

アジア高度先端医療者育成支援事業報告

Report on the Asian Human Resource Development Project for Medical Professionals

東京都は、都市外交を推進するうえで必要な人材育成事業を継続するために、2015 年度より 10 年間にわたり、「東京都都市外交人材育成基金」を設置し、その適応のもと本事業は実施しました。

アジア諸国においては、大きなニーズがあるなかリハビリテーションに従事している専門家の数は非常に少ない状況であり、本事業は、1) アジア諸国の優秀な人材が、東京都で高度な医療技術を習得し、アジアでの医療技術の向上に貢献するとともに東京都との橋渡し役として活躍する、2) 東京都の公立大学である本学教員が現地で講演などを行い、医療水準向上の後押しをすることで、アジア諸国における医療分野での東京都の貢献度を向上する、3) アジアの留学とともに学ぶ本学学生の国際性、語学力向上が見込まれ、こうした学生が国際的なレベルで医療提供現場のリーダーとして活躍することが期待された。

In an effort to sustain initiatives for fostering human resources necessary for promoting intercity diplomacy, the Tokyo Metropolitan Government established the Tokyo Human Resources Fund for City Diplomacy for a 10-year term starting in fiscal 2015, and this Project has been implemented under the said fund.

Despite significant needs, Asian countries face severe shortages of specialists engaged in rehabilitation, in these circumstances, the Project was expected to achieve three objectives as described below:

- 1) Enable talented human resources from Asian countries to acquire advanced medical skills at Tokyo Metropolitan University (TMU) so that they can contribute to improving medical technology in Asia while acting as bridges between Tokyo and their respective countries.
- 2) Increase Tokyo's contribution to the medical field in Asia by encouraging the improvement of medical care standards through onsite lectures and other activities by TMU faculty members and
- 3) Anticipating improvement in the international perspective and linguistic ability of TMU's students studying with international students from Asia enables these students to play active roles as leaders in providing medical care on an international level.

➤ 本事業の概要と目的

1. 高度医療者育成

○アジア諸国の医療水準向上の後押しをするために医療技術者を本学大学院人間健康科学研究科の 3 学域(理学療法科学域、作業療法科学域、放射線科学域)で受け入れ、高度な先端医療者として育成するなど、アジアからの医療人材の高度な知識と技能の習熟や学修を支援する。

○理学療法科学域では、徒手理学療法を学修し、国際的な資格である Orthopaedic Manual Therapy (OMT)を習得する。作業療法科学域では、先端作業療法(福祉機器、小児・発達障がい、高齢期、予防など)を学修し、生活環境、福祉用具及び自助具の開発と適用に関する高度専門職を育成する。放射線科学域では、医学物理コース(放射線治療物理学分野)を拡充し、医学物理士認定試験を受験する。

○学位(修士)等の取得を通じて、高度先端医療者として育成し、帰国後に日本の高度技術を活用した医療実践や自国の医療者育成に寄与する。

2. 技術支援

○本学人間健康科学研究科の3学域(理学療法科学域、作業療法科学、放射線科学域)の教員を派遣し、アジア諸国での講義・技術指導等を開催する。

○アジア諸国の大学等(留学生の母校を中心)に教員を派遣し、現地の医療技術者教育の向上を図ることにより、アジア諸国の医療人材を育成し、各国の医療水準向上に寄与する。

➤ **Outline and Objectives of the Project**

1. Training of Advanced Medical Professionals

○ To encourage improving medical standards in Asia, the TMU's Graduate School of Human Health Sciences (three departments of Physical Therapy, Occupational Therapy, and Radiological Sciences) admits medical technicians and trains them as advanced medical professionals by helping them master and learn advanced knowledge and skills.

○ In the Physical Therapy Department, the medical technicians will learn manual physical therapy and acquire the international qualification of Orthopaedic Manual Therapy (OMT). In the Occupational Therapy Department, they will learn advanced occupational therapy (welfare devices, pediatric/developmental disabilities, aging, preventive techniques, etc.) to develop advanced professionals in developing and applying living environments, assistive devices, and self-help devices. The Medical Physics Course (Radiation Therapy Physics) will be expanded in the Radiological Sciences Department to enable students to take the medical physicist certification examination.

○ By obtaining master's degrees, etc., the students will be trained as advanced medical professionals to contribute to the practice of medicine and the development of medical professionals using Japanese advanced technology in their home countries after they return home.

2. Technical Support

○ Faculty members of TMU Graduate School of Human Health Sciences (Physical Therapy Department, Occupational Therapy Department, and Radiological Sciences Department) will be dispatched to hold lectures and give technical training, etc., in Asian countries.

