Nobuko Kayashima Miki Sugimura Kazuo Kuroda Yuto Kitamura *Editors*

Impacts of Study Abroad on Higher Education Development

Examining the Experiences of Faculty at Leading Universities in Southeast Asia





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Editors Nobuko Kayashima JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA) Tokyo, Japan

Kazuo Kuroda Graduate School of Asia-Pacific Studies Waseda University Tokyo, Japan

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA) Tokyo, Japan Miki Sugimura Faculty of Human Sciences Sophia University Tokyo, Japan

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA) Tokyo, Japan

Yuto Kitamura Graduate School of Education The University of Tokyo Tokyo, Japan

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA) Tokyo, Japan



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Foreword

The study abroad experiences of highly skilled individuals from developing countries have vastly contributed not only to individual knowledge, skills, career prospects and personal transformation, but also to the political, economic, cultural and academic development of their home countries. In the higher education sector, study abroad by university faculty has had a significant impact on the development of their home institutions. The rapid development of higher education in Southeast Asia since the 1980s has prompted demand for study abroad as there have been limited opportunities for teacher training and acquisition of advanced degrees domestically. The study abroad of highly skilled professionals in developing countries has thus played an important role in introducing new knowledge and skills from abroad, a role that remains fundamental to the provision of international scholarship programs through Official Development Assistance (ODA) by Japan and other developed nations.

In 2018, the JICA Ogata Sadako Research Institute for Peace and Development initiated a research project examining the impact of faculty study abroad experiences on the development of universities and the research and educational activities of faculty members. Focusing on the Southeast Asian context, higher education researchers from ASEAN and Japan formed a team to examine the trends and impacts of faculty study abroad and conducted a large-scale empirical study. While findings supported the existing knowledge of the positive impacts of faculty study abroad on university development, the study also revealed a significant shift in the meaning of study abroad in the Southeast Asian context. Though faculty study abroad has been characterized in the literature as a means of "promoting the transmission of knowledge and skills," this study identified an emerging trend toward faculty study abroad as a "pathway to international academic networks." Further, the research uncovered several trends in study abroad which mirror the development of higher education in Southeast Asia, including increases in domestic advanced degree acquisition and intra-ASEAN mobility. This volume presents these and other results of the joint research efforts of the ASEAN-Japan research team.

At the beginning of the twenty-first century, there were roughly two million international students worldwide. In 2020, this number ballooned to six million. Academic globalization is still expanding; developing countries have joined developed countries in cooperative and competitive efforts toward knowledge production and acquisition. While the role of international mobility programs is shifting, their importance will only grow. This volume speaks to the interest of those involved in higher education and study abroad, aiming to initiate discussions that will contribute to the future development of higher education in developing countries.

> Tanaka Akihiko President Japan International Cooperation Agency Tokyo, Japan

Preface

Since the turn of the century, the global population of international students has grown exponentially. Over the past two decades, their numbers have tripled from approximately two million to six million. Correspondingly, their presence in the higher education communities of developed countries has more than doubled from 4.0% to 8.3%. This surge in international student enrollment can be attributed to several factors: the relentless march of globalization since the late twentieth century has increased global mobility, economic development in developing countries has led to increased wealth and expanded higher education populations, and the internationalization of higher education has created a framework for promoting study abroad. In the context of development, the once-criticized phenomenon of study abroad from developing to developed countries, often perceived as a gateway to "brain drain," is now viewed positively as a conduit for information and technology transfer, or "brain circulation." The recognition of the developmental benefits of study abroad is underscored by its inclusion as one of the targets of the Sustainable Development Goals (SDG 4.b). Notably, global Official Development Assistance (ODA) funding for scholarships and student support costs has surged from \$3.2 billion in 2015 to \$4.4 billion in 2020, according to DAC statistics, reflecting an increased commitment to promoting overseas educational opportunities for developing countries. Japan is among the nations at the forefront, implementing extensive scholarship programs through its ODA funds.

While a general understanding of the impact of study abroad on the socioeconomic development of developing countries has been established, most studies to date have examined changes in the personal knowledge and attitudes of individuals who have studied abroad, along with effects on individual employment and income. Surprisingly, few studies have examined the impact of study abroad on the organizations and societies to which returnees belong. Despite the implementation of large-scale study abroad programs by governments and international organizations, measuring the organizational and societal effects of these programs has proven challenging. This may be due to the length of time it takes for the effects of study abroad on human resource development to manifest, coupled with the diverse work environments in which returnees find themselves. However, as the global population of international students continues to burgeon and study abroad programs expand, there is an imperative need to elucidate their societal significance. Against this backdrop, in 2018, under the auspices of the Japan International Cooperation Agency (JICA) Ogata Sadako Research Institute for Peace and Development, we assembled a research team of higher education scholars from Japan and Southeast Asia. Our goal was to examine the institutional impact of study abroad. The project focused on 10 leading universities in four Southeast Asian countries undergoing significant economic and academic development—Malaysia, Indonesia, Vietnam, and Cambodia. The research examined the study abroad experiences of faculty members, seeking to describe the impact of these experiences on their subsequent activities and on the overall development of the university.

This research project has three distinctive features. First, the analysis is grounded in an extensive dataset of faculty members at the target universities. A comprehensive questionnaire survey sent to all faculty members at the 10 target universities yielded responses from approximately 3,300 faculty members, achieving a commendable 25% response rate. Qualitative data was also collected through interviews with approximately 140 university faculty members and higher education experts. These extensive datasets were instrumental in identifying the trends in study abroad of faculty members at the top universities in the target countries and in empirically analyzing the impact of such study abroad experiences on the development of their universities.

Second, the study conducted comparable surveys in Malaysia, Indonesia, Vietnam, and Cambodia, countries that share regional similarities but exhibit different levels of development and historical backgrounds in higher education. This approach produced deeper analytical insights into the relationship between the level of development, context-specific factors, and trends and impacts of faculty study abroad in each country. The international composition of the research team, which included members from Japan and Southeast Asia, further enriched the study by bringing diverse perspectives and insights.

The third distinctive aspect of this research is its contextualization of trends and impacts of faculty engagement in study abroad within the larger framework of Southeast Asian university development. This framework includes such critical facets as the evolution of graduate education, the rapid advancement of internationalization efforts, and the progress made in the process of regionalization. The research not only revealed the impact of faculty members' study abroad experiences on their subsequent pedagogical and research endeavors, but also brought to the fore the transformative changes taking place within the higher education landscape in Southeast Asia. The findings contribute valuable perspectives for refining study abroad programs in the region and offer nuanced implications of considerable depth for the broader field of higher education.

The book is structured as follows; Chapter 1 introduces the overarching framework and outline of the study. Chapters 2 and 3 analyze the evolution and trends of faculty study abroad at major universities in the four focus countries. Chapters 4–13 provide country- and university-specific case studies of the impact of study abroad, with two to three chapters devoted to each of the four countries. In addition to quantitative data, rich qualitative data from interviews contribute to a compelling analysis. Finally, Chapter 14

compares the impact of study abroad in the four countries and synthesizes the case studies, discussing the relationship between university internationalization and faculty study abroad, the evolving role of study abroad, and its future opportunities and challenges.

This study was made possible with the cooperation of more than 3,000 faculty members at the target universities who willingly responded to an extensive questionnaire despite challenging circumstances during the pandemic. Additionally, we are grateful to the more than 100 university faculty members and higher education experts who generously contributed their valuable time for interviews. We express our sincere appreciation and seek to reciprocate the debt of gratitude to our numerous collaborators by disseminating the results of our research worldwide. We also acknowledge the support of the JICA Ogata Research Institute and the JICA overseas offices, which made this large-scale survey possible and provided useful advice. Special thanks are due to Juno Kawakami of Springer for supporting the publication of this book. Finally, we are deeply indebted to Naoko Hikami, Lauren Nakasato, and Rushia Moriya of the JICA Ogata Research Institute for their tireless efforts in supporting the editorial process, without which this book could not have been completed.

With the growth of higher education in developing countries and the internationalization of academic activities, the role of university faculty studying abroad has been shifting from a means of transferring knowledge and technology to that of a gateway to international networking. It is our hope that this book will contribute to a deeper understanding of the burgeoning higher education sector in Southeast Asia and provide valuable insights for improving study abroad programs, which are poised to expand further in the future.

Tokyo, Japan November 2023 Nobuko Kayashima

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Introduction: Development of Universities in Southeast Asia and the Impacts of Study Abroad

Nobuko Kayashima and Sarah R. Asada

Abstract

This chapter provides an overview of the Empirical Research Project on Impacts of Study Abroad in Developing Countries conducted by the Japan International Cooperation Agency (JICA) Ogata Sadako Research Institute for Peace and Development. The research aim was to investigate the impacts of university faculty members' study abroad experiences on their academic activities and the development of their universities. The mixed-method project used an extensive quantitative questionnaire and semistructured qualitative interviews with ten leading Southeast Asian universities in Malaysia, Indonesia, Vietnam, and Cambodia. The flagship comprehensive and STEM universities were selected based on their internationalization efforts and recent exponential qualitative and quantitative growth. The chapters in the volume present the findings through case studies and cross-country comparisons authored by the international research team based in Southeast Asia and Japan. This chapter presents

a theoretical framework based on an extensive literature review of higher education and national development in relation to Southeast Asian universities, the academic profession, internationalization, and study abroad. The original framework provides readers a nuanced understandings of the volume's chapters and how higher education systems in developing countries have the potential to promote national development through cultivating future citizens, increasing quality of higher education and research, and contributing to international cooperation through knowledge creation and sharing.

Keywords

Study abroad · University faculty · Academic mobility · Higher education · Internationalization · Southeast Asia

1.1 Introduction

1.1.1 Cultivating Faculty Through Study Abroad for Leading Universities

Since the 1950s, higher education development in developing countries has greatly expanded. Following the Second World War, the state of higher education in the newly independent Southeast Asian nations was extremely weak,

N. Kayashima (\boxtimes)

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan e-mail: kayashima.nobuko@gmail.com

S. R. Asada Faculty of International Studies, Kyoristu Womens's University, Tokyo, Japan

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yet through qualitative and quantitative improvements, the higher education systems in many of these countries have reached the "mass" stage of development. Gross enrollment rates in tertiary education in Malaysia, Indonesia, Vietnam and Cambodia, grew from several percent in the 1970s to 41% (2021), 36% (2018), 35% (2021), and 13% (2021), respectively (UNESCO 2023).

In his book, From Dependence to Autonomy: The Development of Asian Universities, Altbach (1989) frames the development of Asian universities as a process of introducing and indigenizing Western models. Further, in his 2004 publication Asian Universities: Historical Perspectives and Contemporary Challenges, Altbach highlights the need to embrace diversity in the region, considering the complex issues societies face in the 21st Century, including globalization and the massification of higher education. In the 15 years between these two publications, higher education in Malaysia, Indonesia and Vietnam has transitioned from an "elite" to a "mass" model as indigenization has progressed and internationalization strategies have been introduced to adapt to the growing global academic system. Looking back at the past half-century of higher education development in Southeast Asia, such developments have been characterized by the introduction and indigenization of foreign models, the unique development under each country's environment and the introduction of internationalization strategies in response to globalization.

Faculty members have a profound impact on university development. They are not only responsible for all three of the essential functions of the university; teaching, research and contributions to society; they are also central to university administration. It is no exaggeration to say that universities are the products of their faculty members. Until recently, however, graduate-level education in developing countries has met neither the scale nor quality necessary for faculty development, and many from top universities have sought degrees from universities abroad. While abroad, they gain the fundamental training necessary to become an academic professional as well as the experience of being an international student. After returning to their home countries, they ideally leverage this experience to make contributions to the development of their home universities.

Regarding the impact of such international experience, Altbach (1989) asserts that.

A very large number of Asian academics, particularly those at the highest ranks in the universities, were educated abroad, largely in the industrialized nations of the West. The impact of foreign training is often considerable, forging continuing links, networks of colleagues and orientations to scholarship. The precise impact of foreign study remains to be analyzed, but in the Asian case, because of the very large numbers of students involved and the continuing ties with metropolitan academic systems, foreign training is a particularly important factor (Altbach, 1989, p.13).

Furthermore, 14 years later, in his book *The Decline of the Guru*, which analyzed academic professionals in developing countries from a center/periphery perspective, Altbach states that.

A significant number of students who obtain their degrees abroad do not return home, and those who do return and join the academic profession bring the values and orientation of the country in which they studied back with them. While foreign study has received considerable attention, its impact on the academic profession has not been analyzed. In many developing countries, academics with foreign degrees constitute a significant part of the professoriate. More important, these returnees are clustered at the top of the profession and dominate the research-oriented universities (Altbach, 2003, p. 7).

While study abroad from developing to developed countries has triggered a brain-drain problem (Altbach, 1981, 2003; Bloom & Rosovsky, 2007), its role in the transfer of expertise and educational systems must also be recognized. As leading universities in developing countries established themselves based on the Western model and flourished through a process of indigenization, a crucial element of this process has been the growing contributions made by topclass faculty and the study abroad experience they bring to their profession.

This leads to the question of the specific potential impacts resulting from faculty members' study abroad experiences. For example, in terms of teaching activities, faculty members may improve curricula, create teaching materials, or develop new educational programs using the new knowledge and skills they have acquired during their study abroad experience. With regard to research activities, they may initiate new research projects or provide research guidance to students using the research methods they learned abroad. The international experience and personal connections fostered through study abroad will be of great value to the international teaching and research activities of faculty members upon their return to their home universities. In addition, the management practices they have seen, heard, and experienced at their host universities can be transferred to their home universities and laboratories (Nguyen, 2023; Moeliodihardjo, 2023; Sirat, 2023, Sok 2023).

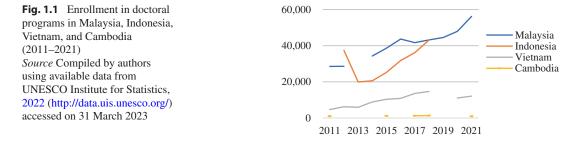
On the other hand, there are reported cases of returnees who have studied abroad in developed countries for relatively long periods and, on their return to their home countries, find it difficult to reintegrate into the academic community (Da Wan et al., 2022; Nguyen, 2023, Sok 2023). The experiences of university faculty who have studied abroad in developed countries can therefore have both positive and negative effects.

1.1.2 Diverse Study Abroad and Development Paths for Universities

There have been various developmental paths of modern higher education systems in Southeast Asian countries. In the case of Vietnam, early French influence gave way to Soviet influence, with US influence gaining traction from 1986. Immediately following independence, Indonesia retained the existing Dutch higher education system, but early efforts were made to reform and Indonesianize the system. In Cambodia, post-independence higher education was based on the French system, which was eventually replaced by the Soviet model. In recent years, however, there have been shifts toward the US model. Malaysia has a hybrid model based on the English and American systems (Lee, 2007). While these countries have all followed different developmental paths in establishing their higher education systems, the current trend under globalization is toward Americanization (Altbach, 2004).

The study abroad characteristics of the faculty members targeted in this study are as diverse as the paths of higher education development in each country. These will likely vary by home country and institution, and it is highly likely that different pathways will also be observed depending on factors such as the field of study and timing of study abroad. Just as different factors underlie these diverse patterns of study abroad, different experiences during study abroad are likely to have various impacts on the subsequent activities of academic staff. By examining the specific factors that define the faculty study abroad experience-such as home and destination countries, academic field, timing of study, and the environment-and by analyzing the conditions under which such experiences impact the development of the university in which they work, it becomes possible to gain greater clarity on the institutional impacts of study abroad by faculty members.

Since the turn of the century, two major trends have emerged in the study abroad of faculty members from Southeast Asian universities. First, as higher education development has progressed, graduate education has been established in many Southeast Asian countries, opening up the possibility of earning a graduate degree domestically. Figure 1.1 shows the number of students enrolled in doctoral programs in Malaysia, Indonesia, Vietnam, and Cambodia (2011–2021), indicating that doctoral programs are expanding rapidly in all countries except Cambodia. In these countries, an increasing number of students are expected to pursue advanced degrees in their home countries and become university faculty members. These new phenomena may imply a shift away from the South to North flow of faculty mobility described by Altbach in 1989 and 2003.



The second trend influencing the international mobility of faculty in Southeast Asian universities is the internationalization of higher education. With the rapid advancement of information and communication technologies, globalization has progressed across various facets of society, including higher education. Moreover, the growth in the international mobility of students and faculty members has led to the proliferation of cross-border educational programs and collaborative research projects between higher education institutions in various countries (Knight, 2007). Top universities are expected to nurture world-class human resources through international programs and contribute to addressing global issues through international research activities; therefore, the international competence of faculty members is now more crucial than ever (Enders, 2007). Under these circumstances, the study abroad experience of faculty members is now more directly related to their subsequent international teaching and research activities.

In summary, in some Southeast Asian countries where higher education is developing rapidly, a situation has emerged whereby university faculty members can be trained through graduate education in their own countries rather than through studying abroad. At the same time, studying abroad has come to mean more than simply introducing advanced academic knowledge from developed countries. It has also become a gateway to international academic networks. In this sense, the study abroad environment for university faculty members in Southeast Asian countries is changing, and so is the meaning of studying abroad.

1.1.3 From Individual Outcomes to Institutional Impacts visà-vis Faculty Study Abroad Experiences

Because an advanced degree is required to become a university faculty member, studying abroad for this purpose is often long-term. Although the number of privately funded international students from developing countries with growing economies is increasing, many university faculty members in developing countries still receive scholarships from their own governments, developed countries, international organizations, or NGOs to join a study abroad program. For study in Japan, for example, the Japanese Government Scholarship Program for Foreign Students was established in 1954 to promote international exchange with other countries and contribute to human resource development in developing countries. To date, more than 100,000 foreign students have received this scholarship. Many university faculty members from Southeast Asian countries who have studied in Japan have also benefited from this scholarship program.

These various scholarship programs are designed to not only enhance the careers and incomes of individuals who study abroad but also contribute to the economic, social, and academic development of the target countries as a whole. In addition to the personal impacts that studying abroad has on recipients, it is also intended to have a significant impact on the society and economy of the developing country. However, while many studies on study abroad have examined the impact of foreign study at the individual level, few studies have empirically clarified the impact on institutions and society beyond individuals. Given the enormous number of public scholarships that have been provided for the socioeconomic development of developing countries, it is important to clarify the institutional impacts of study abroad programs.

1.2 The Role of Study Abroad in Developing Leading Universities and Contributions to Society in ASEAN Countries

1.2.1 Inquiry into Leading Universities in ASEAN Countries

In 2018, the JICA Ogata Sadako Research Institute for Peace and Development launched the Empirical Research Project on Impacts of Study Abroad in Developing Countries—based on Study Abroad Experiences of Academic Professionals of Major Universities in ASEAN Countries. The research team was comprised of researchers from Japan, Malaysia, Indonesia, Vietnam, and Cambodia. The research questions, objectives and methodology that the research team employed in this research project are set out in this section.

Many faculty and faculty candidates at leading universities in Southeast Asia have earned advanced degrees from universities in developed countries, funded mainly by international aid or government support from their own countries. The common understanding is that top universities are essential for national growth and development, and that talented faculty play a crucial role in university development. This can then be used to justify the sustained public funding for large-scale and long-term study abroad programs for faculty members and candidates for faculty positions. In other words, study abroad for faculty and faculty candidates benefits both the individual and supports the development of the university, which in return offers considerable benefits to society. Thus, the central theme of this research is to uncover the concrete ways in which faculty abroad experience impacts university development.

The impacts of faculty members' study abroad span multiple aspects of university functions, including teaching, research, social contribution, and university administration. Furthermore, there is considerable variation in the characteristics of study abroad for faculty members, such as home and destination countries, academic field, the timing of study, degree level, and maintenance of personal networks. Needless to say, the environment, history and level of higher education development of each country examined in this research also vary widely. This research seeks to move beyond simply examining the positive impacts of faculty members' study abroad experiences and delves deeper into nuanced analysis and understandings of how and why different types of faculty study abroad experiences influence the various impacts on participants' career paths. Moreover, with Southeast Asian universities in the midst of fundamental changes driven by the internationalization of higher education, expansion of graduate school programs and higher education massification, the evolving higher education landscapes are undoubtedly influencing how the impacts of faculty study abroad manifest. Thus, this research carefully investigates and analyzes the concrete impacts, both positive and negative, of diverse faculty experiences of studying abroad and how broader trends in higher education have affected these experiences and impacts.

Our two research questions are as follows.

- (A) How has study abroad by faculty members of leading universities in Southeast Asia evolved over the course of university development? What factors have contributed to this change?
- (B) What are the individual and institutional impacts of study abroad by faculty members from leading universities in Southeast Asia? What factors influence these impacts?

