the goals of establishing a pro-American government and an anti-communist nation, they reorganized the healthcare facilities and trained medical professionals. Also, they focused on training and appointing the Korean officials to the health care department in Korea. During this period, 43 Korean physicians went on to study abroad in the US, and acted as a link between Korean and American medical sciences.[22]

21. Chosun People's News, 8 Aug. 1946.

22. Jwa-Seop Shin, The Policy of the United States Army Military Government in Korea toward Public Health and Medicine in Occupied South Korea, Seoul National University Mater's Degree Thesis, 2001.

## 1.3. Influence of the Korean War

The Korean War, which broke out on June 25th 1950, completely destroyed a Korea that was recovering from severe injury, a consequence of Japanese colonial annexation. The war went on for 3 years and 1 month, and it devastated 45% of the industrial facilities that led to economic and social turmoil.

As it was in all fields, the effect of the Korean War on healthcare was incalculable. The statistics from the Department of Health reports: 58 physicians killed, 17 physicians kidnapped, 300 nurses either killed or missing, and 15 officials killed from the Department of Health; of the total 3,155 private hospitals, 450 hospitals were completely destroyed, and 1,065 hospitals were partially destroyed. In the case of the public hospitals, of the 54 hospitals, 10 were completely destroyed and 36 were partially destroyed. There were 540 dental offices prior to the war, and 81 were completely destroyed and 189 were partially destroyed. Moreover, of the 159 pharmaceutical factories, 10 were completely destroyed, and 133 were partially destroyed. 161 of research facilities such as chemical or epidemic research institutes were completely destroyed and 361 of them were partially destroyed. The total size of area destroyed from these facilities was nearly 30,000 $m^2$ and were estimated to be 2 million USD. The estimated cost does not include medical equipment, medicines, and other equipment within the destroyed facilities.

Aside from the damages on facilities, 144 X-ray machines and all of the medicine were stolen from the hospitals. 9,285 items, nearly 3 million USD worth of goods were damaged at the public facilities, and 2,668 items, or 1.3 million USD worth of goods were damaged at other facilities. In sum, total of 4.3 million USD worth of damage was caused from the war.

Although it may sound paradoxical, the Korean War provided an opportunity for Korea to reorganize the healthcare system under the American influence. Of the 54 public hospitals that played a role of a physical foundation for Japanese medical services, 10 were completely destroyed and 36 were partially destroyed. It resulted in Japanese medical sciences being replaced by American medical sciences with the aid of the American government.[23] Hence, with all the leftovers of Japan destroyed, the transition to American medicine was rather smoother.

The number of professors kidnapped by North Korea was not small at all. All of the head professors from the surgical department in the SNU College of Medicine were kidnapped. 3 chief surgeons, Lee Jaebok, Kim Sichang, and Baek Injae were kidnapped during a lecture they were giving to students, and Lee Jungbok, Lee Donhee, Lee Jongdoo, and Park Changho were kidnapped from the internal medicine department. Professor Lee Gap-soo,

23. O-sung Shin, A Study on the Health Care in Korea around the Korean War: 1945-1959, Seoul National University Master's Degree Thesis, 1994.

who was the dean of the College of Medicine and chair of the department of physiology, was also kidnapped. Besides the ones mentioned above, around 10 associate professors and assistant professors were kidnapped.

Even then, the Korean War also provided many opportunities for Korean physicians to come in contact and be influenced by military surgeons from both the United Nations (UN) and US military forces. Korean physicians were impressed by the advanced medical sciences that the American physicians performed. According to Baek Manki, an honorary professor of the SNU College of Medicine, 4 medical colleges united together to establish Wartime United University for medical students at Pusan in 1951. However, due to the shortage of professors, 10 military surgeons from UN were invited to give special lectures. The lectures given by the military surgeons provided the students with not only the latest trends, but also a chance to study English. Thus, it was very popular among the students.[24]

## 2. Background of the Seoul National University Cooperative Project

### 2.1. United States Aid for Korea after the Liberation

After World War II, the US was engaged in a Cold War with Soviet Union. The foreign policies of the US changed in order to reorganize the world order in favor of the US. Accordingly, the US contributed greatly in establishing an anti-communist government in South Korea, after it was liberated from Japan. The US also participated in forming UN military forces to enter the Korea War, in order to prevent the spread of communism on the Korean Peninsula. However, devastated by 3 years of war, Korea was too weak to function as its ally. Thus, the US had to quickly strengthen the nation of Korea.

US aid to Korea played a critical role in revitalizing Korea and its economy in the later years. The US aid that started to come in after the liberation of Korea continued up until the 1960s as can be seen in the table <Table 1-8>.

24. Baek Manki. Wartime United University and Affiliated Hospital. Unpublished paper.

Table 1-8 | Chronological Categorization of Korea as Beneficiary (Ministry of Finance, 1993)

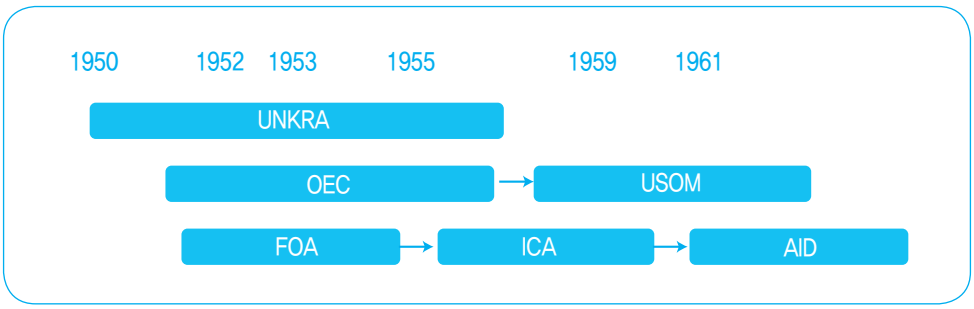
| Category | Emergency Aid (1945-1953) | Full-scaled Aid (1953-1961) | Switching to Loans (1962-) |
|---|---|---|---|
| Basic Legislation | Mutual Defense Assistance Act (MDAA) | Mutual Security Act (MSA) | Foreign Assistance Act (FAA) |
| Purpose | Emergency Aid | Economic Stabilization and Defense Reinforcement | Loan-centered Economic Aid |
| Organization | GARIOA (1945-1949)<br>ECA (1949-1950)<br>SEC (1951-1953) | FOA (1953-1955)<br>ICA (1955-1961)<br>PL 480 (1956-) | AID (1961-) |
| Types of Aid | Emergency Supply Provision, Technical Assistance, Emergency Aid | Defense Assistance, Technical Assistance, Surplus Agricultural Product Aid, etc. | Development Loan Development Aid Surplus Agricultural Product Aid, etc. |

Source: Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006

Acronym) MDAA: Mutual Defense Assistance Act, MSA: Mutual Security Act, FAA: Foreign Assistance Act, GARIOA: Government and Relief in Occupied Area, ECA: Economic Cooperation Administration, SEC: Supplies, Economic Cooperation, FOA: Foreign Operations Administration, ICA: International Cooperation Administration, PL 480: Public Law 480, AID: Agency for International Development.

The SNU Cooperative Project was an educational assistance program (officially, it is under the umbrella of technical assistance) that was described as 'full-scaled aid', which took place between 1954 and 1961, aided by the US Foreign Operations Administration (FOA, predecessor of ICA) and ICA. The main development organization in support of Korea after the Korean War was the United Nations Korean Reconstruction Agency (UNKRA), and the educational assistance was mostly led by the USFOA. Also, an affiliated organization of the United Nations, Office of Economic Coordinator (OEC) was established in Korea to plan and coordinate US aid. In July 1955, FOA was reorganized as ICA. Although OEC belonged to UN, starting 1955, it went under the ICA in Washington D.C. In 1959, the OEC was reorganized as the United States Operations Mission to Korea (USOM), and took charge of the aid. Also, in 1961, ICA was reorganized as the Agency for International Development (AID). [Figure 1-1] exhibits the change of aid organizations in 1950s.

Figure 1-1 | Change of Aid Organizations for Korea




By the currency at the time, as a 9.45 million USD project, the SNU Cooperative Project was the biggest and the most significant program in educational assistance provided by ICA and its former organization FOA. After the Korean War, starting from August of 1953 to September of 1961, the US provided 313.7 billion USD to Korea in grants, and a total of 174.4 billion USD, which accounts for 56%, was provided through FOA and ICA. FOA/ICA supported the educational field with about 1.14%, nearly 20 million USD of the total budget, and this amount was about twice as much as the aid given by UNKRA. 47% of the 20 million USD was assigned to higher education, and 86%, or 9.45 million USD was allocated to the SNU Cooperative Project. 'From 1955 to 1957, over a 3-year period, SNU has gone through the most innovative development period ever in its history'[25] thanks to the numerous professor exchange programs and the massive support of the SNU Cooperative Project.

Even in comparison with the scale of technical assistance by FOA/ICA, the importance of the SNU Cooperative Project is evident. As of June 1960, ICA was providing 96 technical assistance efforts in 33 countries, and its contract was 97 million USD. Even though the exact amount of aid given to facilities other than SNU cannot be verified, when dividing 97 million USD by 96 organizations, each organization would be assigned about 1 million USD. It is only a ninth of the budget SNU received. This was possible because the SNU Cooperative Project was not just aiming for the recovery of educational facilities, but for the reorganization of the entire Korean educational system.

25. Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006.

## 2.2. Relevance between the National University Establishment Plan and the Project

The SNU Cooperative Project shows close relevance to the higher education policy of the USAMGIK from 1945 to 1948. On July 13th 1946, USAMGIK announced the 'Establishment Plan of Seoul National University'. This plan was going to merge 3 colleges of KIU and 9 municipal colleges to create one new national university. The professors and the students of SNU, with the support of some Korean education circles, rose up against the plan, protesting that the plan would reduce the capacity of education and cause an even greater shortage of professors. Especially in the medical sciences, many opposed the plan to promote 4-year colleges to 6-year universities, and combine the KIU College of Medicine with KMC to create the SNU College of Medicine. Despite strong resistance from the members of academic society who believed that the plan would lead to poor quality of education and that they needed shorter term training programs to produce physicians instead, USAMGIK pushed on ahead with the plan under the justification of standardizing and expanding higher education.

According to policy documents from the time, in order to achieve the comprehensive goal of occupation (of Korea) in-depth, the US considered the establishment of education policy as an important aspect. It offered its goal by stating, "Until the goal of US occupation in Korea is achieved, the US will stimulate the knowledge and understanding of American history, values, institution, culture, and achievements in Korean citizens." In other words, the Establishment Plan of SNU was set to stimulate a better understanding of American history, culture, and achievements. Starting from the planning stage to the actual execution of the 'Establishment Plan of Seoul National University', the US planned on reorganizing higher education facilities in Korea. Also, it was trying to diffuse the American culture and ideas through implantation of an American education system at SNU. The series of processes taken from the standardization of higher education by establishing SNU through the SNU Cooperative Project was an extension of the policy described above.

In 1952, UNESCO-UNKRA's Educational Planning Mission to Korea (EPMK) was dispatched in Korea to evaluate the problems of higher education in Korea, and to offer development plans. They also offered the same opinion as the USAMGIK. EPMK recommended to the Korean government that it should look into the requirements for the universities, the number of universities, and the possibilities of merging several universities. It also suggested that the government prioritize the recovery of SNU with immediate support in the College of Agriculture, Engineering, Basic Sciences, and Medicine. Afterwards, UNKRA, along with FOA, shared in the support of higher education development in Korea. However, the educational assistance by UNKRA was completely transferred to ICA which

was established in 1955. The SNU Cooperative Project can be identified as an extension of the policies recommended by 'EPMK' and forced by the 'Establishment Plan of Seoul National University.'

## 2.3. The Approach of the International Cooperation Administration

Foreign aid for developing countries can be categorized by the characteristics of the approach. Depending on this, it can be categorized as either multilateral or bilateral, and loans or grants. Also, depending on the field of assistance, it can be categorized as military aid, economic aid, or educational assistance. It can also be categorized by the method of support: technical assistance or facility aid. According to these categorizations, the SNU Cooperative Project was bilateral (country to country), in the form of grants, educational and technical assistance.

Ever since World War II, the US adopted 'technical assistance' as their basic foreign policy toward developing countries. The term 'technical assistance' is defined as "an act of supporting the training of professionals to improve the accumulation of technology, or improving the flow of technology by providing equipment or establishing educational institutions."

In carrying out their technical assistance programs, the US utilized American universities to enhance the capabilities of the educational institutions in developing countries. The US made contracts with competent American universities to provide long-term technical assistance in the developing countries, so that they could strengthen the capabilities of their human resources. Such technical assistance programs were instigated under the careful apprehension that utilizing the universities would result in the greatest output with the least cost. Accordingly, President Eisenhower emphasized cooperation amongst the universities, as he gave his speech at Baylor University in 1956.

"The goal of the American universities is not to implant American attitudes, policies, and processes in developing countries. The professors of American universities and their educational system should bear the responsibilities of educating the citizens of the developing countries. Each American university should support the development of the developing country's human resources and their endowed resources, as well as developing communication that goes both-ways… in doing so the developing country can acquire the technology achieved by the United States. Through such humanistic partnership based on people-to-people relationship, we will earn dynamic results, as we have earned in our foreign policies."[26]

26. Michigan State University, A research project on overseas programs of American universities, 1957.

That is to say, rather than implanting attitudes and policies in other countries, the US should establish person-to-person relationships to develop more natural alliances with other countries.

In 1959, the Associate Director of ICA, Lenard J. Saccio stated that based on his experience from ICA, the most effective method of executing a program in the educational field was signing a contract with the universities to improve higher education. And by training the local instructors and professors rather than carrying out education directly by American professors, the project could take a step closer to its original goal.[27]

In a report published by ICA in 1956, the following statement was made about technical cooperation through American universities.

"Technical cooperation among nations is essentially the exchange of knowledge and skills. For newly developing nations, technical cooperation hastens economic and social progress. For more industrialized nations, technical cooperation provides the means not only of assisting lesser developed nations to become stronger economic partners in the free world, but also establishes the framework for an increased cooperation, extending far into the future, in other fields of mutual interest. Today American universities have an enrollment of some 34,000 foreign students. Over many years, many American universities have had continuing nongovernmental contracts with foreign educators and educational institutions. The university contracts program sponsored by the International Cooperation Administration is, therefore, recognition of the experience of American education in this field. The duration of a university contract has a maximum of 3 years, yet contracts are often renewed or extended. The American university, either in association with a foreign educational institution, with ministries of the host governments, or directly from ICA, undertakes to accomplish specific tasks, such as: (1) Expansion of urgently needed facilities for education in fields such as engineering, medicine, agriculture, public administration, or business administration; (2) Establishment of a specific service – agricultural extension, industry development and others; (3) Research, as for example in an agricultural crops, industry, health, economics; (4) Training of personnel in technical fields, both in the participating country and in the United States. Supplies and equipment in limited amount also are involved – books, laboratory and shop equipment, audio-visual aids – to the degree that these are necessary in carrying out contract activities."[28]

27. University of Minnesota, Twelfth Semi-Annual Progress Report to International Cooperation Administration, Seoul National University and Office of General Affairs, R.O.K: covering the period April 19, 1960-October 19, 1960.

28. ICA, Technical Cooperation through American universities, ICA office of public reports, Washington D.C. 1956.

As of September 1960, in respect to their foreign policies, ICA had made 96 contracts with 33 countries throughout Africa, Europe, Far East Asia, West Asia, and Latin America, and was operating 53 programs, which sums up to about 100 million USD. Compared to the programs and projects in Japan, the Philippines, Vietnam, Thailand, and other Asian countries, the SNU Cooperative Project was carried out on a significantly large scale.

## 2.4. Selection of the University of Minnesota and Seoul National University

The ultimate purpose of the SNU Cooperative Project was to enhance the capabilities of human resources through the strengthening of higher education in medical, agricultural, and engineering sciences. After observing what was remaining from the Japanese colonial era and the Korean War, UN officials and American officials both understood and agreed that the most effective and realistic assistance should be given to supporting higher education in Korea. However, since they could not support all the universities in Korea, the most reasonable option was to select a university that would represent Korea, and at the same time, have influence over other universities in Korea.