○ Faculty members will be dispatched to Asian universities, etc. (primarily the alma maters of the international students) to improve the standard of education for local medical technicians. In doing so, they will contribute to training medical human resources and improving medical care standards in Asian countries.

➤ **本事業成果の概要**

本事業においては、アジア9か国(タイ、インドネシア、ベトナム、スリランカ、バングラデシュ、インド、中国、パキスタン)から優秀な人材を受け入れ、本学大学院での学修を通して高度な医療技術を習得し、帰国後は自国での医療技術の向上に貢献するとともに、東京都との橋渡し役として活躍し、様々な国際連携プログラムの構築に貢献することとなっている。また、本学教員が現地やオンラインでの講演・講義などを行い、医療水準向上を後押しし、アジア諸国における医療分野での東京都の貢献度を示すものとなった。これらは、本学への継続的な留学生の受け入れにも寄与している。また、本学で留学生が学ぶことや、修了生の連携や交流活動は本学学生・教員の国際力・語学力・グローバル資質の向上につながるものとなってきている。2020年初頭からの感染症の拡大は渡航を伴う移動の制限による留学生の入国制限、東京2020オリンピック・パラリンピックの無観客開催といった大きな影響を与えるものとなったが、

パンデミック期間中は IT 技術を活用した新たな教育スタイルや国際交流の創出の機会ともなり、それらは渡航制限が緩和されたのちにも継続されるものとなっている。本事業成果では当初の 2 つの目的、1. 高度医療者育成、2. 技術支援による医療と人材育成の向上に加えて、3. グローバルなキャンパス環境と人材の育成に分け、各活動成果状況を各目的の成果項目を対応させて報告する。

➤ Overview of Project Achievements

In the Project, outstanding human resources from nine Asian countries (Thailand, Indonesia, Vietnam, Sri Lanka, Bangladesh, India, China, and Pakistan) have been admitted to TMU Graduate School of Human Health Sciences to learn advanced medical skills. After returning home, graduates have contributed to improving medical skills in their home countries and helped establish various international cooperation programs, thereby acting as bridges between their countries and Tokyo. Moreover, by conducting seminars and lectures, both onsite in these countries and online, to help raise the standard of medical care, TMU faculty members have demonstrated Tokyo's level of commitment to the medical care field in Asia. This has also contributed to TMU's ongoing acceptance of international students. In addition, the activities of international students enrolled at TMU and the cooperation and exchange activities of graduates have enhanced the international perspective, linguistic ability, and global awareness of TMU students and faculty members. While the spread of COVID-19 from the beginning of 2020 had significant impacts, including the imposition of limits on the entry of international students due to travel restrictions and the holding of the Tokyo 2020 Olympics and Paralympics without spectators, it also became an opportunity to create new educational styles and international exchanges using IT technology. These have been maintained, even following the easing of travel restrictions. In reporting on the achievements of the Project, we will describe activities and achievements in relation to three objectives, namely the initial two goals of 1. training of advanced medical professionals and 2. improvement of medical care and human resource development through technical support, and the additional goal of: 3. global campus environment and human resources development.

➤ 成果項目

1 高度医療者育成

1-(1) アジア諸国の医療技術者を人間健康科学研究科(理学療法科学域・作業療法科学域・放射線科学域)で受け入れ、医療人材としての高度な知識と技能の習熟や学習を支援した。

1-(2) 学位(修士)等の取得を通じて、高度先端医療者として育成し、帰国後に日本の高度技術を活用した医療実践や自国の医療者育成に寄与している。

2 技術支援による医療と人材育成教育の向上

2-(1) 人間健康科学研究科の教員を派遣し、アジア諸国での講演会、講習会等を開催した。

2-(2) アジア諸国の大学(留学生の母校を中心に)に派遣・教員招へいし、各大学の医療者教育の向上を図ることにより、アジア諸国の医療人材を育成し各国の医療水準向上に寄与した。

3 グローバルなキャンパス環境と人材の育成

3-(1) 本学の学生・教職員が各専門分野での高い知識と技術をもって、様々な背景の中で、協調性・実行力・積極性のある、国をまたぐ国際社会で広く活躍する人材を育成し、そのための学修・就業機会を得る環境を整える。

3 -(2) 修了生が本学、東京都との連携のための中心的な役割を果たし、本学、東京都との国際連携を成熟させる。

➤ Achievements

1 Training of advanced medical professionals

1-(1) Medical technicians from Asian countries have been admitted into the Graduate School of Human Health Sciences (Physical Therapy Department, Occupational Therapy Department, and Radiological Sciences Department) and supported as medical professionals in learning and acquiring advanced knowledge and skills.