As the rapid development of information technology continues to drive the transition to a knowledge-based society, it is increasingly important to acquire knowledge and skills from abroad and to promote the international mobility of human resources through study abroad programs. The Sustainable Development Goals (SDGs), an international development agenda spearheaded by the member states of the United Nations, also call for increasing the number of scholarships to allow more people from developing countries to study abroad in developed countries (SDG 4.b). The ultimate goal of this research, which examines the individual and institutional impacts of faculty members' study abroad experiences at leading Southeast Asian universities, is to generate useful evidencebased implications from the findings and envision how study abroad contributes to the future development of higher education institutions and societies, thereby providing insights for study abroad programs and stakeholders seeking to improve and innovate program design and implementation to align with future agendas.

1.2.2 Research Design

The research team selected the following focal countries and universities to analyze faculty members' study abroad experiences and their impacts. Southeast Asia is one of the regions that has achieved the most remarkable economic growth worldwide from the time of independence up to the present. It has also grown away from having a very weak higher education system to having leading universities that are internationally recognized. Given the diversity of economic growth and higher education development paths, the research team selected four countries from Southeast Asia: Malaysia, Indonesia, Vietnam, and Cambodia (Table 1.1).

Across these four countries, the research team selected ten top universities as representative higher education institutions. Two universitiesone comprehensive university and one university in STEM-were selected for each of Malaysia, Indonesia, and Vietnam. For Cambodia, where the size of universities is small, four universities were chosen: one comprehensive university, one university of social sciences, and two universities in STEM. The reason for selecting two types of universities-one comprehensive and one in STEM-is to generate findings specific to the field of science and technology, where the globalization of academic activities is even more pronounced. The selected target universities are listed in Table 1.2.

The research team conducted questionnaire surveys of all faculty members at the ten target universities between 2019 and 2022. The questionnaires primarily asked those who had studied abroad for master's or doctoral degrees about the impacts of the study abroad experience on their subsequent teaching, research, societal

Table 1.1 Economic and academic features of four focal countries

	Malaysia	Indonesia	Vietnam	Cambodia
a. DGP/capita (2021)		\$ 4,332	\$ 3,756	\$ 1,625
b. Gross enrollment rate of tertiary education (2018 or 2019)	43.1%	36.3%	28.6%	14.7%
c. Enrollment in bachelor's programs (2018)	685,571	6,659,889	1,707,025	168,242
d. Enrollment in master's programs (2018)	98,052	355,463	106,567	22,022
e. Enrollment in doctoral programs (2018)	43,188	43,126	14,686	1,349
f. Year of independence	1963	1945	1945	1953
g. Former colonial administration	UK	Netherlands	France	France

Source Compiled by authors using available data from World Bank Open Data (https://databank.worldbank.org/) accessed on 31 March 2023

Country	University	Major academic fields	Enrollment in UG programs	Enrollment in PG programs	Number of lecturers
Malaysia	Universiti Sains Malaysia (USM)	All Fields	22,162	12,857	2,003
	Universiti Teknologi Malaysia (UTM)	STEM	16,088	9,396	1,628
Indonesia	Universitas Gadjah Mada (UGM)	All Fields	27,072	10,828	3,608
	Institut Teknologi Bandung (ITB)	STEM	23	23,848	
Vietnam	Vietnam National University, Hanoi (VNU)	All Fields	51,012	6,773	2,634
	Hanoi University of Science and Technology (HUST)	STEM	32,000	1,500	1,200
Cambodia	Royal University of Phnom Penh (RUPP)	All Fields	-	-	535
	Institute of Technology of Cambo- dia (ITC)	STEM	_	-	152
	Royal University of Agriculture (RUA)	STEM	-	-	132
	Royal University of Law and Eco- nomics (RULE)	Social Sciences	_	-	56

Table 1.2 Target universities of the survey

Data Source Nguyen, 2023, Moeliodihardjo, 2023, Sirat, 2023, Sok 2023

contributions, and university administration activities. In addition, faculty members without degree seeking study abroad experience were asked about the impacts of their domestic master's or doctoral study experience on their subsequent activities.

The global outbreak of the COVID-19 pandemic shortly after commencing survey distribution presented challenges in data collection. The situation resulted in the closure of the target universities' campuses and the switch to telecommuting by faculty members. However, valid responses were eventually obtained from more than 3,000 faculty members at the ten universities. The research team also collected qualitative data on the impacts of study abroad by conducting semi-structured interviews with faculty members and higher education officials in the focal countries from 2020 to 2023. The quantitative and qualitative data collected were used for comparative analysis across the four countries (see Chaps. 2 and 14) and for country- and university-specific case studies (see Chaps. 5, 6, 8, 9, 11, and 13) to clarify the research questions of this project.

Since the purpose of this study is to analyze the impacts of faculty members' study abroad experiences on their subsequent activities as faculty members and on the development of their universities, their study abroad experiences at the master's or doctoral level are the focus of the analysis. Undergraduate and short-term study abroad experiences are not included within the scope of the study. Study abroad experiences of non-academic staff are also excluded.

1.2.3 Theorizing the National Development-Academic Professional Nexus

This volume examines how the study abroad experience of academic professionals from select ASEAN countries contributes to their country's national development by advancing the trajectories of their academic careers. Figure 1.2 presents a model conceptualizing the national development-academic profession nexus. The decision to study abroad, the study abroad experience, and its personal outcomes

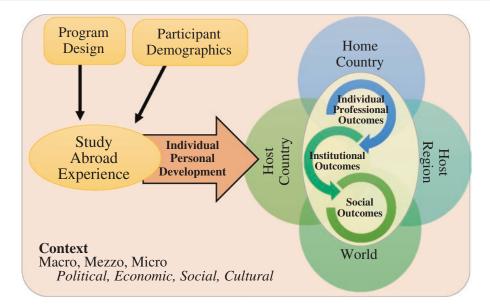


Fig. 1.2 Theoretical framework for study abroad outcomes in the national development-academic profession nexus *Source* Adapted from Asada, 2020. Copyright 2020 from *50 years of US study abroad students: Japan as the gateway to Asia and beyond* by Sarah R. Asada. Reproduced by permission of Taylor and Francis Group, LLC, a division of Informa plc

are influenced by participant demographics and explanatory variables. For example, participants' backgrounds and personal circumstances can influence the outcomes. Meanwhile, the elements of the study abroad design, such as the duration, language used, the context of academic work, living arrangements, and opportunities for cultural interaction and learning, can also influence the outcomes of study abroad experiences (Engle and Engle, 2003).

The theoretical model acknowledges how study abroad participants have agency in interpreting the meaning of their international experience and subsequent engagement with the knowledge, skills, and values acquired abroad in their home country. In particular, the study abroad experience spurs subsequent individual personal development where individuals experience transformation at the individual level in how they understand and participant in their lifepaths. For example, study abroad participants often report increased intercultural competencies, improved language skills, interest in world affairs, increased awareness and connection with the host country, alternative understandings of their own culture and values, and a better understanding of their role within the world. Individual personal development resulting from the study abroad experience has the potential to influence their professional and personal lifepaths for more than fifty years (Asada, 2020).

The empirical studies presented throughout this volume focus on how participant outcomes of the study abroad experience manifest at two levels: individual professional outcomes and institutional outcomes. For individual professional outcomes, the study seeks to understand how the study abroad experience may or may not contribute to their subsequent academic profession experiences in teaching, research, social contribution, and university administration. For institutional outcomes, the individual professional outcomes are examined in relation to the participant's higher education institution to show insights into how their individual activities as academic professionals contribute to their institutions, such as through the improvement of education, internationalization, human resource development, and management.

The two-tiered outcomes of study abroad experiences at the individual and institutional levels are viewed through a transnational lens in relation to the home country, study abroad destination's host country and region, and the world. This transnational approach allows for an examination of the role of the study abroad experience in contributing to subsequent engagement between the home country with the host country and the wider world in terms of institutional outcomes for internationalization. In addition, historical markers related to macro, mezzo, and micro levels can further illuminate how contextual factors push and pull study abroad outcomes over time and space. In this volume, the macro-level is defined as pertaining to society, the mezzo-level as relating to national higher education systems, and the micro-level to the individual higher education institution of the participant.

1.3 Southeast Asian Higher Education and the Academic Profession in National Development

1.3.1 The University as a Space for Nation Building

While the nations of Southeast Asia are not a monolith, the region shares collective experiences of rebuilding after the turmoil of wars and colonization. With newfound freedom, Southeast Asian nations promoted national development while overcoming the political, social, and economic struggles of the twentieth century. In conflict-affected societies, higher education is one source of peacebuilding and can provide a catalyst for effective and sustainable post-war recovery through stabilization and securitization, reconstruction, state-building and peacebuilding (Milton & Barakat, 2016). Universities are a space for knowledge production and play important roles at individual, economic, political, and societal levels. The legacy of colonialism and the global diffusion of western ideals and models of higher education has created difficulties as non-Western nations seek to reestablish their own higher education systems (Yang, 2013). In the post-colonial era, the adaption of Western higher education models is both voluntary and involuntary. In Cambodia and postcolonial Global South societies, Sen (2020) argues that national development policies and practices should reflect relevant localized approaches for their own respective communities.

In Southeast Asia, the reality of the higher education systems and their policies remains highly nuanced by four factors: diversification, massification, marketization, and internationalization. In a globalized world, these factors are interconnected and become a catalyst for change in higher education worldwide and within Southeast Asia. During the Asian Economic Miracle from 1965 to 1990, eight Asian countries, including Singapore, Thailand, Malaysia, and Indonesia, experienced dramatic economic growth while reducing poverty and income inequality (Campos & Root, 2001). The backbone of the Asian Economic Miracle stems from the education sector's role in providing knowledge and skills for emerging industries (Altbach and Umakoshi 2004). In particular, Asian higher education moved from elite to mass education because of the capacity of universities to produce the highly skilled workforce needed for economic development (Yonezawa et al., 2014).

In the 1970s, enrollment in tertiary education in the four countries presented in this book— Cambodia, Indonesia, Malaysia, and Vietnam hovered around 1 to 2% (UNESCO Institute for Statistics, 2022). Figure 1.3 illustrates the shifts in tertiary enrollment rates by percentage from 1980 to 2021. There are two main trends observable in the data. First, the percentage rose steadily from single digits in the 1980s to about 10 to 25% at the turn of the twenty-first century for Indonesia, Malaysia, and Vietnam. Then, from the 2000s until most recently, enrollment rates continued to increase exponentially to around 35% for Indonesia and Vietnam and almost 45% for Malaysia. The push towards massification

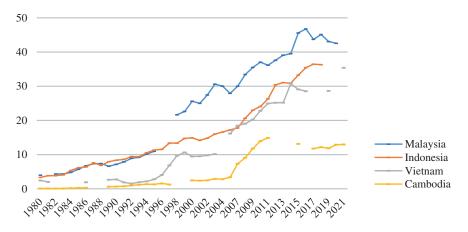


Fig. 1.3 Tertiary enrollment by percentage of gross population (1980–2021) *Source* Compiled by authors from available data from UNESCO Institute for Statistics, 2022 (http://data.uis.unesco.org/) accessed on 31 March 2023

is also seen in national policies. For example, Malaysia's National Higher Education Strategic Plan Beyond 2020 stated a 50% participation rate goal by 2020 (UNESCO, 2015). Meanwhile, the prolonged civil wars of the 1970s and total elimination of all formal education institutions under the Khmer Rouge Regime from 1975 to 1979 has necessitated a long recovery process for Cambodia to reestablish its decimated higher education system (Ek & Muth, 2022; Sol, 2021). Since 2009, Cambodia's tertiary enrolment rates drifted from about 11.8% in 2009 to a record high of 14.9% in 2011, with the most recent data in 2021 indicating enrolments of about 13%.

The shift towards massification of higher education is interconnected with the diversification of the higher education landscape of Southeast Asia. In the diversification process, countries have witnessed the emergence of new sectors and types of higher education institutions that provide various kinds of advanced training (Teixeira et al., 2022). For instance, Indonesia expanded its higher education system to become one of the largest in the world. This was done through the creation of a large-scale private section with the goals to increase access, enhance quality, and develop several world-class universities (Welch & Aminudin Aziz, 2022). In Malaysia, the 1990s witnessed the expansion of the private sector after endorsement by the national government,

and the early twenty-first century has seen the introduction of new community colleges and publicly funded polytechnics mandated by the national government (Li, 2016).

In Vietnam, the Doi Moi period spurred the expansion of private higher education, in turn increasing access (Chau, 2022). In addition, the General Agreement on Trade in Services (GATS) prompted the emergence of cross-border providers throughout the region (Ratanawijitrasin, 2015). Meanwhile, in Cambodia, development partners and Official Development Assistance (ODA) have played a role in capacity building for its higher education system (Kaewkumkong, 2020; Li et al., 2023). Overall, the diversification of institution types has increased opportunities for access and various institutional roles to meet societal, economic, and individual needs leading to increases in higher education participation rates.

The marketization of higher education has spurred Asian nations and higher education institutions alike to implement policies to compete in global higher education and participate in the world knowledge system (Altbach and Balán 2007). Higher education has been transformed by globalization through the global university rankings, homogenized global rhetoric regarding higher education aims and goals, and benchmarking led by international organizations, such as the Organization for Economic Cooperation and Development (OECD) and the World Bank (Cai, 2010). In Southeast Asia, there are three main factors contributing to a market-oriented higher education section: the growth of private for-profit providers, the increase in the autonomy of public higher education institutions combined with new responsibilities of self-financing, and the competitive higher education landscape with an increasing number of institutions, resulting in academic institutions vying for students, academic staff, and resources (Ratanawijitrasin, 2015).

Internationalization of higher education is taking place against the backdrop of the changing global higher education landscape that permeates national and institutional policies throughout Southeast Asia. For example, the introduction of cross-border providers in the diversification of higher education previously discussed is one form of internationalization. Moreover, the race for global university rankings and global governance through the benchmarking of international organizations further contributes to internationalization. Since 1999, the number of outbound students from Asia has more than tripled, while the number of inbound students has increased nearly threefold (Kuroda et al., 2018). International student mobility within Asia, usually facilitated by bilateral institutional agreements, is now further strengthened by strategic multilateral alliances through the proliferation of consortia and university networks (Asada, 2023). In Southeast Asia, international student and scholarly mobility, international program and provider mobility, and academic collaboration are the current prevailing examples of internationalization.

Southeast Asian higher education has undoubtedly undergone significant changes since the 1960s, with increased enrollment rates, the introduction of various institution types, the competition for students and faculty, and the rise of internationalization. The legacy of colonialism and global diffusion of western ideals and models of higher education remain against the backdrop of individual higher education systems with national distinctiveness. Indeed, current higher education policies and reforms related to standards, excellence, and quality often come

from developed countries and international organizations. This reopens troubling discourses on academic hegemony and westernization under the veil of national and institutional aspirations to become global (Zajda, 2022). Despite the global landscape of higher education's pressure toward conformity, Southeast Asia remains committed to a regional identity and views higher education as a pillar to further develop and nurture its own region. In 2015, the ASEAN Community Vision 2025 prompted further shifts in the region's higher education towards regional integration (Ratanawijitrasin, 2015). In 2022, the launch of the Roadmap on the ASEAN Higher Education Space 2025 further promotes improved access, people-to-people connectivity, and the internationalization of the region's higher education systems (ASEAN, 2022).

1.3.2 Centrality of the Academic Profession in Higher Education and Society

At the core of the higher education sector's broad purpose for nations and societies is the academic profession's nexus of teaching, research, university administration and societal contributions. Academic professionals may be frequently perceived as working in academic silos. However, there is considerable interaction and collaboration between individuals, institutions, disciplines, and countries (Wray & Kinman, 2022). The contributions of the academic profession to national development are multidimensional. The teaching and learning process leads to economic outcomes for individual students and society according to the human capital theory in economics (Mincer, 1975) and functionalist theory in sociology (Durkheim, 1956). The knowledge and skills students gain from academic professionals in the classroom are later used in the workforce, leading to an increase in financial potential for individuals and economic growth and productivity for their societies.

Conversely, sociological discourse also acknowledges the institutionalization of higher education due to its large scale, resulting in the contemporary world relying on higher education as a social institution to construct and legitimize education and research as society's source of knowledge (Baker, 2014; Meyer et al., 2007). Indeed, the impact of higher education on national development can be centered upon its knowledge production and described as generative intrinsic, a term coined by McCowan (2018) that suggests higher education's impact is "organic to their intrinsically valuable practice" (p. 292). In other words, the commitment to understanding ourselves as humans, societies, and the world and the resulting knowledge creation and sharing comprises the core mission of the academic profession in higher education in teaching, research, university administration and societal contributions.

As Asian higher education systems evolve to meet global, regional, and local trends, major shifts are also occurring in the academic profession and changing the scope of academic workloads. Due to massification and diversification, a lack of capacity reveals the fragility of systems inadequately equipped to teach increasingly larger student populations with possible repercussions for teaching quality and effectiveness (Jiang et al., 2018). Marketization further exerts pressure for increasingly stringent teaching policies and processes, escalating pressure on research agendas to produce and publish to a global audience, and deepening collaboration with industry through income generation, entrepreneurial activities, and knowledge transfer (e.g., Lynch, 2017; Mok, 2015; Nixon et al., 2018). Internationalization, further perpetuated by the globalized higher education landscape, emphasizes the role the academic profession as prominent intermediators in national and institutional aspirations toward status as worldclass universities. University rankings often place great importance on academic professionals' research agendas, such as international research collaborations and publications in international academic publications. In short, the accumulation of higher education trends has resulted in unsustainable workloads, with academic professionals often balancing contending

forces of global ambitions with local needs and limitations.

In Southeast Asia, professional development of knowledge and skills for the academic profession is important for improving national higher education systems while paving the way for common transnational arenas, available regionally and globally, for mutual learning and collaboration (Phuong et al., 2015). In national development, science, technology, engineering, and mathematics disciplines are dominant forces (Freeman et al. 2019). However, developing countries often lack the financial capacity required to provide the substantial resources needed by the academic profession for STEMrelated research and teaching (Yonezawa et al., 2016). Meanwhile, social sciences and humanities disciplines, once understood as rooted in their respective countries, may require lower investment but still abide by national pushes for global aspirations like STEM-related disciplines (Chou & Chan, 2017).

Chou and Chan (2017) further explain that non-English-speaking developing countries prioritize national development by increasing global economic competitiveness vis-à-vis placing heavy emphasis on higher education's knowledge production and sharing to gain international prestige. This can result in a phenomena known as the "Social Science Citation Index (SSCI) Syndrome," which permeates the academic profession, forcing academics to publish in internationally indexed academic publications or perish on the sidelines. The SSCI Syndrome's focus on publishing in international publications perpetuates the academic hegemony of the English language and Western knowledge ideals by shaping the academic profession's research agendas in developing countries, thereby overlooking research and teaching relevant to national needs and neglecting local publications.

While research indeed provides legitimacy of knowledge, the other role of the academic profession in knowledge production and sharing is in the teaching and learning process for their students. In the classroom, the academic profession transfers knowledge and skills of their discipline to their students. For national development, this is crucial for cultivating the future workforce and, in turn, contributing to the industrialization and modernization of a country (Pham, 2021). Education serves three roles in societies: subjectification, socialization, and qualification (Biesta, 2020). In subjectification, students are nurtured as individuals, recognizing their unique potential and developing independence. With socialization, students, through academic studies, develop social values, behaviors and attitudes to operate in the larger society. Lastly, qualification refers to how acquired subject-matter knowledge, skills, and values enable students to be active in society. Accordingly, the knowledge, skills, and values imparted by the academic profession to their students through teaching have multifaceted influences on national development beyond economic productivity.

The higher education learning experience nurtures the human aspect and fosters individuals with the capacity to be active citizens and members of society. However, the current paradigm of marketization and the SSCI Syndrome focus on improving research skills and knowledge production while neglecting the realm of teaching competencies, resulting in a mismatch of policy and practice to balance the research and teaching activities of academic professionals (Ros & Oleksiyenko, 2018).

1.3.3 Beyond National Borders Through Internationalization and Study Abroad

Internationalization is omnipresent in higher education systems today. However, it is not a monolith. Internationalization has been a part of higher education in various forms worldwide throughout history. Internationalization is widely conceptualized as the integration of international, intercultural, and/or global dimensions into higher education (Knight, 2004). Higher education acts as a platform for internationalization through formal and informal teaching, learning, research, and innovation across individuals, nations, societies, and cultures (Asada, 2022). It is often categorized as a binary with two pillars: at-home and abroad. The abroad pillar is the mobility of people, programs, providers, and projects (Knight, 2008). For example, international student mobility is one traditional type of internationalization abroad. The creation of dual degrees, joint degrees, branch campuses, and international universities are examples of new trends in the abroad pillar of internationalization. Internationalization at home is defined by Boleen and Jones (2015) as "the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments" (p. 69). At-home, by nature, provides opportunities for all higher education students and academic staff to access an internationalized higher education experience. Richard J. Arndt, former president of the Fulbright Association, explains that it takes at least 10-20 years for the social and economic outcomes of international higher education experiences to manifest (Feigenbaum, 2001). This highlights the need to examine internationalization influences on a long-term basis to understand its social outcomes.