The first advisor of the project, Maloney once commented that SNU was 'a university that would take its positions as a leader'. It meant that the SNU Cooperative Project was aimed at training professors at SNU, an institution that would produce human resources throughout Korea. It was targeting the entire higher education of Korea rather than the reformation of SNU. However, there was considerable opposition. There were various opinions voicing that they should distribute the benefits among the 6 national universities throughout the country instead of concentrating them in just one, or that they should invest in private institutions rather than public universities.

After numerous meetings with the Office of Economic Coordinator for Korea (OEC), the chancellor of SNU, Choi Kyu-nam, earned the promise that the OEC would provide support only if the Korean government also agreed on the terms. The secretary of the Ministry of Education at the time held his stance against the proposal because of the situations in Korea. Yet, convinced by the chancellor Choi's assertion which argued that concentrated investment would be much more efficient than balanced distribution, the government approved his proposal. As a result, SNU received 300,000 USD from FOA in its first support. Based on this first support, SNU submitted a large scale reconstruction plan to FOA through the Ministry of Education in Korea.

The reason why three colleges - medicine, agriculture, and engineering - out of of twelve colleges from SNU were selected was that these three fields were most immediately in need for development for growth of the Korean economy. The fundamental goal of US

foreign policy was the development of a self-sufficient country with immediate support for economic stabilization. Hence, support in science and technology was the most emphasized. It was in accordance with FOA/ICA's basic policy that the movement stressed educational assistance in five fields: engineering, medical, agricultural, managerial, and public administration studies.

Ever since support for SNU was approved, FOA selected UM to commission the support of SNU. In 1954, FOA and UM signed a provisional contract that guaranteed 3 months of preparatory activities, and FOA requested a feasibility study from Dr. Anderson, the Dean of the College of Public Health at UM. The FOA applied three criteria in selecting the university. First, rather than distributing the fund among several universities, one university that could take care of the funding of three fields would be selected. Second, the university had to show its strengths in the fields of agriculture, engineering, and medical sciences. Third, the university could not be involved in other university cooperation program of FOA. Since the early 1950s, the US had instigated large-scale projects with the universities; so, many colleges were eliminated by the 3rd criteria. Although many famous universities such as Harvard, Yale, Princeton, Columbia, and Chicago were mentioned at first, they were eliminated early in the selection because these universities did not have a college of agriculture. UM and Ohio State University were on the list until almost the end, but since Ohio State University did not have a College of Shipbuilding and Marine Engineering, University of Minnesota was selected.

There were rumors that there were political influences behind the selection of UM. The rumor was that the chief of FOA, Dr. Stasse, former governor of the state of Minnesota, probably would have favored UM. In response to such rumors, one of the advisors for the project, Dr. Gault, argued that it was not true. He said that they had made their decision based on the reports submitted by Dr. Anderson, who visited Korea to observe the situation of Korea and SNU.[29]

At that time, participation in technical assistance for developing countries was helpful in raising the reputation of the university. Moreover, while carrying out the project, ICA paid UM 200,000 USD every year as a commission.

29. Wang-Jun Lee, *ibid.*

# Chapter 2

## Purpose and Context of the Project

1. Purpose and Establishment of the Project
2. Outline of the Project
3. Professor Exchange Program
4. Advisory Service
5. Facilities and Equipment Aid

# Purpose and Context of the Project

## 1. Purpose and Establishment of the Project

### 1.1. Purpose and Range of the Project

As was mentioned in the earlier chapter, SNU Cooperative Project had its purpose in the enhancement of South Korea so that it would act as a pro-American ally in Far East Asia. Especially after World War II, the US felt the need to extend its influence over the world. In order to strengthen its ally, the US had to make sure that Korea developed basic capabilities in the agricultural, engineering, and medical fields to stabilize society. Just like the support ICA provided to other developing countries, it was set between American universities and universities in partner countries with its fundamentals in 'person-to-person relationships.'[30] From a macroscopic perspective, the cooperative project had its purpose in developing a stable pro-American nation that resembled a US-oriented society with its educational culture embedded in it. Professor N. L. Gault Jr. commented that 'our mission was to assist Korean professors in reorganizing the training system of physicians and nurses. It was set so that they could produce professionals similar to American physicians and nurses, rather than holding onto the Japanese system, which embraced the German education tradition and system.'[31] However, as it was written in the contract, the purpose of the project was enhancement of the education and research programs in agricultural, medical, engineering, and nursing studies at SNU. Also, there was an expectation that SNU would influence all the educational facilities of Korea once it found its strength in playing the role as 'the leading university' in Korea.

30. Michigan State University, *ibid.*

31. Wang-Jun Lee, *ibid.*

It can be stated that the project's goal or objective was threefold: the direct and short-term objective was enhancing the capacity of SNU by retraining the professors, giving them consultations, and supplying equipment and facilities; mid-term and intermediate goals were to enhance the other universities and professionals through SNU, which would act as the center of higher education; the long-term and indirect goal was developing Korea into a stable pro-American nation, away from the influence of Japan.

The direct and short-term objective was clearly stated in the project process plan. In the contract, signed on September 28th 1954, ICA and the board of directors from UM <Table 2-1> agreed on the programs that UM had to carry out in Korea. It stated that UM had to 'enhance and develop education and research programs by processing projects in agricultural, engineering, medical, and nursing studies at SNU from Korea.' The contract was stating its purpose as enhancement of the education and research capacity of three colleges at SNU. The direct and short-term objective of the SNU Cooperative Project was also evident in the report made by Maloney, the first advisor from the College of Medicine in UM who visited Korea for 3 months from March to June in 1956.

**Table 2-1 |** Contract between ICA and the Board of Director of University of Minnesota

| |
|---|
| The purpose of this contract is to develop and enhance the education and research programs of agriculture, engineering, medicine, and nursing at SNUin Korea. |
| ---------- omit ---------- |
| ***Overall Plan*** |
| On behalf of UM, the professors of UM will be obligated to support the Chancellor, Dean of Agriculture, Dean of Engineering, and Dean of Medicine from SNU in observing the educational methodology for 6 months and visiting various facilities for 1 month.<br>The selected professors from the colleges of SNU will be trained in UM for 6 to 12 months. Upon request of SNU, professors may be trained at universities other than UM, or with an agreement with FOA, they may be trained in countries other than the United States.<br>As it has been acknowledged in the mutual agreement, the selected professors from the colleges of SNU will receive training for up to a maximum of 3 years. If UM requests another year of training, a document explicating the reasons for extension must be submitted to FOA. Also, upon request of FOA and SNU, the above-mentioned professors may be trained in facilities other than the United States.<br>In accordance with the regulations stated in the contract, FOA must put in efforts with Korea and SNU to guarantee the status of all related personnel when they return to Korea. When the related personnel return to Korea, they should be guaranteed at least one year in the same position they held prior to leaving Korea.<br>In order for the contract to proceed efficiently, UM must provide professionals to SNU for support in the fields mentioned above: public administration, education and educational curriculums, research projects and programs, extension of programs. |

| *Education and Research* |
| --- |
| UM must provide consultation and support to SNU in educating and training the professor about structure, administration, and methodology. |
| *Advisory Service* |
| UM must support SNU in developing advisory services to the government or non-governmental organizations. When requested by either Korea or UNKRA, the dispatched advisors from UM may provide consultation with the organizations from the US, the UN, or Korea to other universities in Korea and related fields of studies. |
| *Special Sessions and Training Programs* |
| Upon request by SNU, UM must provide a plan and support for special sessions and training programs in the fields of studies stated in the contract. When it is necessary, UM may (1) request a period to prepare the resources as well as preparation period for consultation, and (2) support the professionals agreed upon in the sessions and training programs. |
| *Textbooks, Materials, Equipment* |
| UM must consult SNU in the selection and application of needed textbooks, equipment, and materials for activities agreed upon in the contract. |
| *Dispatched Advisory Staff* |
| UM can dispatch Director of Advisors and field staffs when agreed by FOA and SNU. Especially when the deans of agriculture, engineering, and medicine complete their training, one advisor for each one of the deans should be assigned exclusively for at least a year, so that they can carryout the above-mentioned lines of work smoothly. (This may be nullified upon mutual agreement.<br>If capable resources in office tasks cannot be secured, UM can dispatch up to 4 office personnel from the US with guarantees made by UM. |
| *Staff in the US* |
| UM must provide services to accomplish the purpose of this contract by fully utilizing the knowledge and experiences accumulated at its school in Minneapolis. The US must manage staff in charge of communication and management of services between dispatched staff in Korea and UM. |

In his report, Maloney recorded that there were 3,500 licensed physicians in Korea. The population of Korea at the time was around 22 million. In other words, there were about 6,000 people per physician. The reason for such shortage of physicians was that Koreans simply did not have many opportunities to receive medical education during the Japanese colonial era, and medical education shrank due to the loss of professors and destruction of facilities during the Korean War. On the top of that, the problem of 'not being able to do anything' in a situation of 'not having anything to work with' was in their hands. He also added that majority of the physicians had not received proper training.

"The following are problems in the medical education. In the developed countries, all of the medical schools have been standardized. Hence, curriculums in both basic and clinical sciences are being held similarly throughout the universities. However, the situation is different in Korea. Each medical school developed their own curriculum. Although western methods have been transferred, the cramming style of education is still persisting and hindering overall education. Also, the courses held in basic medicine are very limited and simple. Even in clinical medicine, the level of participation at the clinical practices is very limited. Many students are asking for internship programs, but they are not yet being provided. People can apply to take the exam to be a physician even without graduating from the medical schools, and training after graduation from the school is managed irrelevant to medical examination policy."[32]

Maloney concludes that the most important thing for Korea is to make improvements in the medical education rather than increasing the number of physicians. The population to the number of physicians may have seemed appropriate in regards to Korea's economic situation at the time, but the problem was that a significant number of physicians were only at a level of treatment technician. In other words, people who did not receive proper training were working as physicians.

"Recently the Ministry of Education and Ministry of Public Health and Society jointly launched the 'Medical Education Advisory Committee'. It is a significant establishment in the development of medical education. In improving the medical education system and developing physician license exams, the government should clarify its role. The 'Medical Education Committee' within the Korean Medical Association should play a role as a guide. In developing licensing policy for physicians, the government should also develop licensing policies for medical technicians (Medical Laboratory Technologist, Radiological Technologist, and Physical Therapist). Traditional superstitious beliefs need to be eliminated since they are interfering with modern medicine. More autopsies should be encouraged. In order to prevent drug abuse, the regulation of drugs is necessary."

Hence, he stated that it is necessary to have minimal standard requirements for medical colleges, premedical courses, undergraduate medical curriculums, medical professors, educational facilities, educational material, clinical facilities, and enhancement of license requirements to improve medical education.

Maloney pointed out the problems of Korean medical education as following: (1) inadequacy of educational standards, (2) downward teaching without hands-on experience, (3) lack of internship programs, (4) incomplete license policy, (5) low quality of medical

32. Maloney W.F., Report of Observations as Advisor in Medicine to College of Medicine, Seoul National University: April 1 to July 1. 1956.

colleges, and (6) inadequately trained physicians. To resolve these problems, he emphasized the roles of the Ministry of Education, Ministry of Health and Social Affairs, and Korean Medical Association. It is important to note that the problems pointed out by Maloney were not only problems that existed in the SNU College of Medicine, but were problems that existed in the Korean medical education system as a whole and the process of training medical professionals. The overall problems observed by Maloney in Korean medical education[33] were greatly changed through the SNU Cooperative Project.

According to the terms of regulation between ICA and the board of directors at UM <Table 2-1>, the services UM had to provide to SNU can be summarized as '(1) educational training to enhance the teaching and researching capabilities of Korean professors, (2) technical consulting, (3) special meetings and special training programs, (4) textbooks, materials, and equipment consulting, (5) dispatching of staff, and (6) assignment of staff in the US.'

The training to enhance the teaching and research capabilities were categorized into 3 parts: (1) short-term training for the leaders of the university, such as the chancellor and the deans of colleges, (2) mid-term training for department chairs or leaders, and (3) long-term training for newly hired professors. Of the 77 professors from SNU College of Medicine, 40 were newly hired professors. The third group occupied the biggest portion of the three groups to train the future generation of the Korean medical sciences. They were given about 2 years of training, and 11 received a Master's degree and 3 received a Doctorate degree.[34] The leaders such as the dean of the College of Medicine and the directors of attached hospitals were given 3 to 6-month short-term training to raise their understanding of the cooperative project and of the American medical education system. As for the department chairs and leaders, 3-months to 1-year programs were provided to raise their understanding of the American medical education system and to get insights through inspections of medical schools and hospitals. They were very important people because they had the power to influence the 'transfer of learning' of the young, exchange professors. They had the authority to decide whether the young professors could apply newly adopted knowledge and skills from the US to Korea or not.

The primary technical consultation that UM had to carry out was to support SNU in developing advisory services to provide consultation to the Korean government and non-governmental organizations. Though the dispatched advisors were free to provide

33. Midterm and intermediate goal mentioned above.

34. Lee Howang, Lee Sangdon, Sim Bosung, Lim Jungkyu, Heo Jung, Choi Neungwon Kim Sangchan, Lee Sunghak, Ko Eunglin, Sung Kijun, and Lim Sooduk received master degree. Kim Jaenam, Lee Howang received doctorate degree. Lee Kiyoung received his doctorate degree in Institute Pasteur, located in France.

consultations in other universities and related industries, their priority was in supporting SNU. Their primary role in Korea was strengthening the consulting capabilities of SNU professors, and their secondary role was providing support to the other universities and related industries.

The special meetings and special training program services were either the services that professors at UM provided for exchange professors from Korea, or training programs such as meetings and demonstration sessions that dispatched advisors held in support of establishing governmental policies in Korea.

Along with the roles mentioned above, the advisors had to give consultation on selecting textbooks, materials, and equipment to improve the educational program in SNU College of Medicine.

As discussed in the previous section, the short-term and direct objective of SNU Cooperative Project was enhancement of SNU through training of professors, consultation, and reconstruction of SNU. The mid-term and intermediate goal was enhancement of capabilities in other colleges through SNU, the center of higher education. And lastly, the long-term and indirect goal of the project was developing Korea into a stable pro-American ally <Table 2-2>.

The range of the project set to achieve such goals were training of the teaching, technical consulting of organizations, special meetings and special training programs, consulting over equipment and materials, and dispatch of staffs and assignment of staffs in US.

Table 2-2 | Goal or Objectives of the Project

| | |
|---|---|
| **Short-term Objective** | Professor training, consultation, strengthening of SNU through restoration of facilities |
| **Mid-term Goal** | Strengthening of other universities through SNU |
| **Long-term Goal** | Development of stable pro-American ally |

## 1.2. Principles of Project Design

An advisor from UM, Professor Gault, who stayed in Korea for the project from August 30th 1959 to June 30th 1961, stated that it was impossible to develop a blueprint of the project. Because it was something that they never had done before, the entire project was similar to an experiment.[35] In other words, the project was designed and improved by the experience

35. Wang-Jun Lee, *ibid.*

and capabilities of UM within the boundaries of ICA policy. Yet, when we examine the project in detail, we can find several clear design principles of the project.

The *first* design principle was the 'selection and concentration' as we already mentioned. The devastating damage done by the Korean War was not only limited to SNU. Also, SNU was not the only institution with bright minds. Thus, there were opinions such as 'it would be better to choose private institutions such as Yonsei University or Korea University' and 'the benefits should be evenly distributed among the 6 newly established national universities throughout the country'. However, SNU was not only recognized as the top institution during the Japanese colonial era, but also was granted the greatest potential by the establishment of SNU by USAMGIK. It is also reasonable to guess that the decision was influenced by the hierarchical social climate that was dominant in Korean society at the time. SNU was like the eldest son of Korea. Moreover, unlike the newly established national universities that only had infrastructure equivalent to that of high schools, SNU was capable of efficient development even with the damage inflicted by the war. Such possibilities were in mind when Maloney mentioned the 'leading university'.