1-(2) By obtaining master's degrees, etc., the students have been trained as advanced medical professionals. Moreover, after returning home, they have contributed to the practice of medicine and the development of medical professionals using advanced Japanese technology in their home countries.

2. Improvement of medical care and human resource development based on technical support

2-(1) Faculty members of the Graduate School of Human Health Sciences have been dispatched to conduct seminars, lectures, etc., in Asian countries.

2-(2) By dispatching faculty members to Asian universities, etc. (primarily the alma maters of the international students) and inviting their faculty members, thereby improving the standard of education for medical professionals at those institutions, the Project has contributed to the training of medical professionals and improvement of medical care standards in Asian countries.

3. Global campus environment and human resources development

3-(1) Endowed with a high level of knowledge and skills in their respective fields, TMU students and faculty members train human resources who are highly cooperative, energetic, display initiative, and are capable of playing active roles on the international stage, transcending national borders, and the Project creates an environment that provides learning and employment opportunities for this purpose.

3-(2) Graduates play a significant role in building cooperation and maturing international partnerships with TMU and Tokyo.

作業療法科学域の成果 Results of project in department of occupational therapy

修士課程修了後、6 名が博士課程(内 4 名は本学)に進学しさらに高度の医療者・研究者となっている。うち 1 名は本学博士課程修了後、臨床経験を経て、本国の保健省においてリハビリテーション職の管理的役割を担い、自国のリハビリテーション領域の主導的管理地位につき、自国の発展に寄与している。また、3 名は本国と本学・東京都との連携、学生交流や国際活動の発展のための架け橋的役割を果たし、本学における国際交流、グローバル教育に協力的支援をしている。

臨床で活動してる修了生は、本学で習得した知識を本国の臨床支援や、臨床実習教育に反映している。また、在籍中の学生の修了後の進路も含め、修了生は本国の OT 教育で先進的立場での教育を行っている。

Six students who have completed master's courses have advanced to doctoral courses (including four students at TMU) to become more advanced medical professionals and researchers. After obtaining a doctorate at TMU and gaining clinical experience, one such person has assumed a managerial role in rehabilitation at the Ministry of Health in his home country. This person is now contributing to his country's national development by assuming a leading managerial position in the field of rehabilitation. Three other graduates play bridge-building roles in the development of collaboration, student exchange, and international activities between their countries, TMU, and the Tokyo Metropolitan Government. In doing so, they provide cooperative support for international exchange and global education at TMU.

アジア各国への医療と教育向上の成果

本事業では各学域で、大学・部局間協定による連携強化と、対面やオンラインによる講義・講習会の提供により、アジア各国への医療知識・技術の提供を行い、対象国における臨床における医療技術向上を後押しと医療専門職の教育レベル向上へ貢献した。

➤ Achievements in Healthcare and Educational Improvement in Asian Countries

The Project has succeeded in providing medical care knowledge and skills to Asian countries through strengthening collaboration based on agreements between universities and departments in each field and providing in-person and online lectures and seminars. In doing so, it has contributed to improving medical skills in clinical practice and raising the level of medical professional education in the target countries.

(作業療法科学域)

・受入学生 12 名全員が福祉用具プランナーコースを修了し、福祉用具・住環境に係る知識を得て、本国における臨床や教育に貢献している(例: 3D プリンター活用のセミナー開催や臨床応用の実践、作業療法教育の課程に福祉機器関連を含めるなど)。教員の養成は本国の養成教育の充実、養成校の増加に寄与し、今後の作業療法士増加の見込みを大きくするものであり、修了生の大半は本国での専門職養成に関わって、教育レベルの向上・促進に貢献している。

・インドネシア、バングラデシュでは OT 協会との連携も深め、臨床家への講義やワークショップを通して、日本の知識・技術移転を行っている。

・インドネシア大学の Diploma コースやバングラデシュ健康専門職インスティテュートの修士課程のカリキュラム作成や強化に貢献し、バングラデシュ健康専門職インスティテュートの修士課程は 2023 年から開設され、継続的に教育支援にかかわり、高度専門職養成に寄与している。"

(Department of occupational therapy)