How internationalization's global trends manifest in various countries reflects the local context and the ways that national factors mediate with global pressures (Hong, 2020). In the last fifty years, internationalization has transitioned from being a marginal activity to being essential for developing higher education (Khomyakov et al., 2020). Many developing countries use internationalization to promote modernization and excellence in their higher education systems with long-term development in mind. Using World System's Theory (Wallerstein, 2004), the centers of knowledge are often situated in leading research-oriented universities located in English and other dominant language-speaking countries, while the knowledge centers of higher education in developing countries remain at the periphery (Altbach, 2003). Even though developing countries may turn to higher education policies for international research collaboration, it is often difficult for them to achieve center status in internationalization due to the immense amount of human resources and financial capital required (Altbach & Salmi, 2011). However, this center-periphery conceptualization is shortsighted: there is growing agency in developing countries in the periphery as they legitimize their knowledge through internationalization and collaboration with countries outside of the center.

While in the past internationalization was dominated by a small group of students and academics participating in physical mobility across national borders, internationalization is entering a new phase that emphasizes the importance of having an international focus for all higher education staff and students. This is being achieved through strengthening internationalization at home to expand access to all members of higher education (de Wit & Altbach, 2021). In terms of national development, it is essential to highlight the trend towards internationalization, particularly regarding the current globalized era and the 4th Industrial Revolution. Due to globalization and regionalization, the interdependence of Asian economies requires a workforce ready to operate in diverse transnational sociocultural terrains (Asada, 2023). Moreover, the 4th Industrial Revolution is generating a wide range of new cross-functional work, where additional technical, social, and analytic skills will be required (World Economic Forum 2016). The expansion of at-home internationalized higher education experiences provide opportunities for all students to develop the hard and soft skills needed for the changing economic and industrial landscapes (Boni & Calabuig, 2017).

The academic profession, in the past, tended to be neglected in research on internationalization. However, more recently, their vital role in internationalization is gaining prominence (Calikoglu et al., 2022; Friesen, 2013). The academic profession exists at all points across the spectrum—from at-home to abroad—in which internationalization is conceptualized (Asada, 2022). In at-home internationalization, academic professionals are important central actors in institutional governance, research activities, and the teaching and learning process. Faculty

members with international experience can accumulate social capital, enhance research productivity, and advance their careers (Bauder, 2020). The Erasmus Impact study found that academic staff mobility can strengthen internationalization at home, resulting in a domino effect on the internationalization of non-mobile participants (European Union 2014). The international mobility experience ideally also leads to later research collaborations with the host country (Haupt, 2022). Indeed, internationalization is a complex process that takes place over various facets of time, place, and people, with individuals being the catalyst for internationalization after experiencing one type of higher education internationalization (Asada, 2022). By and large, the research and knowledge production resulting from the academic profession and internationalization promotes national development through self-sufficiency in research production, infrastructure capacity building, innovation, and entrepreneurship.

1.3.4 A Future Through Scholarship Study Abroad

The global landscape of higher education experience plays an important role in national development. Study abroad, in particular, has profound implications for socio-economic contributions to home countries resulting from the diffusion of knowledge, skills, and values that are used in participants' subsequent lifepaths. Furthermore, knowledge about the host country's history and culture can be used in individuals' careers and personal lives (Asada, 2020; Varpahovskis, 2021). The study abroad experience provides participants with opportunities inside and outside of the classroom to not only acquire academic knowledge and skills but also create new understandings of own personal values and understandings of the world. The joys and challenges of studying in a foreign country result in hard and soft skills to navigate sociocultural terrains in subsequent life experiences, as evident in the growing research on longterm study abroad outcomes. For example, the JINZAI 5000 Project demonstrates study abroad's role in promoting readiness to take on new challenges without fear of risks, an openness to people with diverse sets of values and cultural backgrounds, the development of selfesteem and self-efficacy, and a feeling of being useful (Yokota, 2016).

For developing countries, international scholarship programs are central to improving access to study abroad experiences to spur further national socioeconomic development. International scholarship funders span and may crisscross the spectrum of international organizations, national and local governments, private foundations, corporations, higher education institutions, and individuals. The act of studying abroad requires financial resources to pay for incurred expenses, including tuition fees, living costs, and travel experiences. The application process requires knowledge and skills related to higher education, language, and culture to navigate the global higher education landscape to identify potential countries and universities that match academic and professional goals. International scholarship programs often provide essential financial support coupled with guidance in the study abroad experience from start to finish.

While Perna et al. (2015) identified 183 government sponsored international scholarships, research is needed to fill the gap in understanding programs and outcomes for students in developing countries. The majority of international scholarship research to date tends to focus on study abroad between the Global North, influenced by the elite nature of study abroad and high participation rates from the Global North (Campbell & Neff, 2020). Furthermore, since the turn of the twenty-first century, international student flows have shifted, with Asia as a region sending and receiving more students than ever before (Kuroda et al., 2018). Likewise, Southeast Asia is experiencing exponential growth as more of its youth seek higher education abroad, prompted by individual desires to go abroad seeking high quality education and national ambitions for human capital development with 21st skills for a global economy.

International scholarship programs for developing countries provide an important avenue to increase equity in degree-seeking study abroad, thereby contributing to the Sustainable Development Goals, building human capital, advancing social change, and fostering goodwill among countries (Campbell, 2019). A systematic literature review by Campbell and Neff (2020) identified six common rationales: 1. Skills and knowledge acquisition for human capital development; 2. Diplomatic aims, relations with former colonies, or solidarity; 3. Social change or social justice in the home country; 4. International or sustainable development and as humanitarian aid; 5. Internationalization of universities; and 6. Providing access to higher education.

Scholarship schemes facilitate study abroad from developing countries to countries with high levels of research infrastructure. After returning home, these individuals augment the international knowledge flow by contributing to their home country's higher education system (Kahn & MacGarvie, 2016). For society, scholarship schemes not only improve the quality and qualifications of academics but also improve human resources in important areas of economics that require specialized knowledge (British Council, 2014). For example, Kazakhstan's Bolashak recipients reported low unemployment rates and higher employability while their employers reported benefitting from their employees' increased knowledge (Perna et al., 2015). In addition, scholarship participants often continue to act as a bridge between their home country and host country throughout their life (Campbell, 2020).

1.4 Structure of the Book

This volume presents a compilation of the findings of the *Empirical Research Project* on *Impacts of Study Abroad in Developing Countries*, conducted by the JICA Ogata Sadako Research Institute for Peace and Development from 2018 to 2023. It has been authored by research team members from Japan and the

Chapter 1 provides an introduction to the research and outlines the project's key concepts and aims. Relevant previous studies are reviewed in the areas of university development in Southeast Asia, the academic profession in national development, the role of internationalization and study abroad in development, and international scholarship programs. This chapter also describes the selection of the project's four focal countries and universities and the methods used in the collection of large-scale data for the study.

Part I addresses the first research question on the current situation and changes of faculty members' study abroad experiences. Chapter 2 provides a comparative analysis based on the results of questionnaire surveys of over 3,000 faculty members from ten leading universities in Malaysia, Indonesia, Vietnam, and Cambodia. The analysis of this large body of data allows the depiction of the prototypical study abroad experience among leading academics in Southeast Asia and reveals the developing and internationalizing landscape of higher education in the region. Next, Chapter 3 builds upon the previous chapter's analysis and provides theoretically insights with nuanced understandings of the relationship between internationalization and study abroad and the dynamic transformation process of Asian higher education toward autonomous national development.

Parts II to V address the second research question regarding the impacts of faculty members' study abroad experiences on their subsequent faculty activities and university development. Each of the four parts focuses on one of the study's focal countries: Part II (Chaps. 4, 5 and 6) examines Malaysia; Part III (Chaps. 7, 8 and 9) examines Indonesia; Part IV (Chaps. 10 and 11) examines Vietnam; and Part V (Chaps. 12 and 13) examines Cambodia. The organizational order of the focal countries in these four parts acknowledge each country's level of higher education development, allowing for easier comparison. The first chapters in each of the four parts (Chap. 4 for Malaysia, Chap. 7 for Indonesia, Chap. 10 for Vietnam, and Chap. 12 for Cambodia) cover the respective country's history of higher education, higher education policies, faculty and student study abroad, faculty development, internationalization of higher education, and national and institutional perspectives of the impact of faculty study abroad. These chapters, written based primarily on literature reviews and data from key informant interviews, provide overall information that is useful for better understanding the case studies of individual universities discussed in later chapters.

Chapters 5, 6, 8, 9, 11, and 13 showcase case studies of the selected leading universities in the four focal countries: Universiti Sains Malaysia (USM) in Chap. 5; Universiti Teknologi Malaysia (UTM) in Chap. 6, Institut Teknologi Bandung (ITB) in Chap. 8; Universitas Gadjah Mada (UGM) in Chap. 9; Vietnam National University, Hanoi (VNU) and Hanoi University of Science and Technology (HUST) in Chap. 11; and Royal University of Phnom Penh (RUPP), Institute of Technology of Cambodia (ITC), Royal University of Agriculture (RUA), and Royal University of Law and Economics (RULE) in Chap. 13. These chapters provide an in-depth examination of the impacts of faculty study abroad on teaching, research, social contributions, and university administration. These impacts are discussed with nuanced understandings by considering possible relevant factors, such as characteristics of study abroad experiences and shifts in study abroad trends. These chapters also highlight new regional changes, such as the growth of internationalization and the development of graduate education in Southeast Asia countries.

Chapter 14, the concluding chapter of the book, synthesizes the results of the case studies of each country and examines the commonalities and differences across the four focal countries. Informed by the project's large-scale data, the chapter reconsiders the role of study abroad experiences for faculty members. Overall, this volume presents valuable insights into the impact of study abroad experiences of faculty members on university development in developing countries and provides a foundation for future research in this field.

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Nobuko Kayashima Ph.D., is Senior Research Advisor at the JICA Ogata Sadako Research Institute for Peace and Development. She joined JICA in 1982 and has played a leading role in the planning and implementation of JICA's education cooperation over the past four decades. Prior to her current assignment, she served as Senior Vice President, Director/Deputy Director of the JICA Ogata Research Institute, and Director General of the Human Development Department. While holding management positions at JICA, she has been actively involved in academic research activities and received her Ph.D. from Nagoya University for her research on the internationalization of Japanese universities.

Sarah R. Asada Ph.D., is an Associate Professor at Kyoritsu Women's University (Tokyo, Japan) and a visiting research fellow at Waseda University. She holds extensive leadership experience in curriculum development, internationalization, and study abroad. Dr. Asada's expertise lies within comparative and international education with a focus on higher education, internationalization, and international relations. As a comparativist, her projects span Asia, Europe, and North America. Her recent book, 50 Years of US Study Abroad Students: Japan as a Gateway to Asia and Beyond (Routledge 2020), was the recipient of the 2020 CIES Study Abroad and International Students SIG Best Book Award.

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Part I Faculty Study Abroad Experiences



2

Contrasts and Shifting Trends in the Study Abroad Experiences of Faculty Members from Malaysia, Indonesia, Vietnam, and Cambodia

Nobuko Kayashima and Miki Sugimura

Abstract

This chapter explores the current landscapeas well as its transformative trends-of faculty study abroad experiences across ten leading universities in Malaysia, Indonesia, Vietnam, and Cambodia. It is based on the findings of the Empirical Research Project on Impacts of Study Abroad in Developing Countries undertaken by the JICA Ogata Sadako Research Institute for Peace and Development between 2018 and 2023. Drawing from an extensive questionnaire survey involving approximately 3,300 participants, the chapter paints a comprehensive portrait of study abroad by faculty members. It examines their choice of international or domestic study, preferred destination countries, financial resources, and the motivations behind these decisions. It elucidates both the similarities and differences across the four nations. The chapter highlights Southeast Asia's

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan e-mail: kayashima.nobuko@gmail.com

M. Sugimura

progress in nurturing its academic professionals, underscored by the proliferation of domestic advanced degree holders and the formation of a regional academic community within the ASEAN region. It explores the expanding scope of academic mobility, the rising significance of internationalizing higher education through faculty study abroad, and the profound influence of scholarship programs on faculty engagement in such initiatives. Overall, this chapter reveals a diverse and dynamic picture of the study abroad experiences of faculty members from leading universities in Southeast Asia.

Keywords

Study abroad · University faculty · Southeast Asia · Destination country · Scholarship program · Regional mobility

2.1 Introduction

The study abroad experience of highly qualified public sector professionals in developing countries not only exerts a profound influence on knowledge and skill acquisition, career progression, and attitudinal metamorphosis at the individual level but also has significant ramifications on the political, economic, cultural, and academic development of the home country. It ultimately leaves an indelible mark on bilateral

N. Kayashima (🖂)

Department of Education, Faculty of Human Sciences, Sophia University, Tokyo, Japan

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan

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diplomacy and international relations between the home and host countries. In numerous developing countries, higher education has developed rapidly since the 1990s. Some of these countries have now entered what is known as the "mass" stage, especially in Southeast Asia. However, a substantial proportion of university faculty members received their training as lecturers and earned advanced degrees through studying abroad in developed countries. This trajectory was necessitated by a historically unfavorable domestic graduate education landscape and an academic research milieu not conducive to nurturing university faculty. Initially, universities in developing countries adopted the Western educational model and eventually adapted it to their unique national contexts. The pivotal role of outstanding faculty members with foreign degrees in this transformative process cannot be overemphasized, as their study abroad experiences had a momentous impact (Altbach, 2003).

Hence, the act of studying abroad for individuals from developing countries holds profound implications not only for their personal development but also for the sending countries and institutions. To date, however, very little has been done to empirically clarify these institutional impacts of study abroad. Consequently, in 2018, the JICA (Japan International Cooperation Agency) Ogata Sadako Research Institute for Peace and Development initiated a comprehensive research endeavor to determine the impact of study abroad experiences of university faculty in developing countries on the academic activities and development process of their universities. This project involved a research team of Japanese and ASEAN scholars specializing in higher education. The research project framed two central research questions to guide its investigations: (1) How have the study abroad experiences of faculty members at leading universities in Southeast Asia evolved over the course of their development? (2) What has been the impact of study abroad of faculty members of leading universities in Southeast Asia at the individual and organizational levels?

The project then selected ten leading universities in four Southeast Asian countries as target universities for the survey: Universiti Sains Malaysia (USM) and Universiti Teknologi Malaysia (UTM) in Malaysia, Universitas Gadjah Mada (UGM) and Institut Teknologi Bandung (ITB) in Indonesia, Vietnam National University, Hanoi (VNU) and Hanoi University of Science and Technology (HUST) in Vietnam, and Royal University of Phnom Penh (RUPP), Institute of Technology of Cambodia (ITC), Royal University of Agriculture (RUA), and Royal University of Law and Economics (RULE) in Cambodia. To methodically amass the requisite data for this ambitious inquiry, a multifaceted approach encompassing document review, questionnaires, and interviews was adopted. A detailed exposition on the background of the research project (see Sect. 1.1), its overarching overview, and the rationale behind the selection of the focal countries and universities (see Sect. 1.2) can be found in Chap. 1 for those seeking a more comprehensive background to the study.

This chapter presents the results of the analysis of the first of the above two research questions, namely, the current status and transition of faculty study abroad in leading universities in Malaysia, Indonesia, Vietnam, and Cambodia. Identifying the features of faculty members' study abroad in this study serves two purposes. Firstly, it aims to shed light on key aspects of higher education development in Southeast Asia and to derive implications for future higher education policy frameworks, particularly faculty study abroad policies. The study abroad experiences of university faculty members are diverse: destination country, reasons for study abroad decision, financial resources for study abroad, preferred destination country, etc., differ depending on various factors and tend to change over time. Clarifying these factors will provide insights into higher education policies in the developing countries. The second objective is to allow for a more detailed analysis of the impact of faculty study abroad on university development. The findings from the analysis of faculty study abroad presented in Chap. 2 are used in Chap. 14 to analyze whether dissimilar study abroad experiences produce different institutional impacts, or whether changes in study

abroad experiences lead to changes in impacts over time. Rather than making the analysis a black box, this should help to clarify which elements of study abroad experiences lead to particular types of impacts (see Chap. 14).

2.2 Previous Studies on the Higher Education Development of Southeast Asia and University Faculty Study Abroad in the Focal Countries

Before presenting the results of the data analysis, this section reviews previous studies on the recent development of higher education in Southeast Asia and the historical development of universities and study abroad in the four countries.

2.2.1 Recent Development of Higher Education in Southeast Asia

In recent years, higher education systems in Southeast Asian countries have undergone significant yet similar transformations. These changes include massification, diversification, privatization, internationalization, and regionalization, as elucidated by scholarly works (Altbach, 2004; Lee, 2006; Ratanawijitrasin, 2015; Welch, 2011).

The phenomenon of massification in higher education is pervasive throughout Southeast Asia, largely due to the escalation of public demand for tertiary education as a result of economic development. Of particular note is the surge in enrollment rates since the 1990s in Malaysia, Indonesia, and Vietnam, followed by Cambodia in the 2000s. However, this expansion has created challenges characterized by overcrowded classrooms, acute shortages of educators, and limited financial resources, all of which threaten the maintenance of educational quality (Lee, 2006; Welch, 2016).

Concurrent with the expansion in access to higher education, academic institutions have also diversified. In this context, traditional research-oriented universities coexist with vocational and technical colleges that respond to the evolving demands of the labor market (Lee, 2006; World Bank, 2000). The advent of online and distance learning programs has further increased accessibility (Raab et al., 2001). Privatization is an important facet of a diversified higher education landscape. Much of the rapidly expanding higher education system is supported by the growth of private education. While privatization facilitates greater access, it also introduces variability in tuition fees and quality standards, raising critical issues of equity and educational quality. Consequently, effective regulation emerges as an imperative concern (Teixeira & Amaral, 2001; Welch, 2011).

In line with the relentless forces of globalization and economic growth, higher education around the world is also subject to impacts of internationalization, which is strikingly evident in the Southeast Asian context. Universities in Southeast Asia are increasingly integrating international perspectives into their curricula and programs. International students and burgeoning instances of cross-border collaborations have become commonplace, with Singapore and Malaysia emerging as regional educational hubs (Ho et al., 2023; Collins et al., 2023; Knight & Morshidi, 2011). Regionalization efforts are manifested through initiatives such as the ASEAN University Network (AUN) and the Southeast Asian Ministers of Education Organization (SEAMEO), which are passionate advocates of academic mobility and collaborative partnerships (Neubauer, 2012).

2.2.2 Malaysia

In Malaysia, the University of Malaya, Kuala Lumpur Division (later the University of Malaya) was established a few years before independence. This was followed by the establishment of leading universities around 1970, including Universiti Sains Malaysia (USM), Universiti Pertanian Malaysia, and Universiti Teknologi Malaysia (UTM). While all of these universities initially followed the university model of the former colonial power, the United Kingdom, they eventually adopted elements of the US university system (Lee, 2004, 2006; Selvaratnam, 1989).

Many Malaysian students and faculty members tend to study abroad in English-speaking countries, such as the United Kingdom, Australia, and the United States. This is due to the fact that Malaysia is a member of the Commonwealth, and English is relatively widely spoken in the country. Of these destinations, the United Kingdom received the largest number of Malaysian students. However, in recent years, the number of students studying in Australia has also increased. Until the 1980s, advanced degrees were mainly obtained by studying in the United Kingdom, but since the 1990s, with the growth of higher education in Malaysia and the subsequent economic crisis, the number of students obtaining degrees domestically instead of studying abroad has increased (Welch, 2011).

In terms of the destinations of leading university faculty members for their foreign advanced degrees, the survey conducted by Sirat shows that for USM, of the 221 faculty members who went abroad to study at the master's or doctoral level between 2009 and 2018, 132 (60%) studied in the United Kingdom, 36 (16%) in Australia, and 19 (9%) in the United States. For UTM, of the 244 scholars awarded scholarships for master's or doctoral level between 2011 and 2018, 134 faculty members studied in Malaysia, and of those who studied abroad, 50 (45%) studied in the United Kingdom, 12 (11%) in Japan, and 11 (10%) in Australia. Study abroad for USM and UTM faculty members is planned in partnership with the government as part of the university's development plan, with the Public Service Department (PSD), Ministry of Education/Ministry of Higher Education (MOE/MOHE), and other government agencies providing scholarships for faculty members to study abroad. However, in recent years, an increasing number of academics who have already obtained their Ph.D. degrees are being hired as university faculty members (Sirat, 2023).

2.2.3 Indonesia

The history of the development of modern universities in Indonesia also dates back to the time of the country's independence. The University of Gadjah Mada (UGM), following preparations during the struggle for independence, was established as the first national university in 1949, and the University of Indonesia was founded soon after in 1950. During the 1950s and early 1960s, many of the country's major universities were established, including Airlangga University, Hasanuddin University, Bandung Institute of Technology (ITB), and Bogor Agricultural University. Immediately after independence, the language of instruction at the universities was Dutch and the majority of faculty members were Dutch; however, the independence process led to an early transition known as Indonesianization. Western aid agencies, such as USAID and the Ford Foundation, supported the development of the weak but expanding higher education institutions, and during that process, a US model of university management was gradually introduced (Buchori & Malik, 2004; Cummings & Kasenda, 1989; Logli, 2016).