The *second* design principle was 'enhancement of human resources and institutions'. The training abroad programs, and support in facilities and equipment were all designed to serve the same purpose of enhancing human resources and institutions. The chancellor Morrill of UM stated that professors were the heart of the university who could make changes in institutions.[36] They had the potential of making innovative developments in teaching and research, thus the most potential lie in training abroad program.[37] Of the programs that UM provided for Korean professors, the training for the newly hired professors was considered the most important. Hence, the deans of colleges and directors of hospitals were also given opportunities to receive training to develop insight. It was done so that they would not hinder the application of newly adopted knowledge that the newly hired professors acquired from the training in the US. The consultation by the dispatched advisors was provided in order to support the returning professors in applying their new knowledge and skills at SNU, so that American medicine and organizational culture could spread in SNU. The support for facilities and equipment started off with the restoration of those destroyed during the Korean War. It had its purpose in supporting the returning professors in applying their knowledge and skills in their fields of work in Korea. All things considered, the principle of designing the project was set to provide a structural and material environment, and remove

36. University of Minnesota, Fourth Semi-Annual Progress Report to International Cooperation Administration & Seoul National University of Korea: covering the period April 19, 1956-October 19, 1956.

37. University of Minnesota, Eighth Semi-Annual Progress Report to International Cooperation Administration, Seoul National University of Korea and Office of General Affairs R.O.K.: covering the period April 19, 1958 - October 19, 1958.

all the obstacles that could possibly interfere with the transfer of learning by the young professors with enhanced capabilities.

The *third* design principle was the 'cooperative relationship between the universities'. As is reflected in the case of ICA's support in other countries, the project was designed to build 'people-to-people relationships.' Such a cooperative frame allowed for more intimate cooperation between the corresponding colleges as was shown in the cooperation between the colleges of agriculture, between the colleges of medicine, and between the colleges of engineering of both universities. The cooperative relationship was an important requirement in determining the sustainability of technical assistance.

In a letter to the Korean Advisory Committee, US Program Coordinator Dr. Tracy F. Tyler cited a speech by Herman B. Wells, the chancellor of Indiana University. In relation to the programs with ICA, Wells discussed the attitudes needed in successful cooperative programs between the universities.

**Five attitudes essential to the success of the university contract program:**[38]

*Institutional Attitudes*

(1) It is of greatest importance that participating colleges and universities regard these contracts as an educational opportunity, in addition to an opportunity for public service.

(2) Success requires the attention and concern of every segment of the university community, from board of trustee and president through the ranks of the teaching fellow.

(3) The American institution in its dealing with the foreign institution must be willing to recognize the contract as a cooperative venture between two equals.

*Government attitudes*

(4) The U. S. government is engaged in partnership with the nation's leading centers of thought and professional achievement. The government must recognize the traditions of our institutions of higher learning and allow these institutions freedom of decision in all those professional and technical aspects of the contracts in which these institutions are best qualified to make them.

(5) There must be a clear recognition that individual contracts and the program as a whole require substantial amount of time for fulfillment. Despite problems caused by annual appropriation of Federal funds, it is still possible to give a measure of stability to the progress through assurance of long-term policy support.

38. Letter sent by US Coordinator Tracy F. Tyler to Korean Advisory Committee.

The *fourth* design principle was the 'respect for professionalism and independence of the university'. In making decisions regarding the educational programs, UM made decisions based on the agreements with SNU. Their decisions were independent from the influences of both ICA and the Korean government. In the speech above, Wells asserts that the American government should recognize the universities as partners and give them freedom in making decisions in professional and technical aspects. Although it can be inferred from the speech that there could have been an ongoing conflict between independence and regulations, as for the SNU Cooperative Project, the independence of the university was promised in professional and technical areas. The noninvolvement of government and its officials contributed to fostering development in academic relationships and a sense of duty that arose from independence.

The *fifth* design principle was the 'self-development' of the developing country. The UM invited the professors from Korea to show them the development and methods used in the US. The leadership the visiting professors gained from the visit was converted into career development opportunities when they returned. As was mentioned by professor Gault and other advisors, advisors' task in Korea was 'not replacing Korean professors, but helping them to do the work themselves.'

According to professor Gault, 'the work done in the National Medical Center could only be done if Scandinavians did them. This is because the facility was established by the support of 3 Scandinavian countries. At the center, they did all the work from chores to surgeries by themselves, so Koreans were left to watch.' Contrary to how things were done at the National Medical Center, the advisors at SNU would have demonstrations and special training programs for Koreans so that they could gain the ability to carry out everything by themselves. It recalls the old proverb, "Give man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime."

The *sixth* design principle was the 'prevention of brain drain'. The cause of brain drain, the extraction of highly educated human resources, can be separated into national aspects and personal aspects. In terms of national factors, the reasons can be the uncertainly of occupation, political instability, economic depression, and health hazards. They move to more developed countries where they are provided with vast opportunities, political stability with freedom, a developed economy, and a rich life. As for personal aspects, relationship with family, personal interests and desire for a specific path in life can be reasons.

In order to prevent brain drain, the contract between ICA and UM set the principle that the Korean government and SNU should guarantee professorship for at least for one year for the exchange professors upon returning from exchange program. This not only entails job security, but also provides a chance for the exchange professors to apply what they

had learned in the US to SNU. However, the contract did not ask that the professors be placed back at SNU. So the decision of going back to SNU was left to the will of exchange professors.

Actually several systems worked for the prevention of brain drain. First, exchange professors could not take their familes with them. Since Koreans value family greatly, not being able to take their family gave them reason to return to Korea. Actually, the Korean government prohibited them taking their families with them. Second, the reason for the project being massive created motivation for them to return. Other than the very first and the last batch, the number of professors who were staying in UM were around 46-67 at a time. As for the College of Medicine, there were about 7 to 30 people at a time. Though staying in groups may not have helped them in improving their language skills and making friends with Americans, it created an intimate bond amongst the members and built a critical mass. Ironically enough, it was helpful for the prevention of brain drain. Third, although there were no written statements, they each felt the duty of returning to Korea and contribute to the development of the nation.[39] Fourth, all of the professors were taught during the Japanese colonial era, so they were not so fluent in English. Most of them could not communicate well enough to actually consider leaving the country permanently.

The *seventh* design principle was the spin-off effect. Despite their primary role in providing consultation to either SNU or the Korean government, the advisors were also allowed to provide consultation to other universities and related industries. They were not limited to SNU and the government, and rather were encouraged to spread the effects of the project to other facilities such as other universities and other institutions. As mentioned by Maloney above, the advisors were aware of the fact that SNU would serve as a pool for teaching resources to other national and private universities in Korea. On top of that, the professors, having an experience of studying abroad in US, were going to serve as very powerful tools in a society rapidly turning into a pro-American society.

Though the blueprint for the SNU Cooperative Project did not exist, from the retrospective studies, it is clear that there existed some principles in designing the project, which had its bases in the accumulated educational capabilities and experiences of UM and ICA. These principle can be summarized as: (1) selection and concentration, (2) enhancement of human resources and institutions, (3) cooperative relationship between the universities, (4) respecting professionalism and independence, (5) self-development of the developing country, (6) prevention of brain drain, and (7) the spin-off of the effects of the project.

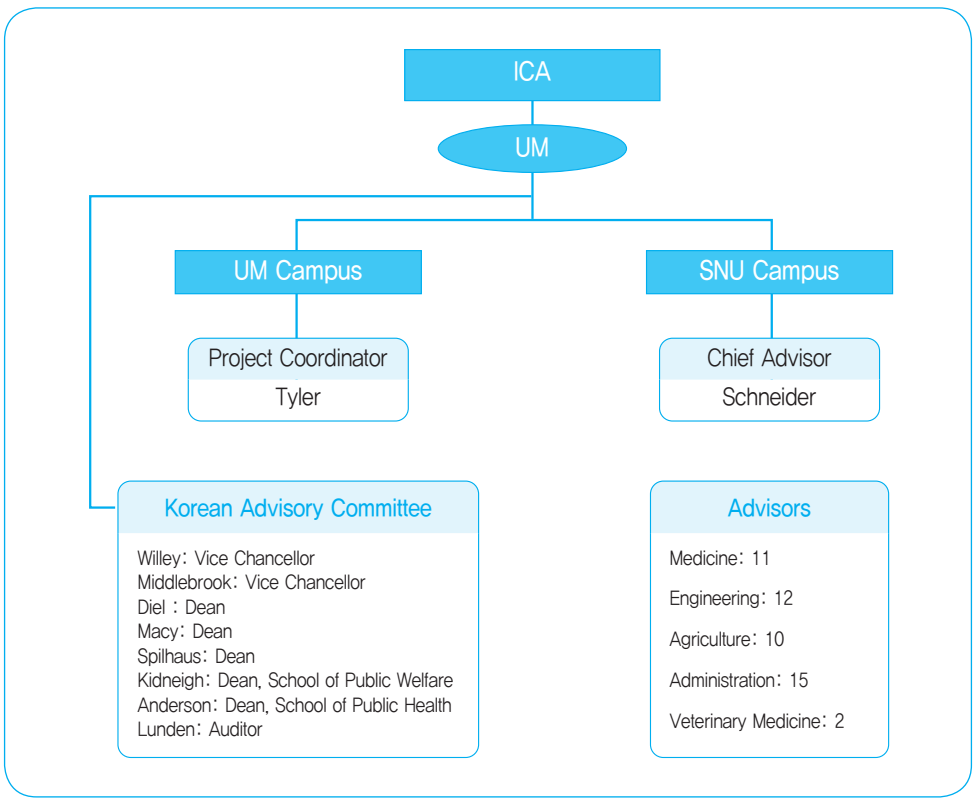
39. Wang-Jun Lee, *ibid.*

## 2. Outline of the Project

### 2.1. Overview

In accordance to the contract of the SNU Cooperative Project between ICA and the board of directors at UM, they were to appoint coordinators at UM and dispatch a chief-advisor for the whole project and overall-advisors for each college of SNU. The chief advisor Schneider resided in Korea for 6 years and 8 months. He stayed in Korea from October 1954 to the end of the project, which was in June 1961. Meanwhile, UM established a Korean Advisory Committee (KAC) on their campus to discuss the progress and problems, and make decisions in respect to the project [Figure 2-1].

Figure 2-1 | Organizational Plan of the Project




In February of 1954, FOA and UM signed an interim contract to secure the UM a three-month period to carry out preliminary investigation. The UM dispatched Dr. Anderson, the dean of Graduate School of Public Health to Korea to measure the validity of the project.

On August 1st 1954, Dr. Tyler, an educator, was assigned full-time coordinator in charge of the UM campus.

On September 28th 1954, FOA signed on the formal prime contract, which was already signed by both SNU and UM. On September 30th 1957, the first SNUCooperative Project was instigated. A total of 1.8 million USD was planned to be invested for exchange professor programs for the professors from the colleges of medicine, engineering, and agriculture, along with dispatched advisors, and reconstruction of facilities and equipment supply.

On October 19, 1954, chief advisor Schneider arrived in Korea. However, as soon as the project started, Korean government submitted a request to expand the scale of the project to the ICA. In order to make adjustments to the project, the secretary of Ministry of Education, Reconstruction Agency official, and the chancellor of SNU, and representative of OEC, representative of UNKRA, representative of UM from the US gathered to have several meetings. The topics discussed at the meetings were mainly on two issues. First, they were to reduce the budget for the training abroad programs and expand the budgets for facilities repair and equipment supply. The proposal to allocate 750,000 USD to training programs and 1.05 million USD on reconstruction and equipment was discussed. Also, the Korean representatives requested that they change the ratio of professor exchange from 1 to 1.5 US to Korea, to 1 to 4.5 US to Korea. The Korean government approved the proposal on November 19th 1954. Although the agreed proposal was not fully executed, the ratio of exchanged professors was increased eventually.

The project began with the exchange of the professors. The first trainees were the deans from the colleges of medicine, agriculture, and engineering. On February 26th 1955, Lee Jaegu, the dean of the College of Medicine, and on April 2nd 1955, Cho Baekhyun, the dean of the College of Agriculture, arrived in Minneapolis. However, the dean of the College of Engineering could not receive his visa on time, and eventually could not participate in the program. Dean Lee Jaegu stayed in Minneapolis and observed the educational system of the College of Medicine at UM, and discussed his findings with the professors of UM.

On April 2nd 1955, 3 engineering professors arrived at UM. On May 19th 1955, Sim Bosung, Kim Sukhwan, and Kim Juwan of the College of Medicine arrived at UM. The reason for the 7-month delay from the date stated on the contract was because they had to learn English prior to their training, and the procedure of going on a business trip to foreign country was very complicated at the time.

From September 28th 1954 to June 30th 1961, the SNU Cooperative Project was extended twice, and went through 19 adjustments. According to Wang-Jun Lee's thesis, duration of the project, 6 years and 8 months can be categorized into 3 periods <Table 2-3>.

Table 2-3 | Characteristics of Project Periods (Adapted from Wang-Jun Lee)

| Classification | 1st Project Period | 2nd Project Period | 3rd Project Period |
|---|---|---|---|
| Term | 1954.9.28. - 1957.9.30. (3 years) | 1957.10.1. - 1959.9.30. (2 years) | 1959.10.1. - 1961.6.30. (1 year and 8 months) |
| Characteristic | Training of Korean Professors in US | Dispatch of Advisors | Finishing the Project |
| Advisor | Maloney (1st Overall Advisor): Producing an overall report on Korean medical education. | Matthews (2nd Overall Advisor): Anesthesiology<br><br>Flink: Internal Medicine<br><br>Schimert (3rd Overall Advisor): Surgery<br><br>Brown: Physiology<br><br>Low: Nursing<br><br>Williams: Nursing<br><br>Mitchell: Hospital Administration | Berglun: Pediatrics<br><br>Jullian: Nursing Sciences<br><br>Gault (4th Overall Advisor): Internal Medicine |

Source: Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006

During the 1st project period (1954.9.28 - 1957.9.30), the number of advisors dispatched to Korea was small. Compared to agriculture and engineering, which had advisors dispatched extensively in 1955 and 1956, it was not until 1957 when medicine started to have advisors. The 1st project period for medicine was the time mainly for Korean professors to visit and learn the advanced knowledge and skills at UM. From dean to assistant professors, the greatest number of exchange professors was sent to US during this period.

During the 2nd project period, (1957.10.1 - 1959.9.30), advisors in each field were dispatched to Korea. Along with returned professors from the US, they developed various programs. Reconstruction of facilities was already in progress during this period, and a lot of equipment was supplied. The College of Nursing and Public Health were newly established and a nursing dormitory was newly built. In terms of teaching and research, it was the term for new methodologies to be applied. The returned professors applied new teaching and evaluation methods such as bedside teaching, clerkship, internship, residency, and multiple-choice questions to the college.

During the 3rd project period (1959.10.1 - 1961.6.30) the results and changes of new educational methods and systems started to become visible. During this period, 90% of the medical students passed Educational Commission for Foreign Medical Graduates (ECFMG) of the US. It was a significant change for Korean medical education. In the areas of research, cases of receiving funds from international sponsors started to appear during this period. On the 14th report, the professors from Korea and the advisors from UM all agreed on the successful turnout of the project by commenting that 'possible changes and innovations have all been made, thus extension of the program is not necessary.'

## 2.2. The First Project Period

During the 1st Project Period, five medical, eight engineering, and eleven agricultural advisors came to Korea. In the case of the College of Medicine, Maloney (March 1956, overall advisor, internal medicine), Low (January 1957, nursing), Matthews (May 1957, overall advisor, anesthesiology), Mitchell (February 1957, hospital administrations), Flink (August 1957, internal medicine) came to Korea. The dispatch of medical advisors was concentrated in late 1957, after some progress was achieved in facilities reconstruction, equipment supply, and the exchange professor program.