- All 12 students accepted in the Project completed the Assistive Device Planner course, thereby acquiring knowledge related to assistive devices and living environment, and they now make contributions to clinical practice and education in their home countries (for example, staging seminars on utilization of 3D printers, practice of clinical applications, and inclusion of assistive device-related topics in occupation therapy education courses). Training teachers contributes to improving teacher education and increasing the number of training colleges in the target countries, which will significantly boost the number of occupational therapists in the future. Most of the graduates of the Project are involved in training professionals and contribute to improving and promoting the educational level in their home countries.
- In Indonesia and Bangladesh, the Project is also deepening collaboration with OT associations and transferring Japanese knowledge and skills through lectures and workshops for clinicians.
- Contributions have been made to creating and strengthening curriculums for a diploma course at the University of Indonesia and a master's course at Bangladesh Health Professions Institute. The master's course at Bangladesh Health Professions Institute, which was opened in 2023, is continuously involved in providing educational support and contributes to the training of highly skilled professionals.

➤ 本事業成果の現状と今後の展望

アジア高度先端医療者育成支援事業を通して、アジア各国との連携を深め、教員・学生国際交流の継続による教育グローバルの発展、本事業で構築されネットワークを基盤にした、国際連携や国際共同研究を可能とする。

➤ **Current Status of Program Achievement and Future Prospects**

By deepening cooperation with countries in Asia and furthering the globalization of education based on continued international exchanges between faculty members and students, the Asian Human Resource Development Project for Medical Professionals facilitates international collaboration and joint international research based on the networks that have been built through it.

◇ 修了生と本学・東京都との連携のためのネットワーク構築

◇ **Network Building for Cooperation between Graduates and TMU and Tokyo Metropolitan Government**

(作業療法科学域)

アジアネットワークミーティング

本事業修了生に加え、他の修了留学生、本学日本人修了生(臨床家含む)をメンバーとするネットワークを2023年度より立ち上げ運営してきた。アジア共通のテーマや課題を通して、作業療法や教育の発展に寄与する研究や情報共有を行うための定期ミーティングを行い、国際的なチームでの連携や研究・論文掲載を目標としている。修了後も継続的なつながりを持ち、本学を拠点とした国際的活動を行えるプラットフォーム構築を継続している。

(Department of occupational therapy)

In addition to Project graduates, a network composed of other graduated international students and Japanese

graduates of TMU (including clinicians) has been established and operated since 2023. Holding regular meetings to conduct research and share information that will contribute to the development of occupational therapy and education through themes and issues common to Asia is intended to facilitate collaboration, research, and publication of articles by international teams. It also allows students to maintain links after graduation, thereby building a platform for conducting international activities centered on TMU.

◇ アジア各国との交流のための基盤構築

アジア諸国の専門家（大学院生）が、東京都で2年間生活をしつつ学修をすることで、専門知識や技術を修得するだけでなく、各国の文化や生活習慣、関連する人々と交流機会を増やすことができた。これらは、キャンパス内の学生・教職員のアジア諸国への理解につながり、それらの積み重ねが、組織間の継続的な交流の基盤となってきた。また、各国の国内事情や教育環境を知ることにより、受け入れる留学生の学修支援環境の向上や、本学学生・教職員が国際理解を深める基礎ともなっている。

◇ **Building a Foundation for Exchanges with Asian Countries**

By allowing experts (postgraduate students) from Asian countries to live and study in Tokyo for two years, the Project has succeeded not only in helping them learn expertise and skills but also in increasing opportunities for exchange with cultures, customs, and people from various countries. Such opportunities have led to an understanding of Asian countries among students, faculty members, and staff on campus, and this accumulated know-how has served as a basis for ongoing inter-organizational exchanges. Moreover, learning about domestic conditions and the education environment in each country has laid a basis for improving the academic support environment for incoming international students and deepening the global understanding of TMU students and faculty members.

◇ 学内での国際交流の継続拡大とグローバル化と人材育成の継続推進

本事業を通して、各学域とも、教員・学生交流の継続、継続的な留学生の受け入れ、国際連携研究の実施を今後も行っていく環境が整ってきた。

今後も、これまで築いてきた MoU 提携校との関係を維持・発展させ、新たな学術交流や共同研究、学生交流プログラムを充実させることで、国際的な協力を深め、グローバルな成果を創出していく。学生に対しては、国際交流事業、留学生の受け入れを継続することにより、学内での国際教育を強化し、異文化体験を通じてグローバルな視点をもった人材の育成を行っていく、教員に対しては現在のアジア各国の教育機関との交流を基盤として教員の国際経験や多文化理解を深める取り組みを強化し、学域内のグローバルな活動を強化していくものとなる。

◇ **Ongoing Expansion of On-campus International Exchanges and Continued Promotion of Globalization and Human Resource Development**

Through the Project, an environment has been established whereby each department can conduct exchanges between faculty members and students, accept international students, and continue to implement international collaborative research on an ongoing basis into the future.