Until the early 2000s, many Indonesian faculty members studied in the United States, West Germany, Australia, and elsewhere with foreign aid funding (Nishimura, 1991; Welch, 2011). Since around 2010, however, the number of faculty members sent abroad by the Indonesian government has increased (Moeliodihardjo, 2023). According to cumulative records since the Institute's establishment, 312 (25%) of ITB faculty members went to Japan, 191 (15%) to the United States, 170 (13%) to France, 129 (10%) to Australia, 126 (10%) to the United Kingdom. The number of faculty members who studied in the United States has decreased in recent years due to the decrease in US scholarships. In the case of UGM, among the current full-time faculty members with foreign doctorates, there are 431 (23%) who have received Japanese degrees, 297 (16%) Australian degrees, 219 (11%) US degrees, 180 (9%) UK degrees, and 164 (9%) Dutch degrees (Moeliodihardjo, 2023).

2.2.4 Vietnam

Until recently, Vietnam has undergone greater socioeconomic transformation than either of the above countries, and higher education has been affected by this transformation. The first modern university in Vietnam was the University of Indochina, established in 1906 under French colonial policy. Later, during the country's division into North and South Vietnam, a Sovietstyle higher education system was introduced in North Vietnam and a US-style higher education system in South Vietnam. These two systems were eventually unified into a Soviet-style system after the country's reunification in 1975. However, with Doi Moi, which began in 1986, major higher education reforms began to be implemented in the early 1990s, and small universities based on specialties were merged into comprehensive universities such as Vietnam National University, Hanoi (VNU) and Vietnam National University, Ho Chi Minh. The influence of the US-style university system has become stronger in recent years (Huong & Fry, 2004; Nguyen, 2023).

Before 1990, the study abroad destinations of Vietnam's leading university faculty members were limited to the Soviet Union and Eastern European socialist countries. However, with the open-door policy of Doi Moi, the destinations changed to East Asian and Western countries. This is due to the fact that, along with the changes in Vietnamese government policy since 1990, a large number of Western countries have started to provide Vietnam with educational development assistance and academic exchange support, and the Vietnamese government has actively encouraged university faculty members to study abroad to obtain their advanced degrees through large-scale government scholarship projects such as Project 322, Project 911, and Project 89 (Nguyen, 2023; Welch, 2011).

2.2.5 Cambodia

Cambodia has had perhaps the most tumultuous modern educational history of the four countries. The negative legacy of its history of depleting highly educated human resources continues to affect the country even today. In the 1960s, several modern universities were established in Cambodia, including the Royal University of Khmer (now the Royal University of Phnom Penh: RUPP). However, the civil war of the 1970s and the Pol Pot regime destroyed all higher education institutions, and the number of higher education personnel decreased drastically. Reconstruction of higher education began after 1979. In the 1980s, the Soviet Union introduced the Soviet model of higher education. However, Western development aid replaced Soviet influence in the 1990s. The current higher education system has tended toward adopting the US model (Chamnan & Ford, 2004).

In the 1980s, the study abroad destinations of Cambodian academics and civil servants were limited to the socialist countries of the Soviet Union and Eastern Europe. However, in the 1990s, educational assistance from European countries, the United States, and Japan increased rapidly, and accordingly, the main destinations for study abroad became Western countries, Japan, Australia, and other countries. In Cambodia, neither the Cambodian government nor domestic universities have provided scholarship programs for overseas study. Therefore, most study abroad has been funded by foreign aid (Sok et al., 2023).

According to the document survey conducted by Sok et al. (2023), as of 2018, the top destination countries for RUPP faculty members receiving foreign Ph.D. degrees were Japan with 15 (22%), Australia with nine (13%), France with nine (13%), and ASEAN countries other than Cambodia with ten (15%), based on the final degrees of full-time staff (including management staff). Similarly, in the case of the Institute of Technology of Cambodia (ITC), as of 2019, there were 14 (19%) staff with Ph.D. degrees from ASEAN countries other than Cambodia, compared to 28 (37%) from Japan

Thus, the higher education systems of Malaysia, Indonesia, Vietnam, and Cambodia, the focal countries of this study, share similarities in that they are all located in Southeast Asia, have adopted modern Western educational models in the last century after experiencing colonization, and currently have rapidly expanding higher education sectors. However, they also have different characteristics. The most important difference is the level of development of higher education. While Malaysia, Indonesia, and Vietnam have already reached the "mass" stage of higher education, with gross enrollment rates of 41% (2021), 36% (2018), and 35% (2021), respectively, Cambodia is still at the "elite" stage, with an enrollment rate of 13% (2021) (UNESCO, 2023). The countries had different backgrounds at different points in their history, including relations with former colonial powers such as the United Kingdom, the Netherlands, and France, and the influence of former socialist countries such as the Soviet Union. In recent years, however, all of these countries have adopted elements of the American university model, a trend that has become even more pronounced with the beginning of the internationalization of higher education in around 2000. The next section examines how the study abroad experiences of leading university faculty in these four countries, with their differences and similarities, have evolved based on questionnaire data.

2.3 Overview of the Questionnaire and Interview Surveys

2.3.1 Conducting the Questionnaire and Interview Surveys

To collect qualitative and quantitative data, questionnaires and interviews were conducted at ten universities in the focal countries. The questionnaire used in this study consists of two parts: (i) a set of questions about faculty members' characteristics and their study abroad experiences, and (ii) a set of questions about the impacts of study abroad. In the former part (i), we collected data on faculty characteristics (gender, age, rank, study abroad experience at the doctoral and/or master's level, including destination country, time period, funding, discipline, etc.), and in the latter part (ii), those who had studied abroad for a master's or doctoral degree were asked about the impacts of their study abroad experience on their subsequent activities (teaching, research, social contribution, and university management) as faculty members, while those who had studied domestically were also asked about the impacts of their domestic master's or doctoral studies on their subsequent activities. Below, in Sects. 2.4 and 2.5, the characteristics and evolution of the study abroad experiences of faculty members at leading universities in Southeast Asia are analyzed, primarily using participant responses to a series of questions about their characteristics and study abroad experience (i).

The research team first created the above questionnaire in English. It was then translated into local languages for Vietnam and Cambodia. For Malaysia, Vietnam, and Cambodia, the English or bilingual versions of the questionnaire were integrated into a web-based survey system in Japan. Web-based surveys were then conducted with the target faculty members using Japan as the hub. For Indonesia, the intrauniversity information systems of Universitas Gadjah Mada (UGM) and Institut Teknologi Bandung (ITB) were used to conduct the survey. Participation in the survey was voluntary. However, as the web-based survey did not yield a sufficient sample size, members of the research team conducted outreach activities such as SMS messaging, holding briefing sessions, and additional paper-based surveys within each university to encourage responses.

While the survey was initially launched in December 2019, due to the outbreak of COVID-19, all of the target universities closed their campuses, and faculty began telecommuting in the spring of 2020. This made it extremely difficult to collect the survey responses. Consequently, the survey period had to be extended, and it was finally completed at all target institutions by June 2022. The valid sample size (and response rate) thus collected was 915 (25%) for Malaysia, 1,747 (35%) for Indonesia, 387 (10%) for Vietnam, and 239 (27%) for Cambodia, for a total of 3,288 (25%) (Table 2.1).

University	Questionnai	re	Interview					
	Total No.No. of responsesof faculty(response rate)members(response rate)		No. of responses Survey (response rate) Period		Modalities	No. of intervie- wees	Survey period	
Malaysia								
Universiti Sains Malay- sia (USM)	2,003	591 (29.5%)	915 (25.2%)	Feb. 2020– June 2020	Individual interviews	20	Oct. 2020– Dec. 2020	
Universiti Teknologi Malaysia (UTM)	1,628	324 (19.9%)		Jan. 2022– June 2022	Individual interviews	9	Sep. 2022– Mar. 2023	
Indonesia								
Universitas Gadjah Mada (UGM)	3,608	833 (23.1%)	1,747 (35.2%)	Jan. 2020– Feb. 2021	Focus group discussions	22	Nov. 2021– Dec. 2021	
Institut Teknologi Bandung (ITB)	1,361	914 (67.2%)		Dec. 2019– Jan. 2020	Individual interviews	30	Jul. 2022– Aug. 2022	
Vietnam		,						
Vietnam National Uni- versity, Hanoi (VNU)	2,634	233 (8.8%)	387 (10.1%)	Dec. 2020– June 2022	Individual interviews	34	Apr. 2021– Aug. 2022	
Hanoi University of Science and Technology (HUST)	1,200	154 (12.8%)		Dec. 2020– June 2022	-			
Cambodia		,						
Royal Univer- sity of Phnom Penh (RUPP)		71 (13.3%)	239 (27.3%)	Mar. 2021– June 2022	Focus group discussions Individual interviews	. 22	Mar. 2023– Apr.2023	
Institute of Technology of Cambodia (ITC)	152	111 (73.0%)		Mar. 2021– June 2022				
Royal University of Agriculture (RUA)	132	36 (27.3%)	_	Mar. 2021– June 2022	_			
Royal University of Law and Economics (RULE)	56	21 (37.5%)		Mar. 2021– June 2022				
							1	

 Table 2.1
 Questionnaire and interview survey

Source Created by the authors

Interviews with selected faculty members with study abroad experience at each university were conducted in parallel with or after the questionnaire survey to collect qualitative data. Participation in the interviews was voluntary. The interviews took the form of individual interviews or focus group discussions. Some interviews were conducted online due to the limitations of the pandemic. The number of participants exceeded 100 (Table 2.1). In some countries, interviews were also conducted with government officials responsible for higher education and non-university experts to obtain addi-

2.3.2 Demographic Characteristics of Samples

tional information on higher education policy

and the university environment in each country.

The collated characteristics of the sample populations are shown in Table 2.2. One comprehensive university and one STEM university were selected from each focal country as target universities, except in the case of Cambodia, where four universities were chosen due to the small size of the institutions. STEM universities were included to generate findings specific to the field of science and technology. It should be noted that, as a result, natural sciences, engineering, agriculture, and medicine account for about 70% of the expertise of the sample population.

Since the purpose of this study is to analyze the impacts of faculty members' study abroad experiences on their subsequent activities as faculty members and on the development of their universities, the study abroad experience for the analysis is defined as "studying in a regular master's or doctoral program at a foreign university while residing in that country for one year or more." The analysis excludes study abroad experiences at the undergraduate level and short-term study abroad. Studying abroad for the pursuit of advanced degrees usually takes a long time: a master's degree requires one to two years, and a doctoral degree takes three to five years. Therefore, this study captures the timing of study abroad, with the year of degree attainment serving as a variable of analysis.

2.4 Comparison Between Faculty Members Studying Abroad and Studying at Home

2.4.1 Studying Abroad Versus Studying at Home

Of the 3,288 valid participants in the survey sample, 2,193 (69%) had studied abroad for at

		Malaysia	Indonesia	Vietnam	Cambodia	Total
No. of Sample Population		915	1,747	387	239	3,288
Gender	Male (%)	42.3	65.4	53.7	74.1	58.2
	Female (%)	57.7	34.6	46.3	25.9	41.8
Age	Average	42.73	45.47	39.38	37.07	43.38
Discipline	Social sciences, Education & Huma- nities (%)	27.3	17.6	32.0	27.5	25.2
	Natural sciences, Engineering, Agri- culture & Medicine (%)	66.2	78.4	67.7	66.7	70.4
	Others (%)	6.5	4.0	0.3	5.8	4.4
Final Degree	Doctoral degree (%)	80.7	76.9	67.7	36.8	74.0
	Master's degree (%)	14.8	23.1	26.9	56.1	23.6
	Bachelor's degree (%)	4.6	0.0	5.4	7.1	2.4

Table 2.2 Characteristics of sample population

Source Created by the authors

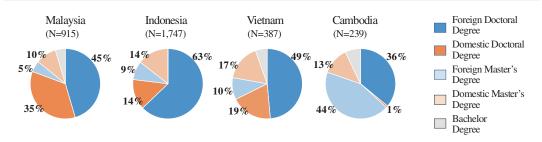


Fig. 2.1 Proportion of faculty members' final degrees. *Source* Created by the authors

least one year in a master's and/or doctoral program, while 1,015 (31%) had completed their master's and/or doctoral programs only domestically. Two-thirds of all respondents obtained their advanced degrees abroad. However, the situation varies from country to country. Figure 2.1 shows the terminal degrees of the faculty members who responded to the questionnaire. It indicates that 56% of the doctoral holders in Malaysia, 82% in Indonesia, 72% in Vietnam, and 98% in Cambodia received their Ph.D. degrees from foreign universities. In Malaysia, the proportion of foreign and domestic doctoral degrees is roughly equal. In Indonesia, Vietnam, and Cambodia, the proportion of foreign doctoral degrees is extremely high. On the other hand, at the master's level, the share of foreign degrees is 34% in Malaysia, 42% in Indonesia, 42% in Vietnam, and 84% in Cambodia. The percentage of domestic master's degrees is higher than foreign master's degrees in all countries except Cambodia. Although, overall, there are many faculty members who have earned advanced degrees abroad, it can be seen that domestic degrees are also prevalent in countries where higher education is more developed and that domestic degrees are more common in master's programs than in doctoral programs.

Between the 1990s and the 2010s, the number of domestic degree earners increased, with the exception of Cambodia (Fig. 2.2). In particular, for master's degrees in Malaysia and Indonesia, the number of faculty members who obtained their degrees domestically has been increasing rapidly since about 2000, while the number of foreign degree recipients has been decreasing or stagnant, with the result that the majority of degrees obtained are now domestic. On the other hand, for doctoral degrees, the number of domestic degrees has increased rapidly in Malaysia and Indonesia since around 2005. However, the number of foreign doctorates has also increased. This suggests that study abroad is still very active at the doctoral level.

Comparing the four countries, the number of domestic graduates has increased over time, with Malaysia taking the lead, followed by Indonesia and Vietnam-first in master's programs and then in doctoral programs. This suggests that the development of higher education led to the enrichment of graduate education, which gradually made it possible to obtain advanced degrees domestically. Comparing master's and doctoral degrees, the number of domestic degrees has increased, and the number of foreign degrees has decreased or remained the same at the master's level, showing a somewhat complementary relationship between the two. At the doctoral level, however, the number of both foreign and domestic degrees has increased. The internationalization of higher education is progressing even in developing countries, and top university faculty members are now expected to engage in international academic activities. Under these circumstances, overseas study in doctoral programs remains important for university faculty members.

It is common for young faculty members from developing countries to receive some form of scholarship to study abroad for an extended period of time to obtain an advanced degree. In recent years, MOE/MOHE, PSD, and leading

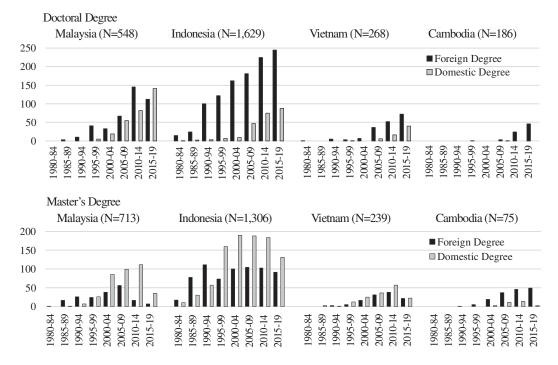


Fig. 2.2 Changes in faculty members' foreign and domestic degree acquisition. *Source* Created by the authors

universities that administer these public scholarships in Malaysia have encouraged domestic study in light of the growing availability of graduate education in Malaysia. For example, MOE/MOHE added admission to top-ranked graduate schools-such as those ranked in the top 100 of THE University Rankings and the top 50 of QS University Rankings-as a requirement for overseas study scholarships from 2016. In addition, based on the improvement of domestic graduate education, PSD has offered scholarships for overseas study only in STEM and social sciences, and domestic scholarships in medicine and pharmacy since 2013 (Sirat, 2023). In Indonesia, graduate education is also gradually developing: medical sciences, development studies, and computer science at the University of Indonesia, electrical engineering at ITB, and geology, water resources engineering, and political science at UGM all provide quality education and research that is sufficiently competitive with those in developed countries (Moeliodihardjo, 2023).

Therefore, it is an effective use of limited public funds to have scholarship recipients study domestically in these growing fields rather than abroad. Moreover, having young faculty members study locally also contributes to the further growth of graduate education, as the development of graduate education requires high-quality students in addition to excellent faculty and well-developed research infrastructure. This is particularly important for Malaysia, which is aiming to become a regional international education hub (Sirat, 2023).

2.4.2 Fields of Specialization and Foreign Degrees

The share of foreign and domestic doctorates varies by field of study (Fig. 2.3). Foreign degrees are most common in agriculture (85%), engineering (79%), medicine (78%), and the natural sciences (74%), where more than three out of four doctoral degrees were earned through study abroad. On the other hand, in the

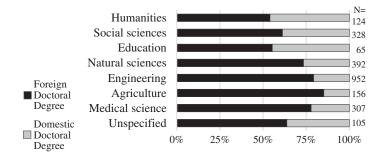


Fig. 2.3 Proportion of foreign and domestic doctoral degrees by field of study. *Note* Total of samples of four focal countries. *Source* Created by the authors

social sciences (61%), education (55%), and humanities (54%), the proportion of foreign doctorates is around half of this total, indicating a clear contrast between the field of science and technology and that of humanities and social sciences. This may be due to the characteristics of the fields, such as the more active internationalization of education and research activities in science and technology, and the fact that research topics in the humanities and social sciences are often rooted in local communities.

2.4.3 Financial Resources for Studying Abroad or Studying at Home

Because of the long-term nature of study abroad for advanced degrees, nearly all faculty members in all four countries receive some type of grant for study abroad. Only 3% of faculty members studied abroad at their own expense (Fig. 2.4). There are several types of scholarships for study abroad, including scholarships from the home country's government or university, scholarships from a foreign government or international organization, and scholarships from the host university. Moreover, the mechanism of funding for study abroad varies widely between each of the countries. In the case of Malaysia, the majority (89%) receive scholarships from the Malaysian government or Malaysian universities. As a middle-income country, Malaysia has very few opportunities for scholarships funded by foreign countries or international organizations. In Cambodia, on the other hand, there are very few scholarship recipients from their own government or universities, with 70% of foreign degree

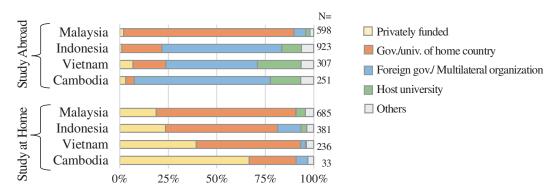


Fig. 2.4 Financial resources for studying abroad and studying at home. *Note* Total number of doctoral degree holders and master's degree holders in four focal countries. *Source* Created by the authors

holders receiving support from host governments or international organizations. In Indonesia and Vietnam, the mechanism of funding sources for study abroad is somewhere between that of Cambodia and Malaysia.

Regarding financial resources for study at home, 25% of faculty members covered the cost of domestic study with private funds, and 63% covered the cost with scholarships from their home government or home university—with these two categories accounting for about 90% of the total. Scholarship opportunities from foreign governments and international organizations are very limited. The ratio of scholarships from home governments/universities increases in the order of Malaysia, Indonesia, Vietnam, and Cambodia. In Cambodia, private funding makes up for the lack of public domestic scholarship opportunities.

Many developing countries make efforts to promote advanced degrees for faculty members because improving the quality of university faculty is critical to improving higher education. In Malaysia, government-funded scholarships for overseas study were established relatively early-in the 1960s-and currently, various government scholarship programs are available for university faculty members to study abroad. These include the Trustees for the Indigenous People (MARA) Study Loan Scheme, the Academic Training Bumiputera Scheme (SLAB), the Higher Education Institutions Academic Training Scheme (SLAI), as well as individual university scholarships. The current target of the Malaysian government is for at least 60% of faculty members in research universities to have a Ph.D. (Sirat, 2023).

In Indonesia, university faculty members have also been sent abroad for advanced degrees since the early post-independence period. Most of the funding came from foreign aid. However, in the 2010s, the Indonesian government began a large-scale scholarship program by establishing the Institute for Education Fund Management (LPDP) (Moeliodihardjo, 2023). In Vietnam, since 2000, under national projects such as Project 322, Project 911, and Project 599, the Vietnamese government has also implemented large-scale overseas scholarship programs to upgrade university faculty members. It has set a goal of increasing the proportion of faculty with Ph.D. degrees. from 30% in 2020 to 37% in 2030 (Nguyen, 2023). While these government scholarship programs in the three countries have played an important role in improving faculty qualifications and competencies, Cambodia has not offered a government scholarship program for university faculty members (Sok et al., 2023).

2.4.4 Reasons for Choosing to Study Abroad or Study at Home

The survey also asked university faculty members about their reasons for choosing to study abroad or at home. The main reasons for choosing to study abroad were that the discipline was more advanced (44%) and that scholarships were available (27%). The main reasons for choosing to study at home rather than abroad also included the availability of scholarships (24%) but added the affordable cost of living and studying (22%) (Fig. 2.5).