During this period, of the total 122 professors who participated in exchange professor program, 36 were from medicine, 54 were from engineering, and 32 were from agriculture. In the same period, of the 76 who returned, there were 26 from medicine, 37 from engineering, and 14 from agriculture. 1 from medicine received a doctorate degree, and 5 received Master's degrees (1 in engineering, 4 in medicine). One exchange professor passed the specialist examination in radiology in the US. The size of equipment supply and facilities repair in this period is shown in following tables <Table 2-4> and <Table 2-5>.[40]

**Table 2-4 |** Equipment Supply during the 1st Project Period (USD)

| | 1956 | 1957 | Total |
|---|---|---|---|
| Agriculture | 260,000 | 50,000 | 310,000 |
| Engineering | 730,000 | 500,000 | 1,230,000 |
| Medicine | 450,000 | 70,000 | 520,000 |
| Veterinary | 50,000 | - | 50,000 |
| Liberal Arts (Pre-Med) | 50,000 | - | 50,000 |
| SNU Administrative Fees | 35,000 | - | 35,000 |

40. University of Minnesota, Sixth Semi-Annual Progress report to International Cooperation Administration & Seoul National University of Korea: covering the period April 19, 1957 - October 19, 1957.

| | 1956 | 1957 | Total |
|---|---|---|---|
| Total | 1,575,000 | 620,000 | 2,195,000 |

Source: University of Minnesota, Sixth Semi-Annual Progress report to International Cooperation Administration & Seoul National University of Korea: covering the period April 19, 1957 - October 19, 1957

Table 2-5 | Facility Repair during the 1st Project Period (USD)

| | 1955 | 1956 | 1957 | Total |
|---|---|---|---|---|
| Agriculture | 422,300 | 650,000 | 159,000 | 1,231,300 |
| Engineering | 65,000 | 100,000 | 676,000 | 841,200 |
| Medicine | 63,500 | 275,000 | 345,000 | 683,500 |
| Total | 551,000 | 1,025,000 | 1,180,000 | 2,756,000 |

Source: University of Minnesota, Sixth Semi-Annual Progress report to International Cooperation Administration & Seoul National University of Korea: covering the period April 19, 1957 - October 19, 1957

Just before the 1st Project Period finished, discussion on the extension period and scale of the project took place. The first advisor to the college of medicine, Maloney prepared a report on medical education in Korea during his three-month stay in Korea. Maloney proposed to extend the project based on his national investigation of medical education in Korea. As a result, the termination of the project was postponed to September 30th, 1959, which was two years after the original date of termination. Also, an additional contract was made to include Graduate School of Public Administration on February 11th, 1957.

## 2.3. The Second Project Period

During the 2nd Project Period, synergistic effects took place in project caused by the returned exchange professors and the dispatched advisors. Facilities repair and equipment supply was almost finished in this period.

During this period, 5 advisors for medicine, 2 advisors for engineering, and 1 advisor for agriculture were dispatched to Korea. As for the College of Medicine, Schimert (July 1958, overall advisor, surgery), Brown (August 1958, physiology), Williams (December 1958, nursing), Gault (August 1959, overall advisor, internal medicine), Berglund (September 1959, pediatrics) were dispatched. During this period, the college of medicine had the greatest number of advisors. The number of advisors for agriculture and engineering was very small compared to that for medicine.

In this period, there was a total of 56 participants in the exchange professor program: 33 were from medicine, 8 were from engineering, and 15 were from agriculture. Up until this period, 7 professors received doctorate degrees (3 in engineering, 3 in agriculture, 1 in medicine), and 33 professors received Master's degrees in US (13 in engineering, 15 in agriculture, 5 in public administration). The size of facility repair and equipment supply in this period is shown in following table <Table 2-6>.[41]

Table 2-6 | Facility Repair and Equipment Supply during the 2nd Period

| | Agriculture | Engineering | Medicine | Etc. | Total |
|---|---|---|---|---|---|
| Facility Repair and Equipment Supply | -<br>12,000 | 52,000<br>18,000 | -<br>50,000 | -<br>68,000 | 52,000<br>148,000 |
| Total | 12,000 | 70,000 | 50,000 | 68,000 | 200,000 |

Source: Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006

Toward the end of the 2nd Project Period, Korea requested for the extension of the project to ICA. Unlike the first extension, there were a lot of arguments regarding the extension and the process was more complicated.

## 2.4. The Third Project Period

The advisors who were dispatched to Korea during the last period were 3: 1 for medicine, 1 for engineering, and 1 for agriculture. As for the College of Medicine, Julian (April 1960, nursing) came to Korea. Other than the vice chancellor, five deans, and three secretaries, total fifty advisors were dispatched during the whole project.

There was a total of 17 professors on exchange program: 5 from medicine, 2 from engineering, and 10 from agriculture. During this period, 4 professors received doctorate degrees (2 in engineering, 1 in agriculture, 1 in medicine), and 23 professors received Master's degree (5 in engineering, 4 in agriculture, 3 in veterinary medicine, 6 in public administration, 5 in medicine). One from nursing received a bachelor degree.

The budget for reconstruction and equipment purchase was completed. From the total of 2,191,415 USD allocated for textbooks, lecture hall equipment, and laboratory equipment, 541,092 USD were allocated to the College of Medicine, as for 1961.

41. Wang-Jun Lee, *ibid.*

As the end of the project neared, various opinions regarding the extension of the project came up. At that time, the Korean government was in need of immediate economic support, so it wanted to postpone aid in higher education. However, the opinion of UM was different. Since the educational system in medicine, agriculture, engineering, and administration had not settled completely, UM insisted on extending the project once again. Furthermore, they insisted that the project should be expanded to the college of education at SNU and other national colleges in Korea.

In 1959, the Ministry of Education in Korea put in a request to ICA for overall inspection of higher education in Korea. In response to the request, the ICA commissioned UM to carry out the investigation research. UM dispatched 13 professors from different fields of studies and conducted a research on the status of higher education in Korea. This investigation went on for about 3 months. Starting from April of 1959, five national universities, five national technical colleges, and 18 private universities were investigated. The report, which called for an immediate adjustment for development of higher education in Korea, was submitted to the Ministry of Education, ICA, and USOM.

However, the Ministry of Education did not respond to the recommendation made on the report. Also, ICA and USOM, which held the budgets for support, agreed with the opinion of the Korean government that strived for 'economic development first, and then higher education'. The SNU Cooperative Project could not be extended further.

## 3. Professor Exchange Program

### 3.1. Importance of the Exchange Program

The most essential component of the SNU Cooperative Project was the professor exchange program. As it was stated by Chancellor Morrill of UM, the professors were the heart of the university[42] and could make changes to the institution. They had the potential to make innovative developments in teaching and research, thus the greatest emphasis was placed on the professor exchange program.[43]

42. University of Minnesota, Fourth Semi-Annual Progress Report to International Cooperation Administration & Seoul National University of Korea: covering the period April 19, 1956 - October 19, 1956 'If the university is a learning society, then the faculties are the heart of the society. The professors should be open-minded and be professionally active. When they following the rules of the university and devote themselves in educating the students, the university can be respected. This is the true role of the professor.'
43. University of Minnesota, Eighth Semi-Annual Progress Report to International Cooperation Administration, Seoul National University of Korea and Office of General Affairs R.O.K.: covering the period April 19, 1958 - October 19, 1958.

Among the professor exchange programs, the training of the junior professors who could influence the future generations was considered to be the most important of all. However, senior leaders such as deans, and directors of hospitals were also given chances to participate in the exchange programs. They were given such opportunities so that they could gain new perspectives and assist the junior professors in applying the knowledge they learned in the US to SNU College of Medicine.

The focus of the technical consultation that advisors provided was the support of the professors who were returning from the US. They concentrated on helping the junior professors returning from the US and eliminating organizational obstacles to their activities.

The primary goal of facility repair and equipment supply was reconstructing infrastructure that was destroyed during the Korean War. Another goal was to provide an appropriate technological environment for the professors returning from the US to apply their knowledge and skills.

In other words, the project focused on providing a structural and physical environment in order to amplify the enhancement of the junior professors in applying their newly acquired knowledge. In doing so, it focused on preventing all possible aspects that would interfere with the transfer of learning of the exchange professors.

The professor exchange program was made even more effective with the synergistic effects caused by the Korean intellectuals at the time. At that time, studying in the US started to become a popular trend. Actually, from the time of liberation to the break of the Korean War, there were 43 Korean physicians who studied abroad in the US with the sponsorship of Rockefeller Foundation.[44] After the Korean War to September of 1955, 40 professors from SNU studied abroad. Of the 40, people who studied in the US were 31, which was quite comparable to those who studied in Europe.

During the Japanese colonial era, it was natural that Korean physicians dreamed of studying abroad in Germany, because it was considered the mainstream. However, after the World War II, Americans surpassed Europeans in economics and sciences. Therefore, the project became a huge opportunity for the professor who yearned to study abroad in the US.

## 3.2. Number, Study Period, and Ranks of the Exchange Professors

The size of the exchange professors was biggest in 1955 and 1959 <Table 2-7>. In the year 1955, when the exchange program was launched, 23 participated in the program: 4 stayed for 1-2 years, 13 stayed more than 2 years in US. In the year 1959, two years before the project finished, 30 participated in the program: 10 stayed for 1-2 years, 12 stayed

44. Jwa-Seop Shin, *ibid.*

more than two years <Table 2-8>. The professors, who went to the US in 1955 and 1959, were mostly assistant professors or teaching assistants <Table 2-9>. The numbers of the professors were concentrated at the beginning because they could have enough time to finish their degree. It was also concentrated in 1959 because it was the beginning year of the last project period.[45]

**Table 2-7 |** Number of Exchange Professors

| | | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | Total |
|---|---|---|---|---|---|---|---|---|
| College of Medicine | | 23 | 6 | 5 | 3 | 23 | 2 | 62 |
| Nursing | Department | - | 1 | - | 1 | 1 | 3 | 6 |
| | Hospital | - | 1 | - | - | 2 | - | 3 |
| Graduate School of Public Health | | - | - | - | - | 3 | 1 | 4 |
| Hospital Administration | | - | - | - | - | 1 | 1 | 2 |
| Total | | 23 | 8 | 5 | 4 | 30 | 7 | 77 |

Source: Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006

**Table 2-8 |** Overseas Study Period of Exchange Professors

(Unit: Person)

| | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | Total |
|---|---|---|---|---|---|---|---|
| 3 months | - | - | - | - | 2 | - | 2(2.5) |
| 6 months | 6 | 4 | 2 | - | 6 | - | 17(22.0) |
| 1 to 2 years | 4 | 4 | 2 | 3 | 10 | 7 | 29(37.6) |
| 2 or more years | 13 | - | 1 | 1 | 12 | - | 27(35.0) |
| Total | 23 | 8 | 5 | 4 | 30 | 7 | 77(100.0) |

Source: Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006

45. Wang-Jun Lee, *ibid.*

Table 2-9 | Ranks of Professors Participated in Exchange Program

(Unit: Person, %)

| | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | Total |
|---|---|---|---|---|---|---|---|
| Professor | 9 | 3 | 1 | 2 | 4 | - | 19(24.6) |
| Associate Professor | 2 | 3 | 3 | - | 3 | - | 11(14.2) |
| Assistant Professor | 4 | 1 | 1 | - | 1 | - | 7(0.9) |
| Lecturer & TA | 8 | - | - | 1 | 18 | 6 | 33(42.8) |
| Other | - | 1 | - | 1 | 4 | 1 | 7(0.9) |
| Total | 23 | 8 | 5 | 4 | 30 | 7 | 77(100.0) |

Source: Wang-Jun Lee, The Influence of Minnesota Project on the Korean Medical Education, Seoul National University PhD Dissertation, 2006

As of April 1961, 90 (79%) out of all the professors from SNU College of Medicine had the experience of studying abroad. 68 were supported by the SNU Cooperative Project and 22 received sponsorships from other international organizations such as Korean-American Association. By the end of the project, there were 77 people who participated in the professor exchange program: 62 medical professors, nine nurses (five nursing professors, four hospital nurses), four staff members from public health, one hospital administrator, and one hospital nutritionist.

## 3.3. Study Program in the US

Considering the customs of Korean society at the time, nepotism would have been a serious concern in the process of selection. However, the selection of participants was up to SNU College of Medicine. There was no open invitation to apply for the program. The participants were selected entirely by the recommendations of the senior professors, and they were screened by a special committee at the University level. After that, applicants had to get final permission from the KAC of UM. KAC closely scrutinized application of old professors who were nearing retirement.

The selected participants had to take 3-month preparatory courses at a private institution to learn English with the sponsorship of UNKRA and Ministry of Education. Language was an important criterion in receiving the final approval for the program. While they were attending the language school, their workload was somewhat diminished, yet they still received full salary. Those already fluent in English were exempt from the language courses after passing the speaking test.

UM also provided a language course for Korean professors up until the project was terminated. In 1955, the first English program that they had to take was a 20-hour per week program for three months. Starting 1956, an orientation course on American culture was added to the language course, which extended the program to six weeks. In 1957, exchange professors took examinations and were placed into three level groups based on their score. They went through five hours of intensive language course for six days a week for three months.

Besides the language program, special lecture courses were often held whenever they were needed. For instance, for those who needed help in chemistry, biochemistry, and physiology, UM opened a five-month clinical biochemistry course in 1955, which was composed of five hours lecture, four hours of laboratory, and one to two hours of consulting per week.[46]

The exchange program can be categorized into leader's courses, short-term fellowship courses, and formal degree courses. The deans of the College of Medicine and directors of hospital were given leader's courses to raise their overall understanding of the project, and to maximize the effects of the project. The program was usually three to six months. As for seniors, including associate professors, three- to twelve-month short-term fellowship courses were offered to help them gain a comprehensive knowledge of the American medical education system and get new perspectives through observations. They were the ones who had the authority and power of whether new knowledge obtained from studying abroad could be applied in Korea or not. Junior professors and teaching assistants were given two- year degree course because they were considered the future generation of medical sciences in Korea.

During their study, those who were on one year short-term programs were given lectures with less than nine credits. However, those in the two-year degree program were required to take more than nine credits. The degree program was compulsory to the basic science professors. Clinical science professors were not obligated to obtain the degree, but they were asked to enroll in graduate school to receive some credits. Since the project had its goal in training the young professors for the future, the junior professors were enrolled in degree programs. The tuition fees were exempted.

The goal of the short-term fellowship for the senior professors was to make them to gain a fresh perspective on health care system and medical education. Considering their old age, getting new knowledge and skills was difficult to them. Furthermore, the language barrier was significant to them compared to younger professors. However, all the chairs of departments in the College of Medicine stayed in the US for more than one year.

46. Kim, Myungjin, A study on cooperation in the field of higher education in the 1950s, Seoul National University PhD Dissertation, 2009.

## 3.4. Achivements of the Exchange Professors

Due to the language barrier and lack of experiences, the exchange professors were ignored at first. However, with their passion and diligence, they eventually gained trust from the professors of corresponding areas.

In the areas of basic science and public health administration, there were no problems in attending seminars and lectures, or participating in laboratory work. Contrarily, in the fields of clinical science, they could not participate in the actual clinical practice with patients, because they didn't have a US medical license. Furthermore, because patients were not comfortable with Asian doctors, even preliminary medical examinations were difficult. Therefore, the professors of clinical medicine learned and obtained new skills and knowledge by observing or assisting American professors in surgery rooms or examination rooms. Even though there were many restrictions, they were still able to gain a great deal of knowledge thanks to clerkship and preceptorship, which made the exchange professors analyze the possible causes of disease and illness, and give presentations of the results, followed by feedback from preceptors.

Even with the language barrier and cultural differences, exchange professors received excellent scores in their class. They kept good grades throughout the entire program. It was very impressive to the staff of UM because they were also aware of the difficulties in language and cultural differences <Table 2-10>.[47]

Table 2-10 | GPA of Professors Participated in Exchange Program: 1961

| Grade | Number of Professors (169) | Completed (158) | Process of Completing (11) | Masters Degree (60) | Doctorate Degree (11) |
|---|---|---|---|---|---|
| A | 34.31 | 34.61 | 30.85 | 37.83 | 43.49 |
| B | 38.14 | 39.21 | 25.68 | 41.37 | 35.37 |
| S* | 14.71 | 13.18 | 32.57 | 8.81 | 10.15 |
| C | 12.84 | 13 | 10.9 | 11.99 | 10.09 |
| 계 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

* S: B or higher

Source: University of Minnesota, Fourteenth Semi-Annual Progress report to International Cooperation Administration, Seoul National University of Korea and Office of General Affairs, R.O.K: covering the period April 19, 1961 - October 19. 1961.10.19

47. University of Minnesota, Fourteenth Semi-Annual Progress report to International Cooperation Administration, Seoul National University of Korea and Office of General Affairs, R.O.K: covering the period April 19, 1961 - October 19. 1961.10.19.