We will continue to maintain and develop the relationships we have established with MoU partner institutions and enhance new academic exchange, joint research, and student exchange programs to deepen international

cooperation and achieve global outputs. Concerning students by continuing international exchange programs and accepting international students, we will strengthen TMU's international education and cultivate human resources endowed with a worldwide perspective acquired through cross-cultural experiences. As for faculty members, we will build on our current exchanges with educational institutions in Asia to enhance their international experience and multicultural understanding and strengthen global activities in the academic arena.

◇ 本事業のレガシー

本事業は、アジアから人材を受け入れ、高度な医療技術を習得させるとともに、修了生が帰国後に自国の医療水準向上や国際連携に貢献する体制を構築した。その中で、理学療法科学域では「Asia Physiotherapist Network」を創設が重要な成果として挙げられる。このネットワークを基盤とした学術大会は、COVID-19の流行による渡航制限を契機にオンライン研究会から発展し、現在では対面での国際交流の場として定着している。さらに、このネットワークは本事業終了後、修了生を中心としたアジア圏の理学療法士のネットワークとして発展することが期待され、MOU提携校や新たなプロジェクトの推進にも寄与していくと考えられる。作業療法科学域では修了生を中心としたアジアネットワークの構築により、本学をハブとした国内・アジア各国の作業療法領域における国際交流と教育的発展の基盤を確立した。養成校の少ないアジアの作業療法領域において、本学修了生が自国の養成校での教員として活躍することは本学と東京都の教育的支援の貢献を今後に残すものとなる。さらに、これらの連携は国際共同研究やプロジェクトを推進する役割も果たしていくと考えられる。また、アジア各国の養成校との連携により学生交流プログラムと教員の定期的交流を通して、MoUをもとにしたアジア5か国オンラインプログラム(学部生)、学部生のアジア諸国の作業療法領域体験短期研修を中心としたプログラムを確立するものとなった。これらグローバル環境教育の整備は本学学生が今後国際的に活躍するためのステップとなるものである。放射線科学域においても同様に修了生が本学教員との交流を継続し、学術的な協力関係を維持している。こうした取り組みは東京都立大学の「アジアの高度先端医療者育成事業」のレガシーとして、教育・研究を継続する仕組みの確立に繋がっている。また、本事業を通じて培われた国際連携やグローバルな教育環境は、本学学生・教員の資質向上にも寄与しており、事業終了後もその成果が持続的に活用される基盤が構築されている。

◇ Project Legacy

This Project established a system for accepting human resources from Asia, teaching advanced medical care skills, and enabling graduates to help raise the standard of medical care in their countries and participate in international collaboration after they return home. In this respect, in the field of physical therapy, the establishment of the Asia Physiotherapist Network has been an important outcome. Having started as an online research group conducted in the midst of travel restrictions imposed by the COVID-19 pandemic, this network has developed into a forum for in-person international exchange. Moreover, following the completion of the Project, it is expected to develop into an Asian network of physical therapists centering on Project graduates and contribute to the promotion of MOU partner schools and new programs. In the field of occupational therapy sciences, by building an Asian network centered on Project graduates, the Project has laid the foundations for promoting international exchanges and occupational therapy education in Japan and other countries of Asia, with TMU acting as a hub. Since there are not many specialized colleges in the occupational therapy field in

Asia, by enabling Project graduates to teach in training colleges in their home countries, TMU and the Tokyo Metropolitan Government can make a lasting contribution to educational support in the region. Moreover, through student exchange programs and regular faculty member exchanges with training colleges in Asian countries, an online program (for undergraduate students) based on MOUs in five Asian countries and a short-term training program for undergraduates to experience occupational therapy in Asian countries have been established. Such developments in the global education environment will provide steps for TMU students to remain active on the international stage in the future. In the field of radiological sciences, project graduates also continue to conduct exchanges and maintain cooperative academic relations with TMU faculty members. As the legacy of TMU's Asian Human Resource Development Project for Medical Professionals, these initiatives are linked to the establishment of systems for continuing education and research. Moreover, the international collaboration and global educational environment fostered through the Project have contributed to improving the quality of TMU students and faculty members, and a foundation has been established to ensure that the achievements of the Project are sustained after its completion.

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