Half of the faculty members who studied abroad reported that the reason for their choice was the "more advanced discipline" in their host countries, indicating a belief that the academic level in their discipline is higher abroad. On the other hand, 7% of the faculty members who studied at home cited the "more advanced discipline" in their home country as the reason for studying at home, and although this is a small percentage, it is noteworthy that the quality of local graduate education is considered to be as good as that in developed countries in certain fields. This suggests that higher education in Southeast Asia is developing and that graduate education is becoming more highly valued.

For both study abroad and study at home, one in four respondents indicated that the availability of scholarships for study abroad or study at

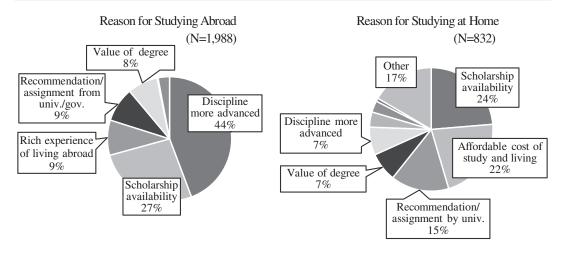


Fig. 2.5 Reasons for studying abroad and studying at home. *Note* Total number of doctoral degree holders and master's degree holders in four focal countries. *Source* Created by the authors

home was the reason for their decision. The type of scholarship was an important determinant of study location. The lower cost of studying and living at home was the reason that 22% of respondents chose to study at home. It is likely that they chose to study at home for financial reasons in cases where scholarships to study abroad were not available. Since the availability and type of scholarship are important determinants of the decision to study abroad, the higher education policies of home countries, the international student policies of host countries, and the development policies of aid agencies have a significant impact on the study abroad decisions of university faculty through the provision of scholarship programs.

2.5 Destination Countries of Faculty Members Studying Abroad

2.5.1 Major Destination Countries

The characteristics and trends of study abroad destination countries from around 1980 to 2020 were identified, as the target population of the study was current faculty members at the

selected universities. Table 2.3 shows the top five destination countries by country of origin, and Fig. 2.6 shows the changes in the number of faculty members who studied abroad in major destination countries between 1980 and 2019. The destination country data presented in Table 2.3 and Fig. 2.6 are largely consistent with the findings of previous studies discussed in Sect. 2.2, confirming that the sample population is sufficiently representative of the target population.

Based on these data, the following five points should be noted. The first point to note is the academic links with the former colonial powers. In Malaysia, in particular, the United Kingdom has an overwhelming presence, accounting for half of the total number of faculty members with foreign degrees, both at the doctoral and master's levels. In the remaining three focal countries, although not to the same extent as in Malaysia, about 20% and 10% of Cambodian and Vietnamese faculty members who studied abroad, respectively, received their degrees from France. About 10% of Indonesian faculty members who studied abroad received their degrees from the Netherlands. In all four countries, former colonial powers are consistently among the top five destinations at both the doctoral and master's levels. Figure 2.6 also shows

	Malaysia			Indonesia			Vietnam			Cambodia		
	Desti-	Desti- Faculty		Desti- Faculty		Desti- Faculty			Desti-	Faculty		
	nation Country	No	% ^a	nation Country	No	% ^a	nation Country	No	%a	nation Country	No	% ^a
Doctoral Degree	UK	211	50.7%	Japan	382	34.8%	Japan	56	29.8%	Japan	30	34.9%
	Australia	85	20.4%	Australia	109	9.9%	France	23	12.2%	France	19	22.1%
	Japan	43	10.3%	Germany	103	9.4%	Korea	17	9.0%	Thailand	9	10.5%
	US	25	6.0%	US	92	8.4%	Germany	16	8.5%	Belgium	5	5.8%
	New Zealand	14	3.4%	Nether- lands	89	8.1%	Australia	10	5.3%	Philippi- nes	4	4.7%
Master's Degree	UK	92	49.7%	Japan	145	20.7%	Japan	18	15.1%	France	36	21.8%
	US	32	17.3%	Australia	96	13.7%	Australia	14	11.8%	Thailand	36	21.8%
	Australia	25	13.5%	US	88	12.5%	UK	14	11.8%	Indonesia	19	11.5%
	Japan	16	8.6%	UK	69	9.8%	France	12	10.1%	Korea	15	9.1%
	Thailand	4	2.2%	Nether- lands	52	7.4%	Germany	11	9.2%	Philippi- nes	13	7.9%

Table 2.3 Top five study abroad destination countries by country of origin

^a Percentage of faculty members who studied in top destination countries among foreign degree holders *Source* Created by the authors

that studying abroad in former colonial powers was common until recently. Although Malaysia, Indonesia, Vietnam, and Cambodia have different historical relationships with their former colonial powers, these countries are still important destinations for faculty members.

Second, in addition to the former colonial powers, Japan and Australia, two industrialized nations in Asia and the Pacific, are the leading destinations. Japan's share is larger for doctoral degrees than for master's degrees, and these numbers have been growing rapidly since the 1990s. Australia, on the other hand, has more faculty enrolled in master's programs than in doctoral programs.

Third, neighboring Southeast Asian countries are among the destinations for study abroad. It is particularly noteworthy that Thailand, Indonesia, and the Philippines are among the top five destinations for Cambodian faculty members studying abroad. The percentage of foreign degree holders who studied in ASEAN countries was 19% at the doctoral level and 47% at the master's level in Cambodia (Table 2.4). The other three focal countries also have faculty members studying abroad in the region, although to varying degrees. Looking at the four countries as a whole, the most common ASEAN destinations are Thailand, Malaysia, and Singapore. This suggests that a reciprocal academic community within Southeast Asia has been growing in recent years.

The fourth point to consider concerns changes in the destination countries for study abroad. Of the 2,193 foreign graduates in our sample, about 80% earned their degrees in seven countries (Japan, the United Kingdom, Australia, the United States, Germany, France, and the Netherlands), suggesting that their destinations are concentrated in a small number of countries. However, the situation has changed significantly over time; Fig. 2.7 shows the shifts in destination countries, tabulated at five-year intervals, for the aggregate group of foreign advanced degree holders from the four focal countries studied. The figure shows the nine destination countries and one region that had a share of 5% or more between 1985 and 2019 (for ASEAN countries, their share is amalgamated). Looking at the changes over the 35-year period, we see that some countries/regions have decreased their share as destinations while others have increased their share. At the end of the 1980s, France, the United States, the United Kingdom, Germany, and Belgium accounted for more than 80% of all faculty studying abroad, but by the end of

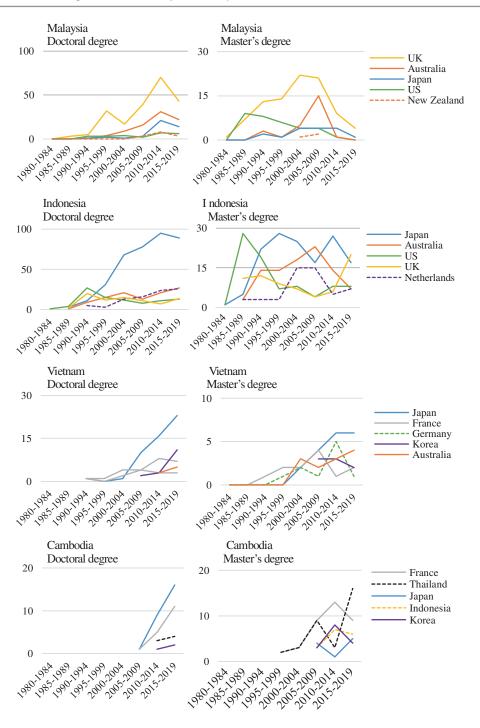


Fig. 2.6 Changes in study abroad destination countries (1980–2019). *Note* Top five destination countries for each country of origin between 1980 and 2019. *Source* Created by the authors

		Home cou	intry									
		Doctoral Degree					Master's Degree					
		Malaysia	Indonesia	Vietnam	Cambodia	Total	Malaysia	Indonesia	Vietnam	Cambodia	Total	
Destination Country	Thailand	2	13	2	9	26	4	42	5	36	87	
	Malaysia	-	30		1	31	-	19	1	3	23	
	Singapore	3	14	3		20	3	7	2		12	
	Philippines		4		4	8		8		13	21	
	Indonesia		-		1	1		-	3	19	22	
	Vietnam			-	1	1			-	6	6	
	Brunei		1			1						
	%a	1.2%	5.6%	2.7%	18.6%	4.9%	3.8%	10.8%	9.2%	46.7%	14.6%	

Table 2.4 Faculty members who studied abroad in ASEAN countries

^a Percentage of ASEAN countries' doctoral or master's degree holders among those with foreign degrees *Source* Created by the authors

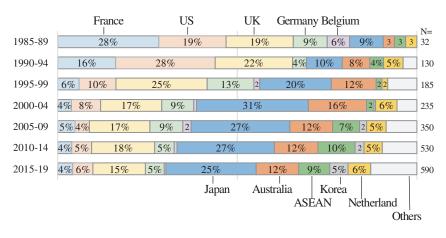


Fig. 2.7 Changing share of destination countries.

Note Percentage of host countries of terminal degrees earned by faculty abroad (four countries combined). *Source* Created by authors

the 2010s, these five countries had declined to 24%, less than a third of the total. The decline in the share of France and the United States is particularly significant. Conversely, Japan and Australia increased their share rapidly in the 1990s and early 2000s, followed somewhat later by the ASEAN countries and South Korea in the 2000s. In addition to France, the United States, the United Kingdom, and Germany—the traditional study abroad destinations since the postwar period—, new destinations such as Japan and Australia were added around the 1990s, and emerging destinations began to appear around

the turn of the century, resulting in a diversification of study abroad destinations. As a result, the total number of destinations has increased from nine in the 1980s to nearly 40 in the 2010s.

The fifth point is that, in the sample collected for this study, the number of faculty members studying for advanced degrees in China was very small. China is rapidly growing as an educational hub in Asia, with 225,100 international students studying in the country in 2020 (UNESCO, 2023). In Southeast Asian countries, it is common to hear that the number of international students studying in Mainland China is increasing due to Chinese government scholarships and private funding. However, only four (two in Vietnam and two in Cambodia) out of 1,172 foreign master's degree holders and 11 (one in Indonesia, nine in Vietnam, and one in Cambodia) out of 1,788 foreign doctoral degree holders had degrees gained in Mainland China in this research project's survey. On the other hand, 21 faculty members (one Malaysian, 15 Indonesian, and five Vietnamese) have studied in Taiwan in master's programs and 23 (12 Indonesian and 11 Vietnamese) in Taiwan in doctoral programs to earn their degrees. In the interviews in Malaysia and Indonesia, Mainland China was not currently perceived as a major destination for faculty members, but some indicated that this number may increase in the future.

2.5.2 Field of Specialization and Destination Country

The country of study of faculty members is also related to their field of specialization. Figure 2.8 shows the composition of faculty members' disciplines by the destination country of their doctoral and master's degrees. First, among the destination countries, Australia, the United States, and the United Kingdom have relatively higher percentages of faculty members in the humanities and social sciences. On the other hand, Japan has the largest share of science and technology, followed by France and Germany. These characteristics may be related to the fact that the former are all English-speaking countries and the latter are non-English-speaking countries. Looking at domestic graduates, more than half of the graduates in Cambodia and Vietnam are in the humanities and social sciences. On the other hand, the field composition of domestic graduates in Malaysia and Indonesia is not so different from that of those who studied abroad. In Malaysia and Indonesia, it is becoming increasingly possible to obtain a domestic advanced degree regardless of discipline, while in Vietnam and Cambodia, the research environment in science and technology, including laboratory and workshop facilities, is not sufficiently developed, so it is still common for faculty members in these fields to obtain advanced degrees abroad.

2.5.3 Financial Resources for Studying Abroad and Destination Country

There are also significant differences in the financial resources for study abroad, depending on the

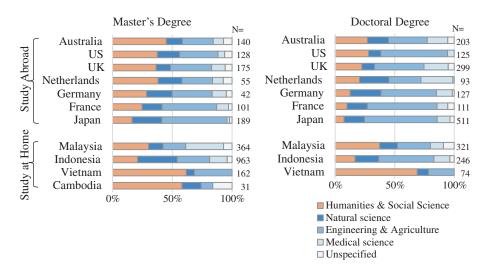


Fig. 2.8 Field of specialization of faculty members by destination countries. *Source* Created by the authors

Fig. 2.9 Financial resources for study abroad by destination countries. *Note* Total number of doctoral degree holders and master's degree holders in four focal countries. *Source* Created by the authors

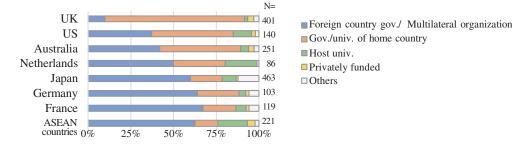
destination country. As noted in Sect. 2.4.3, most faculty members studying abroad in Malaysia, Indonesia, Vietnam, and Cambodia are financed by publicly funded scholarships. However, the sources of funding vary by destination (Fig. 2.9). In the case of Japan, Germany, and France, the majority received scholarships from the host government/international organizations rather than from their home governments. The opposite is true for those studying in the United Kingdom, with very few receiving scholarships from the UK government/international organizations but most from their home governments. Australia and the United States fall somewhere in between, with nearly equal numbers of faculty receiving scholarships funded by their home governments and those receiving scholarships funded by host governments/international organizations. Germany, France, and Japan are among the OECD DAC countries that spend the most on ODA-funded scholarships (OECD, 2023). By providing abundant scholarship opportunities through their ODA funds, these countries attract international students from developing countries.

Many of those studying in neighboring ASEAN countries (62%) are receiving foreign public scholarships for their studies. These scholarships are not likely to be provided by the governments of the destination ASEAN countries but by aid agencies. In fact, the Japan International Cooperation Agency (JICA), an aid agency of the Japanese government, has been working with the ASEAN University Network (AUN) on the AUN/Southeast Asia Engineering Education Development Network Project (AUN/ SEEDNet) since 2003. The AUN/SEEDNet project has supported engineering faculty members from top universities in ASEAN countries to pursue advanced degrees at universities in the region and in Japan. The total number of scholarships awarded up to 2022 is 276 recipients selected to study in Japan and 1,149 recipients chosen to study in ASEAN countries (AUN/ SEEDNET, 2022). The fact that about 60% of the faculty members studying abroad in neighboring ASEAN countries in this survey are in the field of engineering indicates the impact of the AUN/SEEDNet project. The intra-regional study abroad program of this project aims to not only improve the capacity of individual faculty members and their degrees but also create an academic network within the ASEAN region and improve graduate education at the host universities. In this way, development funds from donor agencies are in some ways driving the expansion of intra-regional study abroad.

2.5.4 Reasons for Choosing Destination Country

Reasons for choosing a study destination also varied by country of destination. In the questionnaire survey, respondents who had studied abroad were asked about their reasons for choosing their study destination countries. Figure 2.10 compares the reasons for country selection by major destination country. The United States has the highest





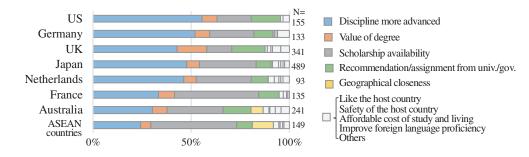


Fig. 2.10 Reason for selecting the destination country. *Note* Total number of doctoral degree holders and master's degree holders in four focal countries. *Source* Created by the authors

percentage (63%) of faculty members who cited high academic standards and the value of degrees as reasons for selecting the country. In addition, Germany, the United Kingdom, Japan, and the Netherlands are all countries where more than half of the faculty responded that high levels of education and research and the value of degrees were reasons for choosing these countries. In contrast, in the ASEAN countries, Australia, and France, fewer faculty members cited the advanced level of the discipline as a reason for their choice of country. The availability of scholarships was the main reason for choosing the country for a large percentage of faculty members who studied in ASEAN countries and France. In general, the availability of scholarships tends to be an important determinant in countries where academic standards and degrees are less highly valued, suggesting a complementary relationship between the two. It is noted in Sect. 2.5.3that many of the faculty members who studied in ASEAN countries received scholarships from development projects. However, without such projects, the number of faculty members studying in the region might have been somewhat lower.

2.5.5 Destination Countries: Changing Preferences

In the questionnaire survey for this project, faculty members without a doctorate were asked which country they would prefer as a future country of study for a doctorate, while those with a doctorate were asked which country they would choose "if given another chance." Figure 2.11 shows the comparison between actual destination countries and future preferred countries of study. The choice of study destination is often influenced by the nature of the scholarship, the advice of their supervisors, and the instructions of their home universities. As a result, faculty members are not always able to study in their country of choice. Therefore, these data show the countries that faculty members at leading universities in Southeast Asia consider to be the best countries in which to study if they were not influenced by external conditions.

The following two points can be made from these data. The first is the popularity of the United States. In all four countries, the actual number of faculty members who study in the United States is not necessarily high due to the limited number of scholarship opportunities, but the number of those who want to study in the United States is much higher than the actual number who go on to study there. Moreover, 80% of these applicants cite the country's academic standards and the value of its degrees as reasons for wanting to study there. In the other top destinations of Japan, the United Kingdom, and Germany, about 65% cite academic standards and the value of degrees as a reason for wanting to study in those countries, while in the Netherlands, France, and Australia, the percentage is about 50%. The desire to study in the United States is driven by an extremely high appreciation of the US higher education and research environment.

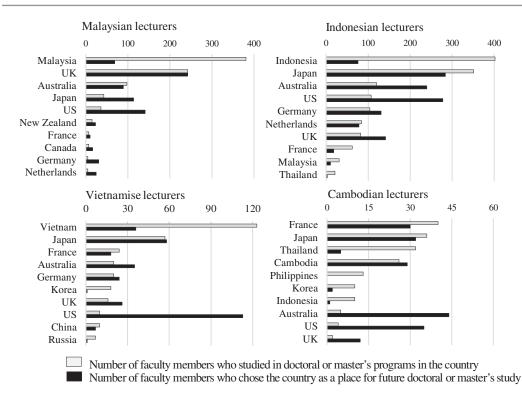


Fig. 2.11 Comparison between actual destination country and future preference. *Note* Total of doctoral degree holders and master's degree holders in four countries. *Source* Created by the authors

Second, although many faculty members in Malaysia, Indonesia, and Vietnam have earned master's and doctoral degrees in their home countries (see Sect. 2.4.1), when asked which countries they would like to study in, very few would name their home country, and there is a very large gap between the actual country for study and the future preference. Family circumstances and the low cost of studying and living are the most common reasons given for citing their home country as a potential study destination. Although domestic advanced degrees are becoming more common in Malaysia, Indonesia, and Vietnam, faculty members in these countries prefer to study abroad if circumstances permit. The same tendency applies to study abroad in ASEAN countries, with fewer applicants than faculty members actually studying in these countries. As noted in Sects. 2.5.3 and 2.5.4, most faculty members who study in ASEAN countries are studying on scholarships from aid agencies, but if asked, they would prefer to study in a developed country.

2.6 Discussion

Based on the analysis of study abroad and at home of faculty members at leading Southeast Asian universities, the following four points are important for understanding the growth of higher education in Southeast Asia and for analyzing the impacts of study abroad, which will be discussed in the following chapters of this volume.

The first concerns the mechanism of faculty members' study abroad at leading universities in Southeast Asia. The prototypical study abroad experience among faculty members in those universities was depicted through the large-scale questionnaire survey of this project. The main points can be summarized as follows. In general, two-thirds of the faculty members in leading universities hold foreign degrees. The number of domestic graduates is also increasing, but the proportion varies from country to country depending on the development level of domestic graduate education. The main destinations for the four focal countries are Japan, the United Kingdom, Australia, and the United States. There are also some cases of intra-ASEAN study abroad. Many faculty members receive scholarships from their home governments, host countries, or international organizations. The availability of scholarships influences the choice of destination countries. Home governments have large scholarship programs for faculty members to encourage study abroad and at home, with the exception of Cambodia. Similarly, host countries offer international student scholarships to encourage study in their countries.

The second is the similarity and diversity of various factors related to study abroad among Malaysia, Indonesia, Vietnam, and Cambodia. They have many similarities-but also significant differences-in terms of the level of development of higher education, domestic degree programs, destination countries, intra-regional study abroad in ASEAN, preferences for destination countries, policies for higher education and scholarship programs for study abroad, and foreign aid. For example, although many faculty members in all four countries wish to study in the United States, Malaysia has a large number of faculty members who study in the former colonial power, the United Kingdom, while Indonesian, Vietnamese, and Cambodian faculty members study in Japan and Australia. Scholarships from the Malaysian government are the main source of funding for study abroad in Malaysia, while scholarships from developed countries and international organizations are the main source of funding for Cambodian faculty. The policies of host and home governments and aid agencies have a significant impact on faculty members' choice of destination countries through the provision of scholarship opportunities. How these similarities and differences affect the impacts of study abroad is discussed in the following chapters.