Up until the end of the SNU Cooperative Project, three exchange professors earned doctorate and eleven earned master's degrees. Kim Jaekyung and Lee Howang earned their doctorate from UM. Lee Kiyoung earned his doctorate from Pasteur Institute in France with the support of the project. Lee Howang, Lee Sangdon, Sim Bosung, Lim Jungkyu, Heo Jung, Choi Neungwon, Kim Sangchan, Lee Sunghak, Ko Eunglin, Sung Kijun, and Lim Sooduk earned their master degree. Furthermore, Kim Juwan earned his specialist board in radiology in US, and Hong Yeoshin earned a bachelor degree in Nursing during this period.

The UM cooperated with other universities, when it didn't have the courses exchange professors wanted to study. From the College of Medicine, Lee Kiyoung studied Biochemistry at Pasteur Institute in France, and Roh Youngmin studied Forensic Medicine at New York State University.

The evaluations on exchange professors were made 3 times: preterm, midterm, and end of term. Though many felt much pressure on the last evaluation, they usually showed great improvement.

Juniors such as assistant professors, lecturers, and teaching assistants received 180 USD, and seniors received 240 USD per month. It was not such a small amount compared to the average 100 USD per month professors were given at SNU College of Medicine. However, they could not open private clinics in the US. The dormitory fee was included in this payment. Most of the professors lived in dormitories at first, but many moved because of problems like not being able to eat Korean food in dormitories.

They were cared very well by UM. The professors who departed to the US in 1955 were all placed in first-class seats regardless of their ranks. When they arrived at the airport, American professors escorted them to UM. Furthermore, project coordinator Tyler attended and gave a speech at the commemoration event for the Anniversary of the 3.1 Independence Movement, which was being held by Korean professors. It also held 'Korean Day' event every year on campus.

## 3.5. Brain Drain

The contract signed by ICA and UM guaranteed at least one year of professorship at SNU after returning from the exchange program. It not only secured the status of the professors who went on the exchange program, but also allowed for them to apply new methods at SNU for at least one year. However, the professors were not obligated to return to their original positions. It was up to the professors to decide. All that was stated was that Korean government or SNU could not take away their jobs during their stay and for one year after return from US.

The aim of the exchange professor program was to apply newly acquired capabilities in Korea. Hence, staying behind after the program was a great challenge for this type of program. Only three people: Park Younggeun, Roh Youngmin, and Bae Jikhyun stayed behind after the program. Although there is no way of confirming that prevention of the brain drain was intentionally designed and installed in the program, some mechanisms surely helped to prevent much loss. First, the professors could not take their families with them. Since Korean people value family greatly, not being able to take their family gave them enough reason to come back. Considering this, Korean government requested that the professors were not allowed to take their families with them. Second, the reason for the project being massive acted as a motivation for them to return. Usually the number of professors staying in the UM campus was around 46-67 at a time. As for the College of Medicine, there were about 7 to 30 people from time to time. Though staying in groups may not have helped them in improving their language skills, it created an intimate bond among the members and built a critical mass. It caused for prevention of brain drain. Plus, since the College of Medicine had a long history of more than 50 years, the relationship between the seniors and juniors was very strong. Third, although there were no written statements, they each felt the duty of returning to Korea and contributing for the development of the nation. Fourth, all the professors were taught during the Japanese colonial era, so they were not so fluent in English. Fifth, because they didn't have US medical licenses, there was no benefit in staying behind after the program. In other words, they had to start all over again, so compared to the professors from agriculture and engineering they had much to lose if they stayed in the US.

Regardless of the length of the program, the returned professors actively applied their knowledge in Korea. They enthusiastically reproduced the modern educational methods that they learned in the US. The newly learned American medical sciences and new styles of teaching and research rapidly diffused among the professors and to medical colleges in Korea.

## 4. Advisory Service

### 4.1. Three-Tier System

During the period of six years and eight months, 50 advisors were dispatched to Korea for the SNU Cooperative Project. As for the College of Medicine, 11 advisors were dispatched: seven for medicine, three for nursing, and one for hospital administration. Among the advisors, there was one chief advisor who overlooked the entire project, and overall advisors in each the College of Medicine, Agriculture, and Engineering. Besides, there were specialty advisors for each department.

Professor Schneidor from the Department of Forestry at UM was assigned the chief advisor. He had experience of working in Korea regarding forestry during the Korean War. The chief advisor supported the overall activities of the advisors, and communicated with the coordinator Tyler at UM. He also took care of the equipment purchases for the project. He was the only advisor who stayed in Korea throughout the entire project.

There were overall advisors: Maloney (1956), Matthews (1957), Schimert (1958), and Gault (1959). Other than Maloney, who investigated the medical education of Korea, overall advisors provided consultation in their special fields of studies. The ranks, fields, and duration of stay in Korea of the advisors are shown below.[48]

Table 2-11 | [49] Advisors' Ranks, Fields, and Duration of Stay in Korea

| Name | Work Period | Fields of Work | Rank |
|---|---|---|---|
| Maloney | 1956.3.24 - 1956.7.11 (3.5 months) | Investigation of the situation | Associate Professor (Dean) |
| Matthews | 1957.5.2.-1958.12.6. (19 months) | Overall advisor and Anesthesiology | Professor |
| Flink | 1957.8.1.-1958.2.18. (6.5 months) | Internal Medicine | Professor |
| Schimert | 1958.7.6.-1959.11.13. (16.5 months) | Overall Advisor and General Surgery | Assistant Professor |
| Brown | 1958.7.25.-1959.2.12. (6.5 months) | Physiology | Assistant Professor |
| Gault | 1959.8.30.-1961.6.30. (22 months) | Overall and Internal Medicine | Associate Professor (Dean) |
| Berglund | 1959.9.2.-1960.9.20 (13 months) | Pediatrics | Assistant Professor |
| Low | 1957.1.1.-1959.2.10. (25.5 months) | Nursing | Assistant Professor |
| Williams | 1958.12.15.-1960.1.12. (13 months) | Nursing | Assistant Professor |
| Julian | 1960.4.24.-1961.4.24. (12.5 months) | Nursing | Professor |

48. Wang-Jun Lee, *ibid.*

49. Gault, N. L. Observation and Comments on the College of Medicine, Attached Hospital, School of Nursing and School of Public Health, Seoul National University. Seoul, Korea. June, 1961.

| Name | Work Period | Fields of Work | Rank |
|---|---|---|---|
| Mitchell | 1957.5.2.-1958.12.10. (19 months) | Hospital Administration | Vice Chief of the Department (University of Minnesota Hospital) |

Source: Gault, N. L. Observation and Comments on the College of Medicine, Attached Hospital, School of Nursing and School of Public Health, Seoul National University. Seoul, Korea. June, 1961

## 4.2. Philosophy of Advisory Work

Advisors were dispatched to Korea starting in 1957, two years after exchange professors were sent to US. It was because their primary role was to support the returning professors in applying their knowledge and skills in Korea by giving technical consultation, and to support them effectively in some of the progress needed to be made in restoration of the facilities and equipment.

The most important aspect in selection of the advisors was the volunteer-ship. This is because one's own will was the most important aspect to consider when working in an unfamiliar environment, far away from home and family. UM was to send their own professors, but when they did not have a professional in the field of interest, or could not find a volunteer, people from outside institutions were selected as advisors.

The advisors were usually in their late 30s or early 40s. Dispatching young professionals was a risky decision, but since the volunteer-ship was considered the most important criteria, and junior professors' adaptabilities and passions were also an important factor in consideration, many young professors were chosen as advisors. Besides, ICA made a request for younger professors, simply because they were cheaper.

The advisors attended meetings, gave lectures and demonstrations, did technical consultations, did clinical practices (advisors were given 2-year limited licenses for the time being), and proposed policies. They especially spent much effort in changing the medical education from one-way information delivery to actually getting students involved in learning. They often held demonstrations in front of the Korean professors and students to disseminate the American education methods.

The advisors regularly attended joint meetings of the leaders of the College of Medicine and the hospital, on Tuesday mornings. They gave opinions and proposed new ways of approaches to the deans and directors. The opinions made by the advisors were fairly well accepted by SNU professors since many had experienced the exchange program already.

Professor Gault stayed in Korea for 22 months as an advisor starting from August 30th, 1959 to June 30th, 1961. He started off his report by using the words of former President

Abraham Lincoln, saying, "If we could first know where we are, and where we are tending, we could then better judge what to do, or how to do it."[50] Following is what was in his last report.

"(the purpose of this project was) to strengthen and develop the educational and research programs in agriculture, engineering, and medicine, including nursing at SNU of Korea... On March 24, 1956, the first Minnesota medical adviser was dispatched to Seoul. Dr. W. F. Maloney in 3 ½ months conducted a thorough survey of the status and needs of the College, serving well to establish "where we are." The second advisor arrived on January 9, 1957 from which date the College has had one or more advisors from Minnesota in residence in Seoul.

Initial activities in rehabilitation of the physical facilities of the College and requisitioning of basic teaching and research equipment began in 1955 under the direction of the chief advisor for the project in Korea, Dr. Arthur E. Schneider. With the arrival, in the spring of 1957, of three advisors: in medicine, nursing, and hospital administration, a team which accomplished a remarkable familiarization with the new set of cultural values they found in Korea, came detailed planning closely developed with their Korean counterparts to define 'where we are tending'. Each advisor worked as effectively as possible by discussing the educational, scientific, and administrative principles involved, assisting the Korean faculty to 'judge what to do and how to do it' in order to achieve their objective.

At no time have the advisors in this project assumed administrative or teaching responsibilities of the Korean staff. Despite invitations to undertake such responsibilities, advisors limited their teaching activities to demonstrate methods or to provide special lectures that were not usually provided by the Korean faculty. By and large, advisors acted as agents for change and through their presence have given some stability to the inevitable insecurity that accompanies change in a traditional cultural pattern."

## 4.3. Tasks of the Advisors

The tasks of the advisors were: (1) figuring out the whereabouts of the SNU College of Medicine, where it was headed, what it should do, and how it should be done, (2) helping Korean professors to make a decision on current issues by having discussions with them based on educational, scientific, and administrative principles, (3) teaching new methods

50. Advisor Dr. N. L. Gault Jr's final report starts with the words of Abraham Lincoln. If we could first know where we are, and whither we are tending, we could then better judge what to do, and how to do it. N. L. Gault Jr. M.D. *ibid.*

through special training sessions and demonstrations, (4) acting as agents for change, so that Korean professors could be more confident in making changes.[51]

The advisors made recommendations by submitting mandatory reports on situations at SNU. They wrote about things that must be done and how they should be carried out. The chief advisor submitted progress reports to the ICA every 6 months. Overall advisors and other specialty advisors submitted one final report when their stay was over.

As Professor Gault and other advisors had mentioned, 'they were not there to replace, but to help Korean professors in carrying out the tasks'. Hence, the advisors waited until the Korean professors could do things on their own, rather than having everything done by the hands of foreigners, which was what was happening at the National Medical Center, established by the Scandinavians.

Gault stated in his report that the role of advisors was to 'provide education' while 'supporting, motivating, and stimulating the professors and students, rather than displacing them.' The act of viewing consultation as 'an opportunity to provide education, in lieu of an opportunity for public services,' had its basis in 'people-to-people relationship' between the universities.

## 4.4. Conflict with the Korean System

The advisors had to understand the Korean culture and people's behavior. Keeping close ties with the returned professors was especially an important matter. Moreover, in order to make the project successful, they had to pay close attention to the entire university community, from dean to part-time lecturers.

In carrying out the programs for the SNU Cooperative Project, the decisions regarding educational issues were solely made by the cooperation between UM and SNU. The educational decisions were not to be interfered with, neither by the ICA or the Korean government. Actually, it was possible because of the advisors who put in vast amounts of effort in making recommendations after careful inspections of the university in finding 'what and how things should be done.'

Of course, SNU professors and Korea was very strange to the advisors at first. One instance was attending a meeting held by the American Medical Association in Chicago in August 1959. When the Korean staff found out that their interpreter was placed on the 10th floor of the hotel, whereas the dean and the hospital director were placed on 6$^{th}$ floor, they felt very uncomfortable over a lower-ranking person staying on the higher floor than the superior. Hence they had to change the rooms.

51. Change is a scary thing, especially to the elites in privileged class. In such aspects, if all the members show new patterns of behavior that is envied by others, then it can help to reduce the fear for change.

At the meetings held every Tuesday morning, many things were discussed, and they were put to vote, but few things were put into action. So it was common that the same topics appeared repeatedly a few months later.

Another instance would be the time when one of the deans was receiving surgery. Dr. Gault was visiting the operation room when the surgery was in progress. He recalled that he was very surprised by the surgery team because they invited him to enter the room while he had his coat on. In order to work in such circumstances, immediate adaptation to the environment and change in thinking were inevitable for the advisors.

Moreover, despite the library being stocked with books from the support of CMB after the Korean War, the library closed at 5 p.m. when the students were just about to begin using it. Even though the advisors knew that this was wrong, they did not fix this. Instead, they waited for the returned professors to take action in fixing such nonsensical occurrences.

As an aftermath of the Japanese colonial era, the communication between the departments was very rare. The advisors were aware of the fact that it was not helpful for the development of the institution, yet they waited until the Korean professors would bring up the matters on their own. However, the notion of Korean professors regarding the communication between the departments never came up.

Kim Myungjin pointed out that such differences in perception came from having different ideas about university. The following is a comparison between the idea of the university between Japanese Imperial institutions and American ones.[52]

Table 2-12 | Comparison of the Idea of University between Japan and America

| Area | Japanese Imperial University | American University |
|---|---|---|
| Aim | Education of the Elites | Education of the Public |
| University System | Lecture-Based | Department- Centered |
| Curriculums | Theory-Centered | School-Industry Link Emphasized |
| Educational Methods | Lecture-Centered | Experiments and Practices Emphasized |
| Management of Colleges | Decision of the Faculty Council Prioritized | Standardized Procedures Emphasized |

Source: Kim, Myungjin, A study on cooperation in the field of higher education in the 1950s, Seoul National University PhD Dissertation, 2009

52. Kim, Myungjin, *ibid.*

The American advisors during the project went through difficulties in comprehending the culture and the situation in Korea. They appeared anxious over the slow changes that were occurring in education. Moreover, the American professors also had to face conflicts with the elderly professors who were more used to traditional Confucian and Japanese cultures. Advisors denoted several problems: (1) the cramming style of education that followed the Japanese style, (2) the inbreeding culture of only appointing the alumni of their school, (3) authoritative culture that oppressed the creativity of the young generation, (4) inefficient organizational management of hospitals and poor patient manners, and (5) lack of scientific approaches in medical science such as autopsies, or clinical pathology seminars. The first three out of the five problems still remain after 50 years.

## 5. Facilities and Equipment Aid

The entire budget for the SNU Cooperative Project supported by the US was estimated to be around 9.5 million USD, though it can vary depending on how the duration and the range is set. The amount greatly exceeded the support of the universities in other countries. The corresponding fund of the Korean government was around 7 million USD. In sum, the budget that went into SNU was around 16.5 million USD.

According to several records, 9.5 million USD was distributed into: 3.5 million USD in professor exchange program and advisory service, 3 million USD in goods supply, and 3 million USD in construction and repair of the facilities. The 7 million USD from the Korean government was used in repair and expansion of the facilities. In sum, about 13 million USD was used in the supply of facilities, equipment, and goods.

Seven new buildings were built for the College of Agriculture located in Suwon. Furthermore, six new buildings were built, and 19 buildings were repaired for the College of Engineering. The cafeteria, laundromat, dormitory for nurses, and the main building for the department of nursing were built in the College of Medicine. A three-story building was built for the College of Veterinary, and the Graduate School of Public Administration building was raised to three stories. Renovations of water, electricity, and heating were made. The latest technological machines and equipment were purchased for teaching, researching, and clinical diagnosis and treatment. They were set to support the returning professors from the professor exchange program. Hence, by 1960, SNU was totally renewed. The following table <Table 2-13> is the expense report of the project. It does not include the response budget backed by the Korean government.

Table 2-13 | Details of ICA Aid for SNU Cooperative Project

(Unit: USD)

| Year | Technical Support | | | | Facility Support | Total | Support from the Contract |
|---|---|---|---|---|---|---|---|
| | American Visitors | Korean Participants | Directly Hired | Total | Large-scaled Facilities, Educational Materials | | |
| 1954 | 479 | 257 | - | 736 | - | 736 | 736 |
| 1955 | - | - | - | - | 526 | 526 | - |
| 1956 | 328 | 394 | - | 722 | 2,568 | 3,290 | 2,227 |
| 1957 | 280 | 320 | - | 600 | 1,677 | 2,277 | 1,246 |
| 1958 | 200 | - | - | 200 | 500 | 700 | 592 |
| 1959 | 489 | 305 | 16 | 811 | 200 | 1,011 | 943 |
| 1960 | 488 | 358 | 22 | 868 | - | 868 | 598 |
| 1961 | - | 25 | 19 | 44 | - | 44 | - |
| Total (%) | 2,265 (57) | 1,659 (42) | 57 (1) | 3,981 (100) (42) | 5,471 (58) | 9,452 (100) (100) | 6,442 (68) |

Source: Kim, Myungjin, A study on cooperation in the field of higher education in the 1950s, Seoul National University PhD Dissertation, 2009

In repair of the buildings and expansion of the facilities, a total of 695,356 USD was spent. In terms of the organizations, around 14,700 USD was used for the building of the College of Medicine. 525,700 USD was used for the affiliated hospital, and 154,800 USD was used for the Department of Nursing.

The renovation of the rooftop, water, and electricity was made and the repair of animal storages, thermostatic chambers, lecture halls, and hallways were also done. Moreover, on the 3rd floor rooftop of the basic medicine building, a new library opened with 150 seats for students and a special reference room for professors. The purchase of academic journals that stopped since the outbreak of the World War II, resumed with 60 different medical magazines supplied monthly, starting in 1955.

At the hospital, the construction of the 1st west wing (gynecology) and 2nd west wing (pediatrics), which remained unfinished since the liberation, were completed along with renovations in heating, electricity, water, hallways, and road pavements. 50,000-gallon water tank and two boilers greatly improved the heating and water at the hospital.

In 1959, a building for operations and the radiology were completed. In 1961, the construction of the storage for pharmacy and dispensary, along with a new kitchen and laundry buildings were completed. The buildings completed in 1961 were equipped with the latest equipment from America, which accounted for the modernization of the hospital.

In December 1958, a 2,300$m^2$ Nursing Science's building was built, and the following year, on March 31$^{st}$, 1959, the Technical High School of Nursing was promoted to the Department of Nursing. In December of the same year, a 3,200$m^2$ Nurse's Dormitory was completed.

On May 30$^{th}$ 1960, with the support of the Atomic Energy Commissions (AEC), a Radioisotope clinic was established on the 1$^{st}$ floor of the Clinical Research Laboratory, and it became the first facility in Korea that used radioisotope for diagnosis and treatment.

To support the equipment for education, research and clinical practice in the College of Medicine and the affiliated hospital, the ICA gave 614,500 USD every year. The budget was distributed into 231,684 USD to basic medicine, 381,660 USD to clinical medicine, and 1,300 USD to the Graduate School of Public Health. From there on, the SNU College of Medicine and the affiliated hospital was able to serve basic needs.

In 1957 and 1958, large-scaled support was given to facility and equipment supplies. This period concurs with the period in which the Korean professors were returning from the professor exchange program.

However, sometimes, not only the Korean government but also the ICA had delays in executing the budgets for the projects. It caused for the delay in the programs, or even stoppage of some programs. The hospitals sometimes had a shortage of heating, hot water, and electricity. Furthermore, some of the equipment for education and research could not be used due to lack of infrastructure, even until the end of the project. On top of this, unstable the political situation at the beginning of the 1960s also delayed the delivery of the equipment.

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# Chapter 3

## Execution and Monitoring of the Project

1. Organization of Execution
2. Monitoring and Improvement of the Project

# Execution and Monitoring of the Project

## 1. Organization of Execution

### 1.1. Organizational Structure for Project Execution

In order to carry out the SNU Cooperative Project, the Office of Project Coordinator was established at UM, and Dr. Tyler, a professor in the College of Education, was nominared as the head of the Office. The role of the Office was to take care of all the project-related affairs in the US. Korean Advisory Committee (KAC) was established at UM to give consultation to the overall execution of the project. Consultants for each area, equivalent to three colleges, were hired to support the everyday life and study programs of exchange professors. Meanwhile, the chief advisor, Schneider, a professor in the College of Agriculture, was sent to Korea to take care of all the affairs in Korea. Overall advisors for each college and specialty advisors for each department were dispatched to do consultation [Figure 2-1].

In preparation of the project, the chancellor of UM entrusted all of the administrative work to the vice chancellor of school affairs Dr. Willey. He also appointed the chancellor of educational affairs as the vice chief of KAC, in order to discuss and make decisions on possible problems that might come up in delivering the project. After the chief of KAC was appointed, the deans of each college, auditor, and clerks were appointed as members of the committee.

The Korean Advisory Committee held 20 official meetings during the entire project period. They also had unofficial meetings, and exchanged memos and letters to share opinions and commentaries on important issues. Moreover, in order to have full understanding of the whereabouts of the project, the chief and some members of committee visited Korea. Some

of the significant decisions made by the committee were: offering a language programs for the exchange professors from Korea, enforcing more close reviews of the applications of elderly professors, etc.

The KAC also reviewed the matters regarding the extension of the project period and the project range that were requested by ICA. On October 10th, 1956, KAC approved a 2-year extension of the project as well as the addition of a 3-year Graduate School of Public Administration. Actually, ICA requested the addition of Administrative Management, Business Management, and Vocational Education besides the Public Administration, but they were not approved by the KAC. At a meeting held in September 1958, the 2nd extension of the project that was set to terminate on September 28th, 1959 was decided.

As mentioned above, KAC played a key role in directing and deciding the major policies of the project. The effective discussion on matters in regard to the execution of the project was possible only because all the deans of the colleges involved in the project were appointed as members of the committee.

The UM dispatched a chief advisor to coordinate the entire project, and overall advisors for each college to coordinate the operation of the project at the college level. The overall advisors were obligated to stay in Korea for at least one year, and had to report to the chief advisor. Specialty advisors for each department level submitted a thorough report on the current situation of each college and recommendations on things that needed to be done, before returning to the US. During their stay in Korea, they discussed important issues with Korean professors, and reported them to KAC, after they returned to the US.

Although KAC submitted a proposal on hiring consultants for each college who would advise and help Korean exchange professors, the ICA rejected it on the gounds that there was no precedent to such matters. However, the issue was brought up again in 1957, and they agreed on assigning one consultant to the College of Engineering and College of Agriculture. The College of Medicine was not assigned a consultant, but Dr. Gaylord W. Anderson, the dean of the Graduate School of Public Health, volunteered for free. The consultants helped the Korean professors with their studies and adaptation to American life. Each consultant from the colleges had to visit SNU at least once, and had to submit a report to Tyler, the head of the Office of Project Coordinator.

The SNU Cooperative Project was managed and executed by the Office of Project Coordinator, Korean Advisory Committee, consultants for each college in the US, and a chief advisor, overall advisors, and specialty advisors in Korea.

For 6 years and 8 months, the chief advisor who was in charge of SNU, and the head of the Office of Project Coordinator who was in charge of UM, never changed. Through their service for more than 6 years, the project was executed consistently and professionally during

the entire project period. Furthermore, almost all of the professors related to the project were given the opportunity to visit SNU to have a comprehensive understanding of the project.

Since the project was under the support of the ICA via UM, the project was executed in close collaboration amongst ICA, UM and SNU. SNU had another close channel with the Korean government because it was a national university. Actually, the Office of Economic Coordinator (OEC) in Korea was an organization that belonged to the United Nations. However, it functioned as an agency of the ICA during the project period.[53]

## 1.2. Conflicts among the Project Organizations

There were many disputes between the ICA and UM over the execution of the projects. At the beginning of the project, they often had conflicts with regard to the leadership over the project. The conflict was resolved by the ICA taking care of budgets and decision for extension of the project, and UM making all the educational and professional decisions. However, the ICA took part in making decisions whenever the budget changes were to be made, even if they were educational or professional decisions, just as it interfered with the the hiring of the consultants at UM. They also agreed on UM being responsible for selecting the advisors and the exchange professors, and ICA being responsible for the safety of the advisors and exchange professors. Yet, even on these matters, they had conflict over the selection. The ICA wanted to select younger professors as advisors to save budget and to ensure adaptability to the new environment, whereas UM wanted more experienced professors with knowhow and academic authority.

Even the perspectives on the role of advisors were different. The UM defined that the role of short-term advisor was consultancy and role of long-term advisor was administration, and they should not replace the work of Korean professors, but the ICA wanted the advisors to give lectures directly to Korean students. UM wanted to provide a research-oriented program for the exchange professors, but the ICA and the Korean government wanted a service-oriented program. UM argued that the Korean professors should acquire degrees in order to enhance professional abilities, but the ICA and the Korean government wanted exchange professors to be trained on practical skills that they could carry out when they returned to Korea. UM wanted to allow the extension of visiting periods whenever the exchange professors asked, but ICA and the Korean government wanted them to return to Korea as soon as possible.

53. One of the newspapers published in the US described the roles of the Economic Cooperation Agency as the following. "The Economic Coordinator will be the representative of the International Cooperation Administration for projects undertaken by that agency in Korea. He will have (1) legal responsibility of assuring performance of operations in accordance with the provisions of Mutual Security Act; and (2) authority to make administrative determinations normally required by the ICA of its field representatives."

## 2. Monitoring and Improvement of the Project

### 2.1. Monitoring and Adjustment by Advisors

The SNU Cooperative Project started after University of Minnesota made a thorough inspection of the situations. Seven months prior to the official signing of the contract, FOA and UM signed an interim contract on February 1954, and FOA guaranteed 3 months of investigation prior to the actual contract. During this period, UM dispatched Dr. Anderson, dean of the Graduate School of Public Health, to Korea and investigated the validity and possibility of the mission. The UM appointed Dr. Tyler as a full-time coordinator for project management at UM campus, on Aug 1st, 1954. A prime contract between FOA and UM was signed on September 28th 1954. The seven-month period prior to the signing of the prime contract was enough for UM to review the feasibility and prepare for the actual implementation of the project.

The advisors dispatched to Korea mostly worked on the analysis, maintenance, and adjustment of the project. During the entire project period, they produced 73 reports, which amount to an average of 10 volumes per year. The chief advisor produced semi-annual progress reports every 6 months, and submitted them to the ICA, the Korean government, SNU, and UM. The overall advisors produced one final report when they finished their term in Korea. In the College of Medicine, 12 reports were produced, 8 for medicine, and 4 for nursing <Table 3-1>.

Table 3-1 | Types of Reports and their Volumes

| Types of Reports | Volumes |
|---|---|
| Semi-Annual Progress Report | 15 |
| Engineering | 13 |
| Agricultural | 7 |
| Veterinary | 2 |
| Medical (Prepared by Advisor) | 8 |
| Nursing (Prepared by Advisor) | 4 |
| Dental | 1 |
| Graduate School of Public Administration | 13 |
| English Programs | 2 |
| Survey on Situations Regarding Public High Schools | 3 |
| Others | 5 |
| Total | 73 |

Source: Kim, Myungjin, A study on cooperation in the field of higher education in the 1950s, Seoul National University PhD Dissertation, 2009

These reports included observations, comments, and recommendations: (1) for succeeding advisors to have prior knowledge on the situation of SNU and progress of the project, (2) for Korean and American professors to have an open discussion on the subject matters, (3) for Korean and American governments to be aware of existing problems and to come up with solutions to the problems.

Following is an example of the report by the overall advisor and anesthesiology advisor Matthews, submitted on November 7th, 1958 <Table 3-2>.

Table 3-2 | Structure of Project Reports

| |
|---|
| Ⅰ. INTRODUCTION |
| Ⅱ. SUMMARY |
| Objectives |
| Organizational Structure |
| Key Administrators and their Functions |
| Faculty |
| Finance |
| Physical Plant, Equipment, Library, Teaching Material, and Other Facilities |
| TEACHING AND RESEARCH PROGRAMS |
| Preprofessional and Premedical Education |
| Undergraduate Teaching Program and Methods |
| Graduate and Postgraduate Teaching Program |
| Research Activities |
| Ⅲ. OBJECTIVES OF THE COLLEGE |
| Comments and Recommendations |
| Ⅳ. ORGANIZATIONAL STRUCTURE |
| Comments and Recommendations |
| Ⅴ. KEY ADMINISTRATORS AND THEIR FUNCTIONS |
| Comments and Recommendations |
| Ⅵ. FACULTY AND STAFF STRENGTHS |
| Faculty Classifications |
| Size, Distribution and Method of Appointment |
| Minimum Legal Qualification for Appointment and Promotion |
| Required Faculty Qualifications for Appointment and Promotion |
| Opportunities to Use Foreign Experience to Strengthen Staff Quality |
| Recruitment, Effect of the Draft, Foreign Exchange, and Finances on Duty Size |
| Hospital Administration, Nursing, and Technical Staff Recommendations |
| Ⅶ. FINANCES |
| Recommendations |
| Ⅷ. PHYSICAL PLANT, EQUIPMENT AND LIBRARY FACILITIES |
| Physical Plant |
| Equipment |
| Library |
| Recommendations |

In each report, educational goals, organizational structure, faculties, budgets, facilities, equipment, standards of clinical treatments, specimens, and other educational materials of the SNU College of Medicine were described. Matthews' report, produced in 1958, was mainly concerned with the establishment of the Graduate School of Public Health and the Department of Nursing that had been considered since the beginning of the project. His report was taken and put into action. As a result, the Graduate School of Public Health and the Department of Nursing Sciences were established the following year. Moreover, he also proposed the establishment of the Department of Medical Technology such as Radioisotope Technology, but it was not accepted. In 1960, however, a laboratory for radioisotope technology was established. He also proposed that it would be more efficient to have the department of medical sciences, public health, nursing sciences, dentistry, and medical technology under another vice-chancellor such as the health sciences vice-chancellor.

Project maintenance and adjustments were made with careful inspections of the advisors and idea-sharing with Korean professors. The proposals of maintenance and adjustments were mostly made while they were in Korea. Even though not all of their proposals were accepted, they certainly developed a foundation in developing the project.

## 2.2. Korean Advisory Committee

The maintenance and the adjustments of the project from US were done by KAC. The vice-chancelor, Willey, was the chair of KAC, and the deans of each college, along with auditor, and clerks were the members of KAC. The KAC had 20 official meetings during the project. They often had unofficial meetings, exchanged memos and letters to share opinions, and required commentaries on important issues. Moreover, in order to have a full understanding of the whereabouts of the project, the chair of the committee and some of the members visited Korea.

On September 23rd, 1958, KAC dealt with the issues related to the exchange program of the colleges and the extension of contract that was to take place in 1959. Issues related to the exchange program were: (1) reducing the number of exchange professors in basic medicine since they thought there were enough professors with adequate skills; (2) increasing the number of exchange professors from the clinical fields that dealt with the latest technology;

(3) expanding the number of professors in hospital administration to guide the management of the affiliated hospital.

The professors at UM routinely reported on the education, overall training, and everyday lives of the exchange professors. These reports were submitted to consultants at each college, KAC, and Tyler, the project coordinator.

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# Chapter 4

## Evaluation and Implications

1. Project Outcome
2. The Key Success Factors of the Project
3. Implications

# Evaluation and Implications

## 1. Project Outcome

### 1.1. Changes in Professors

When the SNU Cooperative Project ended in 1962, there were 106 professors at SNU College of Medicine. Other than the 3 who stayed in the US, 74 of the 106 had participated in the professor exchange program. That is, the percentage of the professors who were trained in the US was about 70% of the total number of professors in the College of Medicine.

Deans of the college, directors of hospitals, chairs of each department, and associate professors had experienced advanced curriculums, teaching methods, faculty systems, and university management systems through the exchange program in the US. They were prepared to apply what they had observed and experienced at UM to SNU College of Medicine. Junior professors also upgraded their knowledge and skills, and some of them earned the academic degrees that they had yearned for for years, and even if they could not obtain degrees, they had still greatly benefited from new knowledge and technology.