The third point concerns the growth of higher education in Southeast Asian countries. The history of higher education in the region shows that, as Altbach (1989, 2003) notes, until about 1990, it was difficult to obtain graduate education of sufficient quality domestically, and almost all faculty members at leading universities received their master's or doctoral degrees from foreign universities. However, higher education in the region has undergone major transformations since the 1990s, including massification, internationalization, and privatization. It has expanded greatly in response to the growing demand for advanced education and, with the trend of globalization and internationalization, transnational education has developed through cooperation with overseas higher education institutions. The privatization of higher education in each country has progressed rapidly. As part of these changes, domestic graduate education has also developed and the number of faculty members pursuing advanced degrees at home has increased since about 2000, first at the master's level and then at the Ph.D. level, in Malaysia, Indonesia, and Vietnam, in that order. Although overseas study for doctoral degrees is still common in STEM fields, graduate education of sufficient quality is now available in some fields and countries.

The fourth is the development of academic exchanges within the region and the response to internationalization. The development of postgraduate education in Malaysia, Indonesia, and Vietnam is evidenced by the increase in the number of inbound international students from ASEAN countries. In this survey, 15% of those who studied abroad at the master's level and 5% of those who studied abroad at the doctoral level studied within the ASEAN region. This indicates that the development of higher education in Southeast Asia has led to increased academic mobility within the region. On the other hand, in Malaysia and Indonesia, the number of faculty members who studied abroad at the doctoral level remains high, although at the master's level, the number of domestic graduates has become larger than the number of foreign graduates. With the rapid internationalization of higher education, gaining international education and research experience through study abroad and building international academic networks are becoming increasingly important requirements for faculty members at leading universities. Southeast Asian countries must simultaneously respond to two distinct challenges: the need to promote domestic study to develop graduate education at home and the need for faculty to study abroad to respond to the internationalization of higher education.

2.7 Conclusion

Based on the above analysis and discussion, the following points are considered to be of particular importance for the future framework of faculty study abroad policies. First, the diversification of academic mobility stands out as paramount. After gaining independence, many developing countries developed their higher education systems by adopting the Western university model and sending their faculty members to Western countries for advanced studies. These efforts facilitated the transfer of knowledge and skills from the "center" of the global knowledge system to its "periphery" through study abroad initiatives (Altbach, 1981, 1989). However, as the economies and higher education systems of developing countries have progressed, the existing global knowledge system has evolved into a more complex and diversified entity. This study revealed that the destinations chosen by Southeast Asian faculty members have expanded from primarily Western countries to include Asian and Pacific countries. In addition, intra-ASEAN scholarly exchanges have also witnessed a notable increase.

Second, participation in an increasingly complex and diverse global knowledge system is taking on unprecedented importance. The global landscape of higher education continues to transcend borders, making academia increasingly borderless on a global scale. Such internationalization is of even greater importance in developing countries, where top-level domestic education and research institutions are often underdeveloped and limited in scope. Even in cases where graduate education is burgeoning, it remains imperative to provide prospective faculty members with opportunities to gain international experience and cultivate international networks through study abroad. This imperative must be balanced with the concurrent development of graduate schools in their home countries.

The third point is the importance of scholarship programs. As the analysis in this chapter shows, a significant proportion of faculty members from leading universities in Southeast Asia study abroad under various scholarship mechanisms. The availability of scholarships from home governments, host governments, international organizations, host universities, and private institutions often determines the feasibility of studying abroad and the choice of destination. Governments and universities must recognize the critical role that scholarship programs play in the development of university faculty. Various scholarship initiatives have consistently contributed to the advancement of university faculty members. However, in light of these findings, it is expected that more effective and coherent study abroad policies will be formulated in the future.

The analysis in this chapter reveals a diverse and dynamic picture of the study abroad experiences of faculty members from leading universities in Southeast Asia.

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Nobuko Kayashima, Ph.D., is Senior Research Advisor at the JICA Ogata Sadako Research Institute for Peace and Development. She joined JICA in 1982 and has played a leading role in the planning and implementation of JICA's education cooperation over the past four decades. Prior to her current assignment, she served as Senior Vice President, Director/Deputy Director of the JICA Ogata Research Institute, and Director General of the Human Development Department. While holding management positions at JICA, she has been actively involved in academic research activities and received her Ph.D. from Nagoya University for her research on the internationalization of Japanese universities.

Miki Sugimura, Ph.D. is a Professor in the Faculty of Human Sciences at Sophia University. She is a Research Fellow of JICA Ogata Sadako Research Institute for Peace and Development, a Visiting Professor at the United Nations University Institute for the Advanced Study of Sustainability, a Senior Program Officer at the Research Center for Science Systems at the Japan Society for the Promotion of Science, and Vice Chair of the Promotion of Sustainability in Postgraduate Education and Research. She was President of the Japan Comparative Education Society, and a board member of the World Council of Comparative Education Societies from 2017–2023. She worked for the International Expert Group on the revision of the 1974 Recommendation by UNESCO in 2022. She is a UNESCO Chairholder on Education for Human Dignity, Peace and Sustainability.

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3

Theorizing the Internationalization of Higher Education in Asia: Faculty Study Abroad Experiences on Leading Universities in Southeast Asia and Beyond

Kazuo Kuroda, Yuto Kitamura and Sae Shimauchi

Abstract

The history of Asian higher education in modern times has been defined by its close internationalization. relationship with Universities and higher education systems in many Asian countries were established in the modern era based on Western models, with study abroad programs from Asia to the West playing a major role in the modernization and development process. This historical process can also be seen through the lens of a dependency structure of knowledge, also referred to as the global centerperiphery relationship. Despite this, Asian higher education has made remarkable strides in the modern era, and the way it has

Y. Kitamura

Graduate School of Education, The University of Tokyo, Tokyo, Japan

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan

S. Shimauchi International Center, Tokyo Metropolitan University, Tokyo, Japan been internationalized—resulting especially from the study abroad experience of faculty members—has become a cornerstone of its independent development. This chapter discusses the theoretical relationship between internationalization and study abroad and the dynamic transformation process of Asian higher education toward independent development based on the results of empirical studies on the impact of faculty members' study abroad experiences on the transformation and development of higher education in four Southeast Asian countries.

Keywords

 $\label{eq:constraint} \begin{array}{l} \mbox{Internationalization} \cdot \mbox{Dependency theory} \cdot \\ \mbox{Modernization theory} \cdot \mbox{Flying geese model} \cdot \\ \mbox{Regionalization} \end{array}$

3.1 Focus of This Chapter

We examine how the study abroad experiences of faculty members of leading universities have impacted higher education in four Southeast Asian countries despite the four countries' different stages of development. We revisit the results of the empirical studies presented in this study, focusing on the geopolitical impact of the host countries on Southeast Asian higher education.

K. Kuroda (🖂)

Graduate School of Asia-Pacific Studies, Waseda University, Tokyo, Japan e-mail: kakuroda@waseda.jp

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan

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3.1.1 Residual Impacts of Studying in Former Sovereign Countries

Historically, Malaysia, Indonesia, Vietnam, and Cambodia, the countries covered in this study, were subjected to British, Dutch, and French colonial rule, respectively. There was also a brief period when most of Southeast Asia was occupied by Japanese military forces during World War II. These former European colonial powers played a specific role and had a strong influence over the establishment of modern higher education, as noted in the historical descriptions of the four countries and the ten target universities in this book. This study also reveals that the influence of the former colonial powers continues today, with the former sovereign countries comprising the main destination countries for the faculty members of the leading universities in these four Southeast Asian countries.

For the leading university faculty members in Malaysia who participated in this study, the United Kingdom was the host country for about half of those who studied abroad, while for faculty members in Vietnam and Cambodia, France was a major destination country along with Japan. For the leading university faculty members in Indonesia, the Netherlands was also a destination country for study, along with Australia, the United States and Germany. This can be attributed to the historical affinity of the higher education systems with the former colonial powers, who have continued to provide scholarships for elite education to their former colonies. This study found that many faculty members from Southeast Asia in continental European countries such as France and the Netherlands (and Germany) are studying abroad on scholarships provided by these countries, confirming that scholarships provided by the former colonial powers play a specific role in maintaining historical international relations in higher education. It was also confirmed in this study that these continental European countries are not only attracting foreign students by offering scholarships but are also developing various

forms of educational cooperation in Southeast Asia, such as establishing international education programs utilizing Official Development Assistance (ODA) to establish joint international universities and promote shared opportunities for research. Aside from these former colonial powers, Japan has become a distinct main destination country.

3.1.2 Emergence of Study Abroad Destinations in Northeast Asia

One of the most noteworthy findings of the survey was Japan's significant contribution as a destination country for leading university faculty members in four Southeast Asian countries. For Indonesia, Vietnam, and Cambodia, Japan was far ahead of the second-ranked countries (Australia and France) as the destination country for the leading university faculty members who obtained doctorates. For Malaysia, Japan was the third-ranked country, following the United Kingdom and Australia. We also found that most of these faculty members studied in Japan with scholarships provided by Japan (likely from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) or JICA). In addition, like continental European countries, Japan has not only provided scholarships to attract foreign students but has also engaged in multilayered cooperation in the field of higher education, including the establishment of international joint universities such as Vietnam Japan University (VJU) and Malaysia-Japan International Institute of Technology (MJIIT) through ODA. Japan has also provided support for the formation of a network of leading engineering universities in ASEAN (AUN/SeedNet). South Korea has become one of the major destination countries for university faculty members from Vietnam and Cambodia. Finally, it has become a popular destination for the younger generation in Southeast Asia. As a regional policy, the ASEAN+3 framework for higher education cooperation and quality assurance has been making steady progress.

On the other hand, of the approximately 3,300 university faculty members who responded to the survey, it is surprising that only 15 had studied in China. It is well-known that China's higher education developed rapidly in the 2000s, attracting a large number of foreign students from Southeast Asia and other parts of the world. However, the country of destination and degree acquisition for faculty members of leading universities in Southeast Asia has not yet reached a stage where the results of such efforts are visible. The Belt and Road initiative regards Southeast Asia as a strategically important region, and China's presence in the region may expand further in the future.

3.1.3 Intra-Regional Study Abroad in Southeast Asia

The cooperative framework for student exchange within the Southeast Asian region has made significant progress. This is largely due to increasing ASEAN integration, and it has been spearheaded by AUN and SEAMEO. In this research, the survey confirmed that a certain number of university faculty members from Cambodia and Indonesia study abroad in their own region of Southeast Asia, especially in Thailand and Malaysia. Although their numbers are not comparable to those of their counterparts studying in developed countries, such as Europe and Japan, further growth can be expected in the future, given the rapid development of higher education in the region as a whole and the progress of the ASEAN and SEAMEO cooperation frameworks. In this regard, the contribution of the AUN/SeedNet project for mobilizing the engineering faculty members within Southeast Asia should be noted.

3.1.4 Pursuing Higher Education in the US, UK, and Australia

In this survey, a specific advantage for destination countries such as the United States, the United Kingdom, and Australia is that they are English-speaking countries, which makes them attractive to faculty members of leading universities in Southeast Asia. It was also found that, compared to continental Europe and Japan, studying abroad in these three English-speaking countries is more likely to be funded by scholarships from the home government or the host universities. This survey also found that, excluding Japan, these three countries are the ones that university faculty in the four Southeast Asian countries most wanted to study abroad in the future. In Malaysia, the social and cultural prestige of the former sovereign nation is still deeply rooted in the society and culture, which may contribute to the popularity of studying in the UK. On the other hand, the interviews from the other countries confirmed that the presence of many US, British, and Australian universities at the top of the world university rankings makes these three countries attractive destinations for study abroad. The increasing importance of English in society and the growth of the political economy as the ASEAN market becomes more integrated may be another reason for the popularity of English-speaking countries as destinations for study abroad.

3.1.5 Autonomous Development of Higher Education in Southeast Asia

In the four Southeast Asian countries—each at a different stage of development-this study found that there has been a gradual shift toward autonomous development of graduate education. In Malaysia, Indonesia, and Vietnam, the number of students obtaining degrees at the master's level in their home countries is now higher than those obtaining degrees through study abroad. In Malaysia, even at the doctoral level, the recent trend toward obtaining degrees in the home country shows that local Ph.D. degrees have become mainstream. Malaysia has succeeded in fostering researchers domestically by developing universities with strong research capabilities, leading to higher placement in the world university rankings. Malaysia has also 50

become a regional core for study abroad by accepting degree-seeking students from within ASEAN and Islamic countries. In Indonesia and Vietnam, many faculty members still obtain their doctoral degrees by studying abroad, but the number of doctoral degrees obtained in their home countries is also steadily increasing. However, in Cambodia, which is at a lower stage of development, graduate education (both master's and doctoral) of university faculty members is still mainly conducted through study abroad, although there have been some efforts to offer more graduate education at these leading universities in recent years.

3.2 Theoretical Perspectives

3.2.1 Study Abroad from a Dependency Theory Perspective

Theoretical perspectives on university faculty study abroad in developing countries include approaches based on modernization theory and human capital theory, as well as dependency and neo-colonialism theories. Dependency and neo-colonialism theories posit that the cause of "underdevelopment" in developing countries is the historical exploitation relationship between the "center" and the "periphery," and were examined by Galtung (1971) and Frank (1972). An equivalent version of this dependency and exploitation relationship also exists in education. Comparative education scholars such as Carnoy (1980) and Arnove (1980) have argued that the uncritical acceptance of "modern education" by developing countries in the international open system, study abroad from developing countries to developed countries, and international educational cooperation led to a deepening and structuring of the dependency of developing countries. Freire (2000) and Illich (1970) also found a situation of dependency in the educational situation (not necessarily in higher education) in developing countries even before the conceptualization of dependency theory. They advocated for "conscientization" and "deschooling" to break these conditions, which greatly influenced the educational movement in developing countries. These ideas were carried over to the discussion of utilizing local knowledge and fostering endogenous development.

Dependency theory was also developed around higher education (Mazrui, 1976). A historical review of the formation process of modern higher education systems in developing countries confirms that in many countries, higher education systems have been built on the model of Western higher education. In Southeast Asia, where traditional institutions of higher education have existed since pre-modern times, modern higher education was established in a way that was detached from such traditional systems of academic research and education. This was because the foundation of modern higher education was laid in countries under colonial rule by Western countries, where the higher education system and language of instruction of the suzerain state were enforced. On the other hand, countries such as Thailand, which maintained independence from colonial rule, voluntarily found models in the higher education systems of Western countries and actively introduced these systems in the process of developing a modern higher education system. After independence from colonial rule, Asian higher education systems were localized to some extent, but their Western characteristics were preserved.

Later, during the Cold War, differences in political systems had a major impact on the state of higher education and academia in Southeast Asia. However, with the prosperity of the US economy and the consequent strength of its higher education system, the American model of higher education became a major influence on Asian higher education reform. Studying abroad in university programs during these times only fostered the vertical relationships that already existed between developing and developed countries within a dependency knowledge system. In addition, universities were enclosed within the Eastern and Western spheres of influence, divided by the Cold War. This fulfilled the premise of a dependency global knowledge system, with Western universities as the center on the one hand, and universities in developing countries, including Asia, in the periphery. Hence, vertical university linkages were promoted, and the so-called neo-colonial dominant-dependency relationship continued. After the Cold War, in the midst of the process of marketization, internationalization, and the English language becoming the lingua franca, the higher education systems of the US, UK, and Australia—with their top-ranked international universities—began to exert greater influence as models.

Capturing this situation, Altbach, who appeared at the beginning of this book, has proposed a center-periphery theory of international knowledge and higher education systems from the perspective of dependency theory and neocolonialism (Altbach and Selbaratnam, 1989; Altbach, 1998; Altbach, 2004). His argument is that universities in developing countries have been in a dependency relationship between developed and developing countries from the time of their foundation, and that the system formation has remained largely unchanged. The relationship between universities in developing countries and developed countries based on such a dependency system inevitably tends to be determined by developed countries, where the system of knowledge is called the center. And the universities in developing countries, located on the periphery, start to worship the culture and consumption patterns of developed countries due to the progress of internationalization, thereby neglecting or ignoring their own culture and social systems. What is being done in the name of internationalization is in reality akin to Westernization. In particular, dependency theory derives from a critical view of the study abroad of university faculty from developing countries to developed countries, arguing that the training of elites in the periphery who pander to the center has the effect of making the dependency on knowledge more structural, rather than moving in the direction of breaking off the relationship. Thus, Altbach's argument has been recognized as one of the most dominant theoretical perspectives in the field of international higher education, a field which he himself initiated.

However, this poses the question of whether it is reasonable to view higher education in Southeast Asia as a periphery dependent on the center of the West at the present day. In the global context, higher education in Western countries still has a particular influence. But now that higher education in Asia, including Southeast Asia, has been dynamically transformed and developed quantitatively and qualitatively, the argument that a structural relationship between Western and non-Western higher education systems could even be positioned as center-periphery is not as convincing. In the context of this historical development, when we consider the study abroad of university faculty members within East and Southeast Asia, we can see that the horizontal and networked nature of this relationship overcomes the dependency theorists' understanding of higher education in Asia. Two theoretical interpretations/hypotheses can be attributed to this networked nature of study abroad.

The first interpretation concerns the composition of intra-regional study abroad within Asia, still positioned within the framework of a dependency theorists' worldview. In this understanding, the periphery side attempts to achieve solidarity and oppose the center to break the dependency on knowledge. However, in order to correct the dependency structure, developing countries undertook activities such as the Asian-African Conference and the United Nations Conference on Trade and Development (UNCTAD). Developing countries sought to achieve their goals through solidarity by establishing anti-imperialist solidarity political movements, revising market rules and price-setting mechanisms by developed countries, and liberating monopolized resources. Compared to these confrontational claims of political economy, the current situation of Asian faculty members' study abroad is open and non-confrontational, even to those outside the region. Looking at the process of forming a quality assurance framework in Asia and the adaptability of Asian universities for international university rankings, the argument of conducting faculty study abroad within the Asian region as a way to promote solidarity within the periphery side does not sound persuasive.

3.2.2 Modernization Theory and the Flying Geese Model

The above argument brings into question the idea that dependency theory can account for the reasons why Southeast Asian university faculty members study abroad and the impacts that their study abroad experiences have on Southeast Asian universities and societies. The most mainstream theoretical explanations for these questions can be found in modernization theory. As presented by Rostow (1959) and others, modernization theory is based on structural functionalism, the idea that all societies develop in the same direction as linear forms. In modernization theory, social development is realized not only through the transfer of capital, knowledge, and technology from developed to developing countries but also through the embodiment of modernity in social systems and people's attitudes and ways of thinking. Therefore, it can be absolutely affirmed that the study abroad of university faculty members from developing countries to developed countries will bring back knowledge and technology and insights into the manner of knowledge production and the ways of thinking of people from developed countries. This will come about through their education and experience of administrative practices at foreign universities. Such a positive correlation between education and modernization can be described as a positive view of the "enlightening" colonial education provided by the suzerain state. Despite structural criticisms from the standpoint of dependency theory and cultural relativism against a view of development that takes the social culture of developed Western countries as a model for educational development in developing countries, modernization theory has been accepted as a presupposed hypothesis for contemporary mainstream development cooperation

and educational development policies in developing countries.

Cummings (1997), in the final chapter of his and Altbach's co-edited book, *The Challenge* of Eastern Asian Education: Implications for America, describes the core of a shared human resource development strategy in the Asian context. He names this the "J-model," and describes it as follows.

- The state coordinates education and research with a firm emphasis both on indigenous value transmission and the mastery of foreign technology.
- (2) High priority is placed on universal primary education, while state investment at the secondary and tertiary level is limited primarily to critical areas such as engineering and the sciences.
- (3) Individual students, their families, and the private sector are expected to provide critical backup for the education provided by the state.
- (4) The Asian state in seeking to coordinate not only the development but also the utilization of human resources involves itself in manpower planning and job placement and increasingly in the coordination of science and technology (Cummings, 1997, 275–276).

The J-model, in other words, is the Japanese model. Cummings argued that the Japanese model significantly impacted the educational development of East Asian countries such as Korea, Taiwan, Thailand, Singapore, Malaysia, and Indonesia and became the educational model that supported the human resource development of East Asia as a whole. The J-model was a variant of modernization theory, perceiving the significance of study abroad and international educational cooperation in the transfer of such a model. A quarter of a century has passed since the J-model discussion, and during this time, the validity of this model, with Japan placed at the top, has completely eroded. However, there is room for reconsideration of a different version of the model-one

in which education in Asia develops through interconnectedness.

Umakoshi (2004) once pointed out the limitations of the center-periphery theory as a theoretical approach to deciphering the current state of Asian higher education. There is, Umakoshi finds, some usefulness in the World Bank's discussion of the "East Asian Miracle" which attributes the economic success of East Asia to the role of strong governments and well-established education systems, and the Flying Geese model, which compares the spread of the Japanese economic development model to East Asian countries to a flying formation of geese (Umakoshi, 2004). This discussion of the historical development of higher education in Asia has a certain usefulness as a perspective to comprehend the historical development of higher education in Asia. Applying his argument to the role of university faculty members studying abroad in Southeast Asia, we can adopt the position that this will strengthen and develop the mutual connectivity, linkages and close relationships with economic development that Asian higher education already possesses. It is not a relationship in which one particular higher education system or institution intellectually depends on another, exploiting and being exploited. Rather, it is an image of geese flying in a V-shaped flock, in which all the linked actors develop at the same time, and the birds flying at the apex of the formation are replaced in turn. To this end, it is important to ensure that the framework for regional cooperation is open to the outside region. Just as Asian economies have achieved their initial development, supported by the openness of the economies outside the region (specifically, North American consumption), it will be essential for Asian higher education to find ways to connect and stay connected with higher education outside the region.

If we look at regional international higher education collaboration merely as a model for countering extraterritoriality, it is likely to only encourage blocs and will not contribute to the development of global higher education. Southeast Asian higher education, which is diverse but has reached a considerable level in both education and research, must aim for intra-regional harmonization as well as cooperation with those outside the region. In this sense, the dialogue on higher education between the two regions that has been developing within the framework of the Asia-Europe Meeting (ASEM) and the promotion of inter-regionalism with higher education in North and South America in the framework of the Asia–Pacific region point to substantial possibilities for the future of regionalization.

3.2.3 Applying a Regional Integration Theory Perspective

The internationalization of higher education in Southeast Asia is developing in a multilayered manner within various regional frameworks, such as Southeast Asia, East Asia (ASEAN+3), and the Asia-Pacific. The formation of these frameworks has also affected the study abroad of university faculty members. In particular, the cooperation framework between ASEAN and SEAMEO in Southeast Asia and ASEAN+3 has become more institutionalized than other regional frameworks, with the ASEAN+3 Higher Education Policy Dialogue initiated by SEAMEO-RIHED in 2009. In 2012, the ASEAN University Network, together with major universities in the three Northeast Asian countries of Japan, China, and Korea, formed the new ASEAN+3 University Network. In recent years, the ASEAN+3 Working Group on Mobility and Quality Assurance in Higher Education has also become more active, and international higher education collaboration in East Asia appears to be driven by Southeast Asian programs. This is in line with the fact that ASEAN has taken the initiative in regional cooperation movements in both political and economic fields in the region, starting with the ASEAN+3, the East Asia Summit, and the Regional Comprehensive Economic Partnership (RCEP).

In international political science and regional integration theory, the process by which Japan, China, and Korea in Northeast Asia join Southeast Asia to form a regional framework in Asia is not considered a "hub-spoke system." A hub-spoke system is one in which a large country or market takes the lead in promoting integration while involving neighboring countries and markets. The current situation has been described instead as a "reverse hub-spoke system," in which a relatively economically weak Southeast Asia engages stronger Northeast 2006: Yamamoto, Asia (Baldwin, 2007). This objective is becoming a reality through the establishment of regional frameworks in higher education. On the other hand, various ASEAN+1 frameworks for higher education cooperation exist between Southeast Asia and Japan, China, and Korea. The addition of Japan and Korea to the ASEAN International Student Exchange (AIMS) program promoted by SEAMEO-RIHED, mentioned above, is a useful example of this. However, there are also various ASEAN+1 programs with China and Korea in AUN and SEAMEO-RIHED, respectively. In the future, it will be important to develop such a framework not only for student exchange but also for the promotion of faculty members to study abroad and obtain degrees and the promotion of international joint research.

The Campus Asia framework was established in 2010 by Japan, China, and Korea to promote student and faculty exchange and cooperation for quality assurance of higher education in the region. The framework began its third phase in 2021 and has started to include Southeast Asia in addition to Japan, China, and Korea. It is hoped that a systemic cooperative relationship will be established throughout ASEAN+3 higher education, through the efforts of universities selected for Campus Asia projects and collaboration on quality assurance and policy dialogue. Meanwhile, various international collaborations are making progress in the Asia-Pacific region, although the participating countries and forms are diverse. In particular, University Mobility in Asia and the Pacific (UMAP) and Asia Pacific Quality

Network (APQN), whose current members include Northeast and Southeast Asian countries and Oceania, have promoted discussions on credit transfer and regional quality assurance in higher education and have become a coherent framework. In this way, it is hoped that the internationalization of higher education will further develop its focus on student mobility and establish new programs to promote study abroad for faculty members.

Asia is a much more varied region than Europe, with diverse political systems, languages, and religions existing within the region, along with significant economic disparities. Similarly, there is great diversity in the state of higher education. In order to promote cooperation in higher education in such a context, there is a great need to harmonize higher education systems, including the establishment of a regional quality assurance system for higher education, a functioning credit transfer system, and integration of academic records. However, higher education in Asia should not be too standardized like a melting pot-rather, it should continue to be characterized by its diversity and dynamism like a mosaic (Kuroda, 2013). In this light, it is not a problem that the regional framework of higher education in Asia is multilayered across Southeast Asia, Northeast Asia, East Asia, and Asia-Pacific. On the contrary, it is necessary to work with such diversity. In the future, it will be necessary for these multilayered regional frameworks to share roles proactively and promote mutual exchanges of information and collaborations to ensure there is consistency of activities among the frameworks.

3.3 An Open-Ended Conclusion: Study Abroad for Peace

The most representative policy philosophy regarding the social significance of studying abroad was the concept of achieving peace through international and intercultural understanding (Ebuchi, 1997). The idea of linking international educational activities with international understanding and peace spread after

World War I and became generalized after World War II. UNESCO, an international organization, was founded on the idea that "since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed." This was stated in the preamble to its charter, adopted in 1945 (UNESCO, 1945). It has also been the most fundamental guiding principle in the process of formulating the framework. In the process of forming the regional international higher education cooperation in Europe, the creation of European citizenship awareness, mutual understanding, and trust building among member countries were also positioned as essential goals. International higher education cooperation in Europe was recognized not as a mere return to the intellectual community of medieval Europe but as a process for building a "concept of a People's Europe" among the people of this region, who had experienced various wars in the modern era (European Commission, 1989). Theoretically, from the standpoint of neo-functionalism, there was the idea that the development of functional cooperation in the region would lead to a political spillover (Haas, 1958) and that deepening functional cooperation would contribute to regional integration and peace through the convergence of human values. The position of the pluralistic security community theory (Deutsch 1957) has been a theoretical pillar of regional international higher education cooperation in Europe. However, this idea cannot be directly applied to the study abroad of university faculty in Southeast Asia. Looking at ASEAN today, we do not necessarily see the integration of people's values and political systems. However, respect for sovereignty and peaceful resolution of disputes are repeatedly asserted and agreed upon in international negotiations and agreements. Regional integration has been achieved not in terms of values themselves but only in terms of the normative aspects of relationships within the framework. This new view of ASEAN as a pluralistic security community has been widely accepted by the academic community (Acharya, 2001).

There are various historical, political, and cultural sparks of conflict in Asia, not to mention the recent frictions between Japan, China, and South Korea over historical perceptions and territorial disputes, as well as the US-China confrontation, to name a few. Dispatching university faculty members to study abroad also requires such an orientation toward the achievement of peace. In doing so, it is desirable that international higher education exchanges promote not only the possibility of converging people's values but also the basic principles of peaceful resolution of conflicts, the practice of dialogue, and understanding others rather than assimilation. International higher education exchange in Asia can only contribute to the achievement of peace in the region with such principles.

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Kazuo Kuroda Ph.D. is a Professor at Waseda University, Graduate School of Asia-Pacific Studies and a Visiting Research Fellow at the JICA Ogata Sadako Research Institute for Peace and Development. He graduated from Waseda University (BA, 1989), Stanford University (MA, 1993) and Cornell University (Ph.D., 1996). He has long been interested in the internationalization of higher education in Asia and the global and regional governance of education. He has held positions at the Overseas Development Council in Washington, DC and Hiroshima University before joining Waseda. His most recent authored book is *A History of Japan's International Cooperation in Education* (2023), published by the University of Tokyo Press.

Yuto Kitamura Ph.D., is a Professor at the Graduate School of Education and Director of the Center for Advanced School Education and Evidence-Based Research at the University of Tokyo and a Visiting Research Fellow at the JICA Ogata Sadako Research Institute for Peace and Development. He received his Ph.D. from UCLA. He held positions at UNESCO in Paris, Nagoya University and Sophia University before moving to the University of Tokyo. He is currently a Member of the Board of Education at Tokyo Metropolitan Government. He was awarded the JSPS Prize in 2018, one of the highest honors for young scholars in Japan and received an Honorary Doctorate in Social Sciences from Stockholm University in 2020.

Sae Shimauchi Ph.D. is an Associate Professor at Tokyo Metropolitan University, International Center. Her expertise lies in the internationalization of higher education, global studies, global sociology and cultural studies, ranging from theory to practice. Her research work includes the following publications: Paradigm Shift on International Student Mobility in East Asia (published by Toshindo in 2016), Global Studies of Undergraduate Education (co-edited by Yonezawa, Shimauchi, and Yoshida, published by Akashishoten, 2022) and "English-medium Instruction in the Internationalization of Higher Education in Japan: Rationales and Issues" (published in Educational Studies in Japan, 2018). Her most recent article is "Thai Boys Love drama fandom as a transnational and trans-subcultural contact zone in Japan," published in the journal Continuum in 2023.

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Part II Impacts of Faculty Study Abroad on Higher Education in Malaysia



4

Higher Education Development and Study Abroad Experiences of Faculty in Malaysia

Morshidi Sirat

Abstract

There are five distinct eras in the development of the Malaysian higher education system. Each era has been marked by legislation and strategic policy intentions that have enabled strong state interventions in the development of the system. Policy implementation inevitably requires adequate resources, talent, and effective governance. The primary task of the Malaysian higher education system and institutions has shifted from planning the development of human resources to planning for and producing human capital. There has also been a marked shift from an elitist form of higher education to one typically described as a mass system. Until the late 1990s, the development of human capital and talent was achieved through various study-abroad programs, particularly for preand in-service university academics, those requiring sub-speciality training, and postdoctoral programs. The Malaysian higher education system has also been continuously exposed to the forces of globalization and the internationalization of higher education. Malaysia's commitment to improving

its global university rankings has meant that study-abroad destinations need to be country- and institution-specific. Generally, time spent abroad has benefited Malaysians when they are back in Malaysia serving universities. However, challenging economic circumstances may require a reconsideration of the approaches used to achieve international exposure for academic staff.

Keywords

Malaysia · Human capital · Higher education · Study abroad · International cooperation

4.1 Overview of Higher Education Development History

While the initial development of higher education in Malaysia was very much a post-independence Malayan effort, it was the British colonial administration that first proposed the need to establish a rudimentary system of postsecondary education. Following the withdrawal of colonial rule in the late 1950s, initiatives to promote higher education by the government of the newly independent Malaya were arguably guided by the pressing need for a pool of qualified civil servants and professionals

M. Sirat (🖂)

National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia, Penang, Malaysia e-mail: morshidi2012@gmail.com; morshidi@usm.my

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to administer the machinery of the nascent government.

In a systematic analysis of the Malaysian higher education system, Morshidi and Wan (2016) characterized the evolution of Malaysian higher education into five distinct eras: Era 1: 1959–1969, Era 2: 1969–1996, Era 3: 1996– 2004, Era 4: 2004–2013, Era 5: 2013 and beyond. Each era is characterized and marked by watershed events. For instance, the watershed event that defined the shift from Era 1 to Era 2 was the May 13 racial riots, which led to the introduction of the New Economic Policy (NEP) as well as the Universities and University Colleges Act (UUCA) 1971. Likewise, the watershed event between Era 2 and Era 3 was the legislative reforms in the higher education system that, in turn, led to the introduction and revision of several legislative acts concerning higher education. The establishment of the Ministry of Higher Education (MOHE) in 2004 and the merger of the MOHE with the Ministry of Education (MOE) in 2013, the separation in 2015, and then the re-merger in 2018 following the change of government in Putrajaya were other important watershed events that defined the transitions across the third, fourth, and fifth eras. However, based on this historical framework, it is still possible to identify the event in 1980—within Era 2—as being crucial in terms of human capital development in Malaysia. In fact, 1980 represented the halfway mark of the New Economic Policy, launched in 1970, with the goal of restructuring Malaysian society in terms of economic and social positioning.

Apart from the strong state intervention through legislation, the Malaysian higher education sector in this second era was also characterized by the changing nature of public universities. Arguably, this era was the beginning of the shift from an elitist form of higher education to one that is typically described as a mass system. Previously, the primary role of public universities was to prepare a small group of civil servants and administrators to govern and manage the newly independent country. But since then, universities have broadened their roles to include supplying skilled human resources for the rapidly expanding economy. They have also worked to remove ethnic disparities in employment and economic opportunities. Therefore, while higher education plays an economic role in the development of Malaysia, it has an even more essential role in nation-building and addressing equity issues.

Arguably, to sustain or even hasten the restructuring of society and the professions, the period after 1980 saw the beginning of a phase where the government established several public universities. By 1995, another four public universities had been established, reaching a total of nine. These efforts were designed to promote human resource development for a newly industrializing country and to implement a human capital agenda for a country aspiring to be a developed nation. The gross enrollment ratio (GER) for higher education also increased significantly-from 4% in 1980, 7% in 1990, 25% in 2000, and further to 37% in 2010 (UNESCO Institute for Statistics, 2014). In terms of student numbers, only 323 students were enrolled in 1959 at the inception of the University of Malaya (UM) campus in Kuala Lumpur (Selvaratnam, 1985). Since then, student enrollment in public universities has increased dramatically, rising to 86,330 students in 1985, then 189,020 students in 1995, and 213,599 in 2002, with 71,278 students also studying in private higher education institutions (Lee, 2004). As of 2013, there were more than 500,000 students in public universities, close to 50,000 in public polytechnics and community colleges, and more than 480,000 in private HEIs (Ministry of Higher Education, 2014).

Underlying this significant numerical growth, the expansion of higher education—typifying the trend toward the massification of higher education—has been supported financially by the state. This can be seen in the percentage of expenditure on higher education, which has remained consistent at more than 30% of the total expenditure on education in recent decades. Besides financial support, it is interesting to note that, while there was no legislation to govern the higher education system six decades ago, there are currently nine separate pieces of legislation that directly influence the development of higher education in Malaysia (Zainal et al., 2013).

From 1996 onwards, a series of legislative reforms were introduced into the higher education sector. Prior to 1996, the private higher education sector was minimally regulated. The Malaysian economy was relatively weak following the major economic crisis of the late 1980s in Asia. As a result of this crisis, for some time, the increased demand for higher education had to be met locally. The weak economy and unfavorable exchange rate of the Malaysian currency prevented many students from furthering their studies abroad. The cumulative effect of these economic problems and the opportunity to develop the Malaysian higher education system and institutions in terms of quality and affordability were influencing factors that prompted the legislative reforms beginning in 1996. In addition, the early 1990s was a period during which globalization and the internationalization of higher education across the South-East Asian region began to have an impact on the Malaysian higher education and institutional systems, with significant potential for attracting international students to the private sector. With the surge in demand for places in the system from local and international students, the private sector-which had benefited tremendously from this trendneeded to be regulated properly. With privatization and the private sector as major drivers for the economy, the higher education sector was not exempted from these reforms as they swept across the Malaysian economic sectors.

In 1996, the Malaysian Parliament amended and introduced six legislative acts relating to higher education. The newly enacted legislation included the Private Higher Education Institutions Act (PHEIA), the National Council on Higher Education Act (NHECA), the National Accreditation Board Act (NABA), the Education Act, and the National Higher Education Fund Corporation Act (NHEFCA). In addition to this new legislation, the Universities and University Colleges Act (UUCA) was amended to lay the framework for the corporatization of PHEIA (Act 555), private HEIs were officially recognized as contributing to national development, a watershed that marked the beginning of the fastest-growing subsector in the Malaysian higher education system. While 130,000 students were registered in private institutions in 1995, comprising about 35% of the total tertiary student enrollment, that number had increased to 203,000 five years later in 2000. This accounted for 53% of the total higher education student population (Tan, 2002). The number of private HEIs also increased from 156 in 1992 to 707 in 2002 (Lee, 2004).

The late 1990s signaled the beginning of a highly regulated dual system in the higher education sector, overseeing both the public and private systems (including public–private partnerships). The impressive growth of the private higher education sector has led to a system where public and private HEIs can co-exist, with elements of competition and complementarity in terms of students, academics, and programs offered (Wan, 2007). For some time, competition mostly occurred between private HEIs. This was because private HEIs were intended to complement the public higher education sector rather than compete with it.

The Ministry of Higher Education (MOHE) was established in 2004. Between 2004 and 2013, important developments were observed in the higher education system. With the establishment of several international branch campuses, the private higher education sector could be further subdivided into the international branch campuses sub-sector and the Malaysian private higher education institutions sub-sector. While all private higher education institutions in Malaysia were established under Act 555, in terms of quality assurance, the international branch campuses also received quality assurance from their home country system. The establishment of MOHE underlined the importance of higher education in propelling Malaysia into a knowledge-based economy and for Malaysia to achieve its vision of becoming a developed nation. Driven by the need for a national strategic direction for higher education, the first initiative of the MOHE, following its establishment, was to develop a blueprint for establishing Malaysia as a regional hub for higher education. In 2007, MOHE launched the National Higher Education Strategic Plan (NHESP), which formulated the vision of transforming Malaysian higher education into an international hub of higher education excellence with the goal of producing first-class human capital (Ministry of Higher Education, 2007).

With the education hub ambition comes reputational development and brand-building in the exceedingly competitive higher education market. Policies were introduced to push Malaysian universities to become "world-class" institutions based on their rankings. Universities, in turn, developed institutional strategies to compete in national and international ranking tables. Along with these strategies, universities adopted performance management systems to promote effectiveness and efficiency, thereby creating a culture of academic scholarship assessed by quantitative measures. These steps have two implications. On the one hand, they have altered the local academic culture by placing greater emphasis on research activities (Azman et al., 2012, 2014); on the other hand, they have created unrealistic expectations across a variety of fronts that have become a major source of frustration among academics (Wan et al., 2014).

The importance of research and publications in the ranking exercises has motivated the MOHE to recognize five public universities as research universities, with the aim that they would "be at par with world renowned universities" (Government of Malaysia, 2006, 258). The importance of research and the active involvement of higher education institutions in this endeavor have prompted the MOHE to devote greater attention to strengthening research, development, and innovation activities in the universities, which—as shall be discussed later—has impacted on human resource policies at the government and institutional levels.

After the General Election of 2013, the MOE and the MOHE were merged to establish the Ministry of Education. The purported rationale was to ensure that the entire spectrum of education could be put under the purview of a single ministry to ensure continuity in planning and to provide proper coordination throughout the whole education system from primary to secondary to tertiary and higher education. This arrangement, therefore, marks the beginning of another era and was the precursor to the idea of a Higher Education Blueprint to realign higher education with primary and secondary education. In July 2015, however, a renewed MOHE was established, separate from the MOE. However, even following this separation, the idea of a new Higher Education Blueprint aligned with the Malaysian Education Blueprint (MEB) was pursued with greater focus and drive. Under the Malaysian Education Blueprint (Higher Education) (MEBHE) 2015-2025, universities and other HEIs have become important and complex institutions that not only educate and train future human resources for the economy but are also mandated to produce holistic and balanced citizens. The role of universities in creating and disseminating knowledge in a knowledge-based economy will be crucial for Malaysia in transforming itself from a middleto high-income nation.

In May 2018, the 14th General Election (GE14) saw the formation of a new government in Putrajaya, and yet again, the MOHE was merged with the MOE, and the Higher Education Sector was established within the MOE. Between 2018 and 2019, little was laid out in terms of the higher education strategic intent of the new government. Publicly, it is said that all the policies indicated in the Higher Education Blueprint are to be pursued. However, the COVID-19 pandemic, which started in early 2020, has resulted in debilitating disruptions and upheavals across the higher education system. This has affected internationalization activities, with Malaysians preferring to study locally until travel abroad is less inconvenient. Arguably, during the immediate post-pandemic era, there will be a need to reconsider and refine the MEBHE in order to adapt to the new higher education circumstances leading up to 2030 (Morshidi & Abdul Razak, 2021).

The 15th General Election (GE15) was held on 19 November 2022. The snap election was held as a result of a political crisis ongoing since 2020. After GE15, a unity government was formed, and since then, the MOHE has been led by Mohamed Khaled Nordin, a former Minister of Higher Education. The Minister has initiated 11 aspirations. Starting in 2023, these milestones will provide much-needed impetus and guidance to boost the Malaysian higher education sector. One aspiration, "strengthening Malaysia's intellectual resources and talent empowerment through increased investment in postgraduate training, doctoral and specialized expertise," is highly relevant to the context of this chapter. This aspiration will be achieved in part by sending future talent abroad to study.

In summary, since 1990, the primary task of Malaysian higher education institutions has shifted from simply planning for the development of human resources to planning and producing human capital. This goal was deemed important thirty years ago in the context of Malaysia aspiring to be a developed nation by 2020. Table 4.1 summarizes the content of Human Resources Development (HRD) policies in Malaysia across the various national development plans, providing the context of HRD policies and strategies at the ministry and universities. The shift toward a human capital focus from human resources was spelled out in the first comprehensive plan for higher education-the National Higher Education Strategic Plan 2020 (NHESP), launched in 2007. A follow-up plan, the Malaysian Education Blueprint 2015 (Higher Education) (MEBHE), re-emphasized the role of universities and other HEIs in producing graduates for industry. In the context of a push to produce industry-ready graduates, the government insisted that public universities, in particular, have to take the views of university-industry panels into consideration when reviewing university curriculums. Recently, in the context of the need to align itself with the Fourth Industrial Revolution (4IR) and the emphasis on advances in technology-while not pushing humans to the sideline-there has been a shift in government policy intent toward the development of humans (or human development) as opposed to merely human capital.

The Malaysian higher education system is currently made up of 20 public universities, 55 private universities (including six branch campuses of local universities and 10 branch campuses of foreign universities), 35 private university colleges (including four branch campuses), 36 public polytechnics, 105 public community colleges, and 316 private colleges (Kementerian Pendidikan Tinggi, 2023). The system is highly diverse and, more importantly, quality-assured to produce graduates for industry and society without needing to send students overseas for many academic and professional qualifications.

4.2 University Development Policies and Strategies

4.2.1 General Overview

The development of universities in Malaysia was previously guided primarily by the National Education Philosophy. This philosophy has underpinned progress toward the development of the individual and the nation-state. Since 2011, however, universities have become increasingly preoccupied with the internationalization agenda as a means of improving their reputation and the achievement of monetary objectives through the inflow of international students (Ministry of Higher Education, 2011). Since 2013, the objectives have increasingly focused on developing Malaysia as an education hub. This aligns with the government's strategic policy intent that the Malaysian higher education system and institutions should be listed in the world league tables, such as the Universitas 21 Ranking of Higher Education Systems, the QS University Ranking, and the Times Higher Education (THE) World University Ranking. Consequently, this has increased pressure on the system and higher education institutions. Beginning January 2023, the internationalization agenda is to be broadened to include talent recruitment and intensified international networking in addition to international student recruitment.

ttional Human Resource Development (NHRD
Contents of Malaysia's Na
Table 4.1

	Malaysian Government Plans, 1981–2020	nt Plans, 1981–2020						
	4th	5th	6th	7th	8th	9th	10th	11th
	1981-1985	1986–1990	1991-1995	1996–2000	2001-2005	2006–2010	2011-2015	2016-2020
Elements of NHRD	Managing popula- tion, labor force and manpower develop- ment	Managing popula- tion, labor force and manpower develop- ment ment ment ment ment ment ment ment		Managing Managing labor labor force, force, restructu- restructuring abor market labor market and developing and manpower skilled and development knowledgeable manpower	Managing labor Managing labor Auman capita force, restructu- ring labor market development; ring labor market education and and developing training skilled and knowledgeable manpower manpower manpower	skills	nt ing) tet	Improving the efficiency of the labor market, transfor- ming TVET, strengthening lifelong learning and improving the quality of the education system

Source Adapted from Devadas (2016, 124) and Government of Malaysia (2016)

Such strategic intent requires resources and talent in addition to a conducive governance system (see Salmi, 2009). Success by design, not by accident, was and continues to be the approach adopted by many Malaysian research universities in attaining its past achievements and realizing new aspirations. Based on Salmi's recipe for global excellence, research universities have begun implementing strategies to equip and provide university academic staff and personnel with the necessary competencies and exposure at globally ranked universities. In this context, a policy for internationalization involving mobility of scholars and researchers between Malaysia and the UK, USA, and Japan was deemed highly relevant and a program of study abroad in highly ranked universities and research institutions has been instituted following a top-down policy directive from the MOHE. This directive was based on the National Higher Strategic Planning Plan 2020 and the Malaysia Education Blueprint (Higher Education) 2015–2025. With the current focus on talent and education hub aspiration, new policies are being formulated and there is a strategic intent to send Malaysians for postgraduate and specialist trainings beyond traditional destination countries.

4.2.2 Policies for the Internationalization of Higher Education

As it is conceptualized in the current context, and following Knight (2015), internationalization at the national, sectoral, and institutional levels is defined as the process of integrating international, intercultural, and global dimensions into the purpose, function, or delivery of postsecondary education. Internationalization is not just about numbers—such as the observed mobility programs of staff and student studyabroad programs—but also needs to include collaborative academic and research arrangements between countries and higher education institutions. More important is the impact on the participants in terms of global and regional understanding, leading to a higher level of intercultural and inter-regional competencies compared with the situation prior to the internationalization of higher education.

Viewed in the abovementioned terms, Malaysia's Internationalization Policy of Higher Education 2011 was somewhat limited and outdated in terms of its aspirations and objectives. The policy primarily catered to the inward mobility of students to Malaysia, in line with the Malaysian education hub objective. It was an operational policy that aimed to accelerate the inflow of international students to 150,000 by 2015 and 200,000 by 2020 (Ministry of Higher Education, 2011).

Outward mobility of Malaysians-either for short or longer-term study abroad-is not covered in the above policy. However, individual universities have stretched this internationalization policy through their internationalization centers and units to include mobility and student exchanges under SEAMEO-RIHED's ASEAN International Mobility of Students (AIMS) and for scholars through academic exchange and collaborative research programs (Yang Farina et al., 2015). The latter was primarily under the aegis of the ASEAN University Network (AUN) for collaborative arrangements within ASEAN and also worked with international partners such as Japan, Korea, China, and EU, where collaboration is in dire need of substantial funding. Such internationalization activities provide exposure and could also enhance studyabroad opportunities for university academics in Malaysia.

4.2.3 Policies for University Faculty Development

Although the development and implementation of policies for university faculty development in the private university sector are primarily internal matters for the university concerned, these universities, nonetheless, are regulated by the Ministry of Education/Higher Education and the Malaysian Qualifications Agency (MQA) with respect to the academic, subject expertise and teaching credentials of the academic staff. The MQA has indicated that in order to improve the quality of education, there must be strategies for the continuous upgrading of the quality and competencies of the faculty as follows:

The Higher Education Provider has to be committed to the upgrading of the academic qualifications of its staff. Some of the measures to be taken include provisions for study leave to pursue further or advanced postgraduate qualifications and in-service training that [are] aimed at enhancing the quality of academic staff and needs to be relevant, practical and technology centered. The purpose of in-service training is to strengthen and reinforce academic staff with updated and critical knowledge and skills in order to enhance their capabilities for individual and institutional success (Malaysian Qualifications Agency, 2014, 31–32).

MQA guidelines are also applicable to public universities, but in these institutions, it is almost mandatory for faculty staff to upgrade their expertise in terms of improved academic qualifications. This is because promotions to higher grades/positions in the academic hierarchy are dependent on academic qualifications and other criteria, such as excellence in publications and research. It is also essential to note that, in public universities, solely in-house progression among faculty and staff is strongly discouraged. This directly influences the need to study abroad for international exposure in both academic and non-academic matters.

The current academic staff development policies in public universities are primarily based on earlier decisions by the MOHE regarding the qualifications of academic staff in Malaysian research universities, which endorsed the recommendations of the Working Committee on Research Universities. As a result of the recommendations, no <60% of the academic staff in Malaysian research universities hold a PhD or equivalent qualifications. To a great extent, these recommendations have provided a policy starter to upgrade the qualifications of academic staff. Study abroad is then the preferred option for Malaysian research universities to upgrade the qualifications of their academic staff.

4.2.4 Study Abroad in Relation to Faculty Development and Internationalization of Universities

The goal of compiling lists of top universities available for study abroad at the PhD level, subspecialty, or post-doctoral internships is to establish a diverse pool of quality academic staff with teaching and research experience garnered from reputable institutions abroad. Over the longer term, arguably, it is expected that, with Malaysian academics as alumni of these reputable institutions, further opportunities for networking with other respected institutions can be established. Therefore, Malaysian public universities will be in a position to assert their status and reputation to the international community. Since 2007, all Malaysian public universities have had a center or unit that promotes study abroad, international mobility, and exchanges for the nonmonetary aspects of internationalization. Private universities normally multitask these centers as part of their promotional and marketing arm, with the monetary and then nonmonetary aspects of internationalization given due consideration. Balancing these matters has proven to be very challenging for many small local private institutions.

4.2.5 Domestic Scholarships for Faculty to Study Abroad

The Trustees for the Indigenous People (MARA) Study Loan Scheme was first introduced in 1966. These were available to *Bumiputera* (indigenous population) pursuing postgraduate studies overseas. Financial assistance was then given out in the form of full scholarships. From 1968, financial aid for studying at universities was divided into two types: MARA scholarships with a 25% repayment and MARA study loans with a 100% repayment. However, the repayment period for the loan was not specifically mentioned or enforced.

From January 1, 1985, until December 31, 1997, financial aid took the form of convertible loans. Students who obtained good grades upon graduation were eligible to apply to convert their MARA study loans to MARA scholarships. It is a condition of the sponsorship that students must gain admission to a Top 50 University based on the QS World University Rankings by Faculty or Times Higher Education (THE) World University Rankings by Subject, or universities listed by the relevant division in MARA. While MARA sponsorships were initially targeted at the rural and bottom 40% of households (B40), MARA has increasingly provided loans for studying abroad at the postgraduate level, thus providing a pool of qualified academics for private higher education institutions. While academics in the public higher education sector could rely on the sponsorship of the MOHE, MARA loans were an important source of funding for study abroad among academics in the private higher education sector.

Between 2006 and 2018, MARA sponsored 23,410 students to study abroad. Of this total, the UK, Australia, and Egypt accounted for almost 60%. The number of sponsorships for studying abroad peaked in 2013 with 3258 study abroad sponsorships. Since 2014, sponsorship from MARA has declined quite dramatically to less than 50 as of August 2018. For its study abroad program, MARA gave priority to students studying Science, Technology, Reading, Arts, and Music (STREAM) subjects.

For academics in the public higher education sector, both in the pre-service and in-service categories, the public universities themselves, and later, the MOE/MOHE sponsorships were crucial for funding study abroad opportunities. In the 1970s and early 1980s, all public universities provided sponsorship for their serving academic staff to further their studies abroad. These academic staff would receive their salary plus other allowances while studying abroad. These public universities would also provide sponsorship for future academic staff under the *Bumiputera* Academic Training Scheme (SLAB). Under SLAB, recipients only receive various allowances while studying abroad as they are not considered to be academics but are instead undergoing pre-service training. In late 2000, sponsorship of academic staff (in-service and pre-service) was centralized at the MOE/MOHE for better resource utilization and coordination in human resource development planning.

In 2016, the MOHE reviewed the criteria and implementation of the two training schemes for academic staff: the Bumiputera Academic Training Scheme (SLAB) and Higher Education Institutions Academic Training Scheme (SLAI). It was decided that those undergoing further training or study abroad at the PhD level must gain admission to a university listed among the 100 best universities based on the THE World University Ranking or 50 best universities on the QS University Ranking by Subject. For further training at the subspecialty level for academics in the medical and health-related fields, academic staff concerned must gain admission to a university in the top 50 universities based on the THE World University Ranking, or one of the top 50 universities based on the QS University Ranking by Subject. Notably, these two conditions are not applicable if the academic staff member is undergoing a period of training or study abroad in a hospital/private health institute/or public health institute. For post-doctoral programs abroad, an academic staff member must spend their internship period at a top 50 university based on the THE World University Ranking or a top 50 university based on the QS University Ranking by Subject. However, in 2017, the MOHE decided not to adopt the list of top universities based on the THE World University Ranking as a condition for the award of funding for studying abroad under these two training schemes. Since then, to study abroad at the PhD level, an academic staff member has to gain admission to a top 50 university based on the QS University Ranking or a top 50 university based on the QS University Ranking by Subject.

Between 2011 and 2018, the MOHE provided sponsorships to 2250 academic staff to study abroad comprised of SLAI, SLAB, subspecialty, and post-doctoral sponsorships. Just over 50% of the total went to the UK, with an additional 16% going to Australia. The number sponsored for overseas study peaked in 2015 (631), and there has been an observed decline in the number of students sent abroad since then. In 2022, the number of sponsorships rose to 88, but this figure was still low in comparison to the 281 sent in 2018.

4.2.6 International Aid/ Assistance from Developed Countries and International Organizations for Sending Faculty Members Abroad

As a middle-income country moving toward a high-income country status, Malaysia does not qualify for substantial international aid or assistance from developed countries. However, there are bilateral collaborative academic and exchange arrangements with developed countries or international organizations. These bilateral agreements may not necessarily take the form of monetary aid to Malaysia.

4.3 Human Resource Development Policies and Strategies in Public Sector

4.3.1 General Overview

Human resource development policies and strategies in the public sector at the federal level are primarily under the jurisdiction of the Public Service Department (PSD). At the state level, various state governments have their own departments that develop policies and strategies geared to the needs of the individual states. However, it is the Federal Government, specifically the PSD that provides sponsorship for study abroad among in-service civil servants. PSD also provides sponsorship for academically excellent students to pursue higher studies abroad. The offering of PSD scholarships for study abroad is in line with Malaysia's need for quality human capital, primarily in the civil service and in other sectors of the national development agenda. This policy is in line with national aspirations and needs, and it is occasionally implemented in cooperation with other developed countries. Normally, a government-to-government agreement is signed for this purpose.

4.3.2 Policies for Staff Development in the Government

The Public Service Department (PSD) is the main agency that develops and implements HRD policies in Malaysia. Its primary role is to ensure that the best human capital management system is in place to improve the effectiveness and efficiency of the Malaysian Civil Service. PSD continues to develop its HRD management systems, and typically, good practices in HRD are adopted. Its pre-service and in-service training policies are implemented to increase the productivity and efficiency of the government machinery. Through the management of salaries, allowances and facilities, the PSD seeks to attract and retain manpower, as well as develop its capacity toward performance excellence in the public service.

As a newly independent nation in the late 1950s, study abroad was geared toward creating a pool of civil servants for the newly established government administrative machinery, particularly the manpower needs of agencies entrusted with the national development agenda. International agencies such as the UN and programs such as the Colombo Plan provided the necessary sponsorships for studying abroad in the 1950 and 1960s. In the 1970s, with the implementation of the New Economic Policy and the objective of restructuring Malaysian society, affirmative action policies for the *Bumiputera* were introduced as a significant element of Malaysia's study abroad scheme.

Since 1982, with the exception of 1998, the Look East Policy was in place, and PSD provided study abroad opportunities—especially for study in Japan and, to some extent, South Korea. In 1999, with the resumption of the policy after Malaysia's recovery from the debilitating financial crisis of 1998, additional study abroad opportunities were introduced for further studies in Japan and South Korea. However, study abroad in the UK was substantially reduced for both pre- and in-service staff in view of the high tuition and living costs. The trend to encourage studying locally was set in motion.

Since 2009, PSD study abroad schemes for Malaysians need to base their assessment on several aspects of the overall award, such as the excellent academic performance of the candidate, Malaysia's ethnic composition, special consideration for Bumiputera from Sabah and Sarawak, and the representation of other socially disadvantaged groups in the award list. Noticeably, between 2013 and 2015, Malaysians targeted selected destination countries for study abroad. Arguably, higher education institutions in Malaysia are on par with many other higher education institutions abroad, and thus PSD has needed to be selective on where to send students abroad. In addition, local higher education systems and institutions have increased their capacity to absorb many academically qualified Malaysian students. Many higher education institutions have become capable of producing the graduates required by industries and other employment sectors. Reducing opportunities to study abroad and retaining academically talented students to study locally would ultimately enhance the quality of Malaysian public universities. This approach augured well with Malaysia's aspiration to become an international hub of education excellence. Thus, since 2013, applicants receiving sponsorship for studies in STEM fields and social sciences could be sent abroad, whereas for courses in medicine, dentistry and pharmacy, sponsorships would be given for study in Malaysia.

Since 2016, sponsorship for further studies has been based on a convertible loan model. This model was designed due to the need to consider merit, inclusivity, and the situation of the bottom 40% of households with a monthly income below RM 4,360 in the year 2016 (B40). The latter group is particularly likely to experience the burden of loan repayments.

4.4 Study Abroad, International Aid and Cooperation

In the Malaysian context, study abroad programs are interpreted as either time spent abroad under a short-term exchange program or for a specified time to obtain a qualification. Historically, studying abroad for a qualification began in the pre-independence period of Malaya to prepare Malayans for a career in the civil service. This continued in the years immediately after Malaya gained its independence from the British. In fact, a steady wave of Malaysians studying abroad for a qualification continued into the 1970s as Malaysia was building its government institutions and machinery. Similarly, economic development began to be driven by the private sector, and the economic sectors desperately needed qualified manpower. These developments have been well documented in the various national development plans since 1970.

A marked wave of study abroad programs were linked to partnerships between Malaysian higher education institutions, higher-education providers abroad and international aid agencies. Beginning in the 1980s, private higher education institutions in Malaysia were very aggressive in promoting study abroad via various twinning programs with universities in English-speaking countries, such as the UK and Australia. This has allowed for split-time studies in Malaysia and at partner universities abroad. A requirement of the MOHE in the late 1990s has changed the course of this twinning program. The MOHE required private higher education institutions in Malaysia that were applying for full university status to have full-blown homegrown academic programs and qualifications. This requirement subsequently eliminated the twinning degree programs at the undergraduate level with foreign higher education institutions. Interestingly, many of these higher education institutions have continued to collaborate with institutions in Japan, South Korea and Europe through summer schools or university-industry internship programs, thereby exposing students to interregional and intercultural aspects of student life. Admittedly, insofar as studying abroad for a qualification goes, the offer of transfer degree programs to the USA, Canada and Australia is still a major component of study abroad programs for Malaysians.

(i) Commonwealth Universities Study Abroad Consortium (CUSAC)

The Consortium aims to bring together likeminded universities to find ways of increasing mobility across Commonwealth countries at minimal cost with a spirit of reciprocity and mutual exchange. There are currently about 65 members from 21 Commonwealth countries and five regions (Commonwealth Universities Study Abroad Consortium (CUSAC), 2018). Through the bilateral linkages of its members, CUSAC extends the benefits of studying abroad to a wider group of students across the Commonwealth. As an umbrella organization, it enables its members to share and access information through networking and benchmarking events as well as electronically. It also administers a bursary program aimed at assisting student exchanges between member universities. Malaysia is a member of the Commonwealth, and many public universities in Malaysia are members of the Association of Commonwealth Universities (ACU).

(ii) Commonwealth Scholarship Commission in the United Kingdom (CSC)

The CSC is responsible for managing the United Kingdom's contribution to the Commonwealth Scholarship and Fellowship Plan (CSFP). Since its establishment by an Act of Parliament in 1959, more than 16,000 Commonwealth citizens have held awards in the UK. The CSC's secretariat is provided by the Association of Commonwealth Universities (ACU), while financial and welfare support for scholars is provided by the British Council (Commonwealth Scholarship Commission in the United Kingdom (CSC) 2018; Commonwealth Scholarship and Fellowship Plan (CSFP), 2018).

The CSC makes available seven types of awards: scholarships for PhD research; scholarships for master's study; Shared Scholarships (master's awards selected and jointly funded by universities); Academic Fellowships for staff serving in developing country universities; Splitsite Scholarships for PhD students to spend up to one year in the UK; Professional Fellowships for mid-career professionals in developing countries; and Distance Learning Scholarships for developing country students to study master's degree courses.

(iii) British Chevening Scholarships for International Students

Chevening is the UK Government's international awards scheme aimed at developing global leaders. Funded by the Foreign and Commonwealth Office (FCO) and partner organizations, Chevening offers two types of awards, Chevening Scholarships and Chevening Fellowships, the recipients of which are personally selected by British embassies and high commissions throughout the world. Chevening offers a unique opportunity for future leaders and influencers from all over the world to develop professionally and academically, network extensively, experience UK culture, and build lasting positive relationships with the UK (British Chevening Scholarships for International Students, 2018).

(iv) Chinese Government Scholarship-Bilateral Program (Malaysia)

During the 18th ASEAN-China summit in Kuala Lumpur, Malaysia, on November 21, 2015, Chinese Premier Li Keqiang made the commitment that China would increase the number of government scholarships for ASEAN countries by 1000 on the basis of the existing scholarship system over the following three years. Thus, China has offered 50 newly added scholarships to Malaysia since 2016. Applicants can apply under the Chinese Government Scholarship-Bilateral Program. Under this bilateral arrangement, places are available for general or senior scholar/undergraduate/master/doctoral programs (Embassy of the People's Republic of China in Malaysia, 2018).

(v) The Government of Japan (Monbukagakusho: MEXT) Scholarships

The Government of Japan offers the following scholarship programs each year for Malaysian nationals to apply (Embassy of Japan in Malaysia, 2018a):

Undergraduate Studie. Postgraduate (Research Student) Young Leaders' Program (YLP) Japanese Studies