Actually, they could not learn by hands-on practice, that is, they could not participate in clinical practice with patients. This was because they were Asians and looked very different from Caucasians, were not so good at communicating in English, and nobody had a United States Medical License at the time. It was a serious limitation for the professors in the clinical field, but no problem for those in basic science and public health. However, by assisting American professors in the surgery room, interpreting diagnostic data with American professors, observing and drawing practices from American professors, they were able to learn new knowledge and skills, and planned to apply them when they went back to Korea. After the overseas training, they introduced standardized procedures prior to

and after surgery, and latest skills such as intracardiac catheter, cystoplasty using the small intestine, and radioisotope treatment.

In the field of education, John Dewey's educational principle 'learn by doing' was already embedded in the American professors since the beginning of 20th century. By observing and experiencing the teaching practices of American professors, Korean exchange professors were introduced to a new world of medical education. They were able to learn a lot of new teaching methodologies and aspects of school culture: free questions and answers in formal lectures, interactive lectures, seminars, conferences, inter-departmental conferences, and advanced teaching materials such as movies, multi-media, and transparency. Because of these experiences, they could lead the educational reform that was taking place in the College of Medicine when they came back to Korea.

In the area of research, they were able to build basic capabilities to carry out research by learning research design, experimental methodology, and new skills in statistics. However, it took a long time until developments in researcg were tangible. This is because the professors were caught up in teaching and clinical practice for more than 20 years after the termination of the project.

The most important change of all was that they became fully aware of 'where to head' and 'who to look for advice'. The experience as exchange professors implanted the American medical sciences as a vision in the minds of the Korean professors. From that point on, Korean medical sciences and medical education uniformly benchmarked American medical sciences and medical education through the 20th century.

Pride and social reputation also became a great asset to the exchange professors. At the time, the hierarchy among the universities was apparent and SNU was on the top. The experience of studying in the United States while working as a professor at SNU gave them prominent status as leaders in their relative fields. They eventually played the role of leaders in guiding medical science in Korea.

## 1.2. Changes in Curriculum

The short-term and direct goals of the SNU Cooperative Project were enhancing the capabilities of education and research at SNU. During the project, the College of Medicine and its affiliated hospital were recovered and transformed greatly through renovations and the introduction of new equipment. The true effects of the project started to surface in 1956 when the first group of professors who participated in the exchange program in 1955 started to return. More full-scale changes took place in 1960, a year before the termination of the project, when more than 50 exchange professors came back from the United States. In order to accept the new American system, exposure to a drastically new environment was absolutely necessary for the professors who had only been trained in the Japanese style.

After Professor Myung Juwan became the 5th dean of the College of Medicine in September 1956, the College of Medicine started to review its old curriculum, starting from 1957. Dean Myung visited the United States with Kim Dongik, the director of the affiliated hospital, from August 20th to November 18th, 1959. He attended the World Medical Assembly held in Chicago, and visited several hospitals and medical schools in Atlanta, Richmond, Washington D.C., Baltimore, Philadelphia, New York, Boston, Buffalo, Detroit, and Chicago.

When he returned from the US, he formed a committee to review the 3rd and 4th year clinical curriculum. He requested that the committee reform the curriculum so that practice-based education could take place in both outpatient clinics and hospital wards. The committee proposed a new curriculum reducing daily lectures to 2 hours and extending the hours spent in the wards and outpatient clinics to 6 hours. In the proposal, the lecture hours in basic medicine were shortened and the laboratory hours were increased in the 1st and 2nd year. The clinical clerkship hours in 3rd and 4th years were also expanded greatly.

In order to reform one-way, cramming style education, 1,200 hours of lecturing was reduced to 1,000 hours, and lecture to practice or laboratory ratio was adjusted to 30:70. In the old curriculum, the 1st and 2nd year students had to attend lectures from morning to afternoon. However, in the new curriculum, lectures were restricted to 3 hours in the morning, and students spent the entire afternoon doing laboratory work. In 1958, when the old German microscopes from the colonial era were replaced with the new American microscopes supplied by ICA, the laboratory hour became filled with the excitement of students.

There were also great improvements in the curriculum of the 3rd and 4th year students. Clinical practice-based learning, such as clerkship and preceptorship, was expanded so that the 3rd year students could see inpatients and the 4th year students could see outpatients. Starting from this point on, American style clinical teaching was introduced full-scale. After the clinical practice-based learning had been introduced, the internship program was introduced in 1958, and resident programs in 1959, completing the reformation to American style clinical training.

Despite the fact that opportunities for practice-based learning were broadened, patients and their families were not comfortable with the physical examination and history taking by students even under the supervision of professors. This situation was especially worse in the gynecology ward. Furthermore, the capacity of the affiliated hospital was only 500 beds, so it could not accommodate 120 3rd year students and 120 4th year students. In addition, the hospital closed two wards in winter due to the shortage of fuel for heating, resulting in more difficulty for students to have enough experiences. For pediatrics clerkship, it was calculated that each student should experience at least 10 patient cases, but it was

impossible at the affiliated hospital. Therefore, the College of Medicine made agreements with Red-Cross Hospital, Korea Electric Hospital, and National Medical Center for the training of students. However, students could not have enough experience in these hospitals too, due to problems with commuting to these hospitals and the inadequate educational environment of each hospital.

The curriculum of one year was divided into three semesters during the colonial period, but after the reform one year was divided into 2 semesters, and each semester was divided into 2 quarters. The new curriculum of each year was composed of four quarters, so that midterm examinations and final examinations were given at the end of each quarter.

Starting in 1957, interdepartmental lecture (IDL) was tried as a sort of integrated course that had been developed by Case Western Reserve University in the United States in the early 1950s. In the IDL, which was a prototype of integrated education, several professors from different fields of studies entered the classroom at the same time and taught one subject collaboratively. For example, professors from anatomy, physiology, biochemistry, and internal medicine jointly taught 'homeostasis'. This educational method was not only student-centered, but also was very helpful to comprehensively bridge basic medical knowledge with clinical medical knowledge. In regards to IDL, a graduate of the College of Medicine wrote that "various professionals participating to teach one theme from their professional perspective, for instance, professors from internal medicine, general surgery, medical technology, pharmacology, and physiology gathered to teach about tuberculosis, made a deep impression on students' minds."[54] However, such an advanced attempt did not last long due to a non-cooperative environment among the professors who lacked experience in such collaborative culture. In 1971, about fourteen years after the first attempt, the College of Medicine introduced functionally integrated courses such as cardiology, hematology, nephrology, endocrinology, and respiratology and so on, benchmarking the system at Case Western Reserve University.[55]

## 1.3. Changes in the Education and Evaluation Methods

New approaches in educational methods were attempted during the project by the professors who had experienced US medical education either directly or indirectly. Interdepartmental or multi-departmental joint conferences, which symbolized American style open discussion culture, were also introduced. Matthews, the overall advisor, wrote of such changes in the following.

54. Gu-choong Jeong, Pionners of Korean Medicine(I), Dong-bang publisher, 1985.

55. High walls between the departments remained in 1971 when they tried the integrated courses. Even now, the problems are still interfering with the development of the Seoul National University College of Medicine.

'In the past few years, joint or inter-departmental conferences, especially within the clinical sciences have drastically increased. Some of the basic science departments are hosting joint seminars with clinical departments. The concept of interdepartmental cooperation is rapidly being generalized in all fields of studies including, teaching, post-graduate training, research, and clinical practices.'[56]

Around the beginning of the 1960s, when the professors who went on the exchange professor program of this project returned to Korea, new educational methods such as conferences including clinico-pathology conference (CPC), seminars, and grand rounds became generalized, intriguing the interests of students and residents.

Changes in teaching methods were very fast. In the beginning of the project, teaching was done mainly by chalk and blackboard with some handouts or lecture notes. Professors usually brought their lecture notes or textbook and read them in front of the students, while students transcribed the lecture word for word in their note-books. However, slides with charts, graphs, and patients' photographs started to be incorporated into the lectures during the project period. At the same time, classroom lectures changed from professor-to-student one-way knowledge transfer into question-and-answer based interactive methods. Textbooks and terminology in the classroom also changed. Around the beginning of the project, professors started to use English medical terminology rather than German or Latin.

Since 1956, students started to purchase English textbooks. The Gray's Anatomy, which is still a very popular and essential textbook, was introduced to students at the time. Moreover, the medical library that usually closed at 5 p.m. started to open until late at night.

There were many changes in assessment methods, too. Before the project, the so-called 'blank-paper examination' in which professors wrote 2-3 questions on the blackboard and distributed blank papers for students to write essays on them was dominant. However, during the project period, more objective examinations such as those asking true or false questions, fill-in the blank questions, and multiple-choice questions came to be popular. These types of examinations were more convenient, reliable, and easy to mark. The typical test for anatomy laboratory, the so-called 'bell test' in which students should look into a small part of cadaver and write the name of it on paper within 30 seconds, was introduced at the time.

56. Matthews. Final Report of Observation and Recommendations Concerning the College of Medicine, Seoul National University, 1958, p21.

## 1.4. Developments in Facilities and Equipment

From the 9.54 million USD supported by the ICA, 6 million USD was allocated to equipment supply, building construction, and facilities repair. The corresponding fund from the Korean government which amounted to 7 million USD was also spent on equipment and facilities. A total 13 million USD was invested on facilities and equipment.

As a result of the project, the rooftop of the main building of the College of Medicine, animal chamber, thermostatic chamber, lecture halls, and hallways were repaired. On the 3rd floor rooftop of the basic medical science building, a new library opened with a faculty reference room and 150 seats for students. Main medical journals began to be supplied every month. The water, electricity, and heating facilities were supplemented. Buildings for the department of nursing and dormitory for nursing students were also completed.

In the affiliated hospital, a cafeteria and a laundry room were built. In addition to the renovation of water, heating, and electricity facilities, equipment with latest technology for internal medicine, surgery, pediatrics, and all other clinical departments were supplied to support teaching, research, and clinical practice activities of the professors who had been trained in the US or in SNU by advisors. By 1960, when the project was nearing its end, the College of Medicine and its affiliated hospital became a totally new institution.

## 1.5. Changes in the Policies and Institutions

### 1.5.1. Internship and Residency

The introduction of internships and residency was not a part of the original plan of the project. However, they were introduced in 1958 and 1959 under the influence of the project. This was a very important turning point in the history of medical education in Korea, because learning by practice through clerkship, internship, and residency programs was at the core of the American medical education system.

In the affiliated hospital, director Kim Dongik organized a committee for the internship and residency program in 1957. Dr. Choo Geunwon, who was in command of training and development in the hospital after returning from the US, worked mainly for the committee with the support of advisor Flink. Dr. Flink put in much effort to establish this policy. He made a proposal in his advisory reports regarding the management and training program of the internship and residency, and it was mostly accepted and applied to the training programs.

However, the internship program was distorted and turned into a source of cheap-labor at training hospitals before long. The internship program was first introduced in the US after World War I (1914-1918). During the world war period, medical knowledge expanded

greatly, and it became impossible for even the brightest students to study medicine in four years and perform independent clinical practice just after graduation. Therefore, 6 or 12-month internships were introduced to every training hospital, and were extended to 2 years. However, in the 1960s, when residency programs became popular, and clinical education in medical schools came to be more effective, the internship started to shrink and finally disappeared on July 1st 1975. The situation was totally different in Korea. Despite many criticisms about the problem from internships, it still remains and is scheduled to be abolished in 2015.

### 1.5.2. Establishment of the Department of Nursing

Nursing was one of the areas that experienced greatest change through the project. On December 15th, 1958, a 2,300m$^2$ main building for the department of nursing was completed, and in December of 1959, a 3,200m$^2$ dormitory for nursing students was built. The former Technical High School of Nursing became the Department of Nursing in the College of Medicine. This was a great moment in the history of nursing in Korea, bringing up the status of nurses one notch. This change was possible because the physicians that went on the exchange program began to recognize nursing as an independent professional field.

In nursing education too, the theory-focused education style from the colonial era was replaced by American methods of teaching. Demonstrations with patients and interactive lectures with multi-media were introduced and students were assigned at least two hours' laboratory work every week. Clinical training was directed by professional nurses in hospitals.

### 1.5.3. Establishment of the Graduate School of Public Health

On February 1954, the dean of the Graduate School of Public Health at University of Minnesota, Gaylord W. Anderson, visited Korea to investigate the feasibility of the project, a few months before the takeoff of the project. As a famous expert in the field of public health administration, he suggested that SNU establish a graduate school of public health. Other advisors also recommended that SNU establish the school in their reports.

In developing countries that were born after World War II, there were very high demands for epidemic management, environmental sanitation, and public health. The situation was the same for Korea, and the need for professionals in the fields of public health grew rapidly. However, conflict between government officials slowed the process. After a couple of years, in March 1959, they finally approved the establishment of the graduate school. It started off as a department under the College of Medicine, but on July 13th, 1960, it became an independent graduate school.

## 1.6. Changes in Student Culture

One of the effects of the SNU Cooperative Project was the American-oriented academic culture that permeated through the College of Medicine. Professors who completed their exchange program came back to Korea and diffused advanced American medicine in Korea. Moreover, the advisors presented the American culture to students through meetings, seminars, conferences, and the academic journal club. Gradually, a desire and curiosity for American culture started to grow among students.

From 1961, many graduates of the SNU College of Medicine started to apply for the United States Medical License Examination. In that year only, thirty-five graduates from a total of 120 graduates applied for the examination. It is said that Dr. Gault must have influenced the graduates to apply. Once the passing rate turned out to be quite high, more students applied in the following year. They showed a nearly 100% passing rate as a group.

In the United States, immigration from Asian countries was limited by the 'Immigration Quota System' that limited the number of immigrants according to their ethnicities. However, when the US entered the war in Vietnam in the middle of the 1960s, the demands for physicians increased in the US. The Immigration Act was amended in 1965, providing more opportunities for medical school graduates to immigrate to the US. Since 1965, the number of Asian immigrants increased greatly, until 1976, when US Congress adjusted the immigration law again to limit the influx of physicians to the US. The graduates from medical school outside the US had to take more difficult medical examinations and also were required to take an English verbal examination. Even the exchange scholars were regulated from staying behind in the US once their academic program was over.

The number of graduates from SNU College of Medicine who immigrated to the US started to increase every year from the batch of 1956 graduates. However, they may have flown to the US around 1959, because male students, who had to serve in the army for at least three years, were the absolute majority among the students of the College of Medicine at that time. 27 (22%) from the batch of 1956 graduates went to the US. From the batch of 1961 graduates, it was greatly increased to 57 (42%). From the batch of 1971 graduates, the percentage stayed very high (42-52%), but it started to decrease from the batch of 1972 graduates, who probably finished their military service around 1975-1976, when the Immigration Act was re-amended <Table 4-1>.

Table 4-1 | Number of Students Who Moved to US per Year

| Year | Graduates | Immigrated | % |
|---|---|---|---|
| 1956 | 122 | 27 | 22 |
| 1957 | 150 | 30 | 20 |
| 1958 | 139 | 50 | 35 |
| 1959 | 149 | 54 | 36 |
| 1960 | 142 | 54 | 38 |
| 1961 | 135 | 57 | 42 |
| 1962 | 123 | 56 | 45 |
| 1963 | 131 | 74 | 56 |
| 1964 | 128 | 74 | 58 |
| 1965 | 113 | 58 | 51 |
| 1966 | 117 | 51 | 44 |
| 1967 | 124 | 60 | 48 |
| 1968 | 100 | 52 | 52 |
| 1969 | 103 | 47 | 45 |
| 1970 | 81 | 39 | 48 |
| 1971 | 107 | 51 | 47 |

Source: Kim, Myungjin, A study on cooperation in the field of higher education in the 1950s, Seoul National University PhD Dissertation, 2009

## 1.7. Diffusion of Effects to other Medical Colleges

The transformation of the SNU College of Medicine through the SNU Cooperative Project was great, and the effect was quickly diffused to other medical colleges. One of the routes of diffusion was academic societies. At the time, whatever was happening at SNU College of Medicine was a big issue in other academic circles. Another route was textbooks which the professors who came back from US wrote and published. These textbooks were usually used in other medical colleges and eventually became nationally accepted textbooks. As for basic medicine, many of the professors at SNU went to lecture at other medical colleges in and out of Seoul. So the textbooks and student assessment methods used at SNU College of Medicine became the standard among Korean medical colleges.

In addition, the graduates from SNU College of Medicine enjoyed greater opportunities to be appointed as professors in most of the newly established medical colleges. The phenomenon continued until the late 20$^{th}$ century. The project proved its worthiness by

making SNU the center of professor production. Since it was difficult to find statistical data from the 1960s, more recent data was reviewed. As of May 2002, there were 41 medical colleges, and 7,867 medical professors in Korea. Other than the 787 professors came from other academic backgrounds, there were 7,280 professors with a medical background. Among the 7,280 professors, 1,709 professors, which amount to 23.5%, graduated from SNU College of Medicine. From 358 professors in SNU College of Medicine, other than the 18 from other backgrounds, 340 were graduates from SNU College of Medicine. To summarize, from the total 7,280 professors with a medical background, the percentage of graduates from SNU was 23.5%, and the percentage of those who belonged to SNU was 4.7%. Furthermore, the number of professors who graduated SNU College of Medicine took the greatest percentage at 13 medical colleges in this research.[57] These figures show the capacity of SNU College of Medicine as a professor production institution.

In March 1975, about 13 years after the project ended, the National Teacher Training Center for Health Personnel (NTTC) was established in SNU College of Medicine. It functioned as an official channel in spreading the changes of SNU College of Medicine to other medical colleges, training hospitals, nursing colleges, and healthcare professionals throughout the nation. In 1974, the World Health Organization (WHO) established a global-scale Teacher Training Center for Health Personnel in Chicago, Illinois, US. It was aimed to strengthen the capacity of health personnel by retraining, but due to poor accessibility from around the world, six Regional Teacher Training Centers for Health Personnel (RTTC) were established in Western Pacific, Africa, Europe, and other locations. As for the Western Pacific region, the WHO established RTTC at the University of New South Wales, located in Sydney, Australia. The WHO commissioned RTTC to support the NTTC in developing countries such as Korea and Philippines, which were in immediate need of strengthening the capacity of health personnel. The leaders of medical education in developing countries of Western Pacific, such as Korea, Japan, and Philippines, were sent to RTTC in Australia for training. Since its establishment in 1975, NTTC at SNU College of Medicine trained over 12,000 professors from medical colleges and nursing colleges. It contributed greatly in the medical education and the development of the medical sciences in Korea.

57. Yoonsung Lee, Jwa-Seop Shin, Faculties in Korean Medical Schools: Their Specialties and Inbreeding. Korean Journal of Medical Education 16(3), 269-279, 2004.

## 2. The Key Success Factors of the Project

### 2.1. Factors on the United States' Side

One of the most essential success factors of the project was the vast amount of experience that the US had in aiding other countries. The United States aided Europe with the activation of the Marshall Plan, after World War II. So they had already accumulated a lot of information and experiences in the field of development assistance. Besides the project in Korea, the US ran aid programs in 33 countries simultaneously. America's aid experiences accumulated in the ICA was influential in establishing and executing the SNU Cooperative Project.

Based on such experiences, the ICA chose cooperation among the universities as their main approach to assistance. They knew very well that even though governments had greater capabilities in allocating and managing budgets, educational institutions had much more abilities in technical fields like education, medicine, engineering, and agriculture. Furthermore, they also knew very well that if educational institutions were empowermed by government, the success rate of the project would be increased. Thanks to such a policy, SNU and UM were able to work as equal partners in the project. Although there was a fair amount of financial incentives given to UM for participating in the project, there is still no doubt that the project would have been unsuccessful without the passion of UM.

In addition, the US already had accumulated data on the circumstances of the healthcare and medical education in Korea from the period of US Army Military Government in Korea and the Korean War. The US also had the experience of establishing SNU even with strong resistance from academic societies. Hence, the selection and concentration on SNU as a beneficiary of the project that would lead the change of Korean society reflects the in-depth understanding of Korean culture by the US. Meanwhile, it also reflects the belief and responsibility it had towards pushing ahead with the Establishment Plan of SNU in the period of USAMGIK.

The US's interest in Korea was also an important factor. Because US needed a strong ally in northeast Asia during the Cold War period, the US had to support and rehabilitate Korea.

### 2.2. Factors on the Korean Side

The Korean professors of the SNU College of Medicine were considered highly by the officials from USAMGIK, even immediately after the liberation. The officials noted that 'with some assistance, they would lead the medical sciences with their strong will'. The lecturers and teaching assistants who overcame humiliation and discrimination during

the Japanese colonial era eventually became professors at SNU College of Medicine and benefited from the project.

Prior to the beginning of the project, Korean medical sciences began to eye American medical sciences. Ten Korean physicians went on to study abroad in US with the support of the Rockefeller Foundation right after the liberation in 1945. Plus, there were also those who went to study abroad on their own. By the end of 1945, there was a total 43 physicians who were studying abroad. The experience of military medicine during the Korean War also added to the already existing fascination for American medicine. The Koreans soon realized that American medicine was far more advanced than Japanese medicine.

The fact that there was a hospital affiliated with the College of Medicine under a unified system was also an important factor to consider. Unlike the US, in which there was a partnership between the medical schools and hospitals, the hospital connected to SNU College of Medicine was under the administration of the College of Medicine. Thus balanced development in both basic medicine and clinical medicine was possible.

The development of Korea after the project, too, should be noted as well. Not long after of the project, Korea entered its rapid economic growth called 'the miracle of Han River'. The College of Medicine at SNU and its affiliated hospital received concentrated support from the 3rd republic and benefited greatly from monopolistic development.

On top of that, the SNU College of Medicine was able to prolong the effects of the SNU Cooperative Project to further develop the medical sciences with the support of the Rockefeller Foundation's China Medical Board (CMB),[58] the World Health Organization (WHO) Western Pacific Regional Office, and Overseas Economic Cooperation Fund (OECF) of Japan. Though CMB's assistance was instigated in 1953, full-scale support was given from 1961, just after the SNU Cooperative Project was finished, and continued to 1975.[59] By June 1973, the budget funded by CMB to assist SNU College of Medicine was $2,315,350 USD.

Regardless of the effects the project might have had, without these follow up factors, the SNU College of Medicine as of today would not exist. Aside from this, the College of Medicine established the National Teaching Training Center for Health Personnel (NTTC) to train and to further develop medical education with the support of the World Health

58. China Medical Board of New York, Inc. was originally a department of Rockefeller Foundation in 1914. However, it became an independent institution in 1928. It mainly supported Peking Union Medical College until the college became public property in 1951. The CMB withdrew from China and began the projects in 9 other countries. Korea became one of its beneficiaries during this time.

59. Kwon, E-Hyuk, Aid of China Medical Board and Rehabilitation of University, Unpublished Recollections.

Organization in 1975. Utilizing the outcomes of the SNU Cooperative Project, CMB, and OECF, NTTC shared its medical education capacity to other medical schools, and played a key role in retraining the medical professionals of Korea.

Along with intense enthusiasm for education in Korean society and with high social popularity of the physician as a job, the SNU College of Medicine was able to enjoy a continuous influx of outstanding students. This is contrary to the cases found in developing countries that adopted socialist healthcare services.

## 2.3. Factors in Program

Concerning programs, the iterative cycle of design-management-evaluation should be looked at in detail. The ICA and UM produced reports every six months, reflecting the opinions of the advisors both in Korea and US as well as the advisory committee at UM to continuously improve the program.

The activities of the advisors should also be carefully reviewed. The advisors stayed in Korea from 3 months to 2 years, and gave professional consultation and essential in-depth guidance to maintain the continuity of the project. They heavily influenced the establishment of clinical clerkships, internships, residencies, the Department of Nursing, and the Graduate School of Public Health.

That the strategy behind selecting and concentrating on SNU as the main beneficiary was to choose a university that would assist in the development of national human resources should also be pointed out. SNU was the highest educational institution during the colonial era, and it had the potential to become an instructive institution that would disseminate professors to other universities.

The focus on enhancement of human resources and institutions was an important factor as well. The dispatch of advisors, facilities and equipment support were all designed to service the same purpose of enhancing human resources and institutions. The professors were at the heart of the university as they were the initiators of change in the institutions. They had the potential of making innovative developments in teaching and research. Even though the new and young professors were at the center of the program, deans and directors of hospitals were also given opportunities to receive training to develop insight. It was done so that they would not hinder the application of newly adopted knowledge that junior professors acquired from the training in the US. The program provided a structural and physical environment while removing all the obstacles that could possibly interfere with the transfer of learning by the young professors with enhanced capabilities.

Another success factor was the philosophical approach that respected the self-development of the beneficiary. The task of the advisors was not replacing Korean professors, but helping

them to do the work themselves. Unlike the National Medical Center where the staff from the Scandinavian countries carried out all the functions, the advisors at SNU demonstrated and hosted special training programs for Korean professors and students so that they could gain the ability to carry out the operations themselves. Rather than giving a man a fish, they taught him to how feed himself for a lifetime.

The prevention of brain drain was certainly a success factor. The Korean government did not allow the exchange professors to take their families with them. Considering that family is a basic social unit, especially in Korean culture, not being able to take their families gave them a reason to return to Korea. Also, the massive size of the exchange professor group functioned as shackles. The numbers of professors were around 46-67 at a time. As for the College of Medicine, there were about 7 to 30 people. They formed a small community and could keep the centripetal force continuously going.

The project considered the diffusing effects from the very beginning of the project. It was true that UM's primary role was to provide consultation to SNU, but the range of consultations expanded over to other universities and related industries. The effects of the project diffused to other institutions as well as the Korean government.

## 3. Implications

### 3.1. Human Resource Development-Centered Approach

The most significant characteristic of the SNU Cooperative Project was the program design that focused on the development of human resources which would serve as leaders of the beneficiary country in the near future. To be effective, the project provided material resources and infrastructure, and supported institutional change through overseas retraining and advisory service.

There were many different forms of assistance for developing countries since the end of World War II. However, assistance that was focused on material supply, such as buildings, equipment, tools, and drugs usually had the high chance of failure. Even today, it is very common to observe high-technology machines provided to developing countries being wasted because they do not have the human resources that can make use of them. Assistance that was focused on implantation of institution also had a high chance of failure. It is not uncommon to see implanted institutions that are not working properly and distorted or even disrupted because human resources don't have enough of an understanding of the new institution, or don't have the motivation to run it effective.

Unlike such instances, this project first developed the capacity for human resources and then supported them with new facilities and equipments in high priority for them to make use of. Regarding the institutional change, the project didn't build new systems or institutions directly, but facilitated the decision-making of the members of the recipient organization so that new systems could be established that were compatible with their own academic, political, and cultural environment.

Assistance of technology needs to be designed so that it is adaptable to the economic condition, social infrastructure, and human-resource capacity of recipient countries. Transplantation of institutions such as schools, management systems, laws and so on, also need to be designed compatibly to the organizational culture, tradition, and custom of recipient countries. Self-determinant human resources are at the center of this adaptability and sustainability of development. From the experience of the SNU Cooperative Project, we can say that for the adaptability and sustainability of a development project, human-resource development should be the main focus.

## 3.2. Beneficiary-Centered Approach

Although this project was called the 'Minnesota Project' in Korea, the official name of the project given by Americans was the 'SNU Cooperative Project'. The project had a beneficiary-centered name. In terms of naming a development program, it is very common to see that the project gets named after the donor.

As it was shown in the name, SNU was regarded as the subject of the project, and UM as the helper. Throughout the entire project period, SNU was considered as an equal partner to UM, and accordingly, both parties could develop people-to-people relationships between the scholars.

Furthermore, the roles of the advisors in the project were not replacing the Korean professors but helping or facilitating them to do on their own. Unlike the National Medical Center where the Scandinavian staff did all the work, the advisors at SNU hosted demonstrations and special training programs, and waited patiently until Korean professors were able to carry out the functions by themselves. In other words, instead of giving fish, they taught them how to catch fish. The National Medical Center established by the Scandinavians quickly lost its fame as soon as they left Korea, but the SNU College of Medicine and its affiliated hospital experienced continuous development until today. This difference is far more significant in assisting developing countries.

## 3.3. Selection and Concentration

Even with many objections, the project selected and concentrated on one single institution, SNU. The results of this decision were well shown through the professor exchange program. In 1961, as the project was reaching its end, there were 106 professors in the SNU College of Medicine. Other than the 3 who decided to stay in the US, 74 (70%) of the professors had the experience of studying abroad through the program. If only 20 or 30% of the professors had gone into the exchange program, things would have been very different from how things are now. Also, the numbers of the professors were essential for change in institutions and systems to occur, especially when it was set in the ways of the traditional Confucian and Japanese education system.

Since SNU had the potential to be selected and given support, it made such improvement. Without successful results, it would not have been justified. However, still, it is a proven lesson that selection and concentration in either institution or university is better than distributed investment that would have a questionable outcome.

## 3.4. In-Depth Understanding of the Partner Country

At the time of the project, the US already had a vast amount of information and data on Korea. The data gathering started even before the liberation of Korea to prepare for the collapse of Japanese imperialism, and through US military government periods, and the Korean War period.

Furthermore, over the period of six years and eight months, the US still dispatched 50 advisors to Korea. To the College of Medicine, 11 advisors were dispatched: 7 in medicine, 3 in nursing, and 1 in hospital administration. The chief advisor Schneider stayed in Korea throughout the entire project, and among the dispatched advisors, Low and Gault stayed for around two years in Korea. Even though they could not get used to the food and culture of Korea, they tried their best to understand the environment and the people to make the project successful. Furthermore, whenever they found a moment that was appropriate, they tried to stimulate changes without hurting the pride of Korean professors and students.

The importance of understanding the situation, culture, and customs of the beneficiary country and institution cannot be stressed enough. In such aspect, the SNU Cooperative Project was an exemplary model.

## 3.5. Continuous Evaluation and Development

The project made developments based on the iterative cycle of design-management-evaluation. The chief advisor produced reports every six months, and the overall advisors

and specialty advisors produced a total of 73 volumes of reports during the project. 12 of 73 were the reports made on the College of Medicine. The reports were shared and discussed among the Korean professors, Korean government, the ICA, and KAC at UM. Based on these reports, the related organizations adjusted their aims and made adjustments.

The Office of Economic Coordinators in Korea (OEC), which was an organization of the United Nations but also functioned as an agent of the ICA, and the ICA worked with Korean government in monitoring the overall plans and budgets, extension of the contract, and the safety laid legal issues of the advisors and exchange professors. The KAC located in the UM monitored the selection of the exchange professors and the curriculums for the program. The advisors at each department of UM continuously reported the grades and the behaviors of the exchanged professors to KAC. Based on their reports, the programs went through adjustments and developments. Such detailed reports and maintenance of the program are important aspects that must be considered in the success of the project.

## 3.6. Harmonization among Different Aid Programs

Even after the SNU Cooperative Project was over, the SNU College of Medicine was able to prolong the effects to further develop the medical sciences with the support of the CMB of Rockefeller Foundation, WHO Western Pacific Region, and OECF from Japan.

Though CMB's support for SNU College of Medicine was instigated in 1953, full-scaled support was given from 1961 to 1975, which was just after the project had finished. As it was mentioned earlier, in meeting minutes made by the board of directors at CMB in 1974, they recollected that they expanded the aid to SNU College of Medicine in 1961 to succeed to the SNU Cooperative Project that ended in 1961.

Regardless of the effects of the project, without these follow up factors, the SNU College of Medicine as of today would not have existed. Aside from this, the College of Medicine established NTTC to train and to further develop medical education with the support of WHO Western Pacific Regional Office in 1975.

Cooperation among various institutions is critical in development assistance. In terms of Korea, in continuation of the SNU Cooperative Project (1954-1961), CMB of the Rockefeller Foundation took charge and expanded its support (1961-1974). After that, WHO Western Pacific Regional Office's establishment and support of NTTC (1975-1989)[60] in Korea allowed for retraining of the medical professional nation-wide.

60. NTTC is still a functioning organization in SNU College of Medicine. WHO supported NTTC until 1989.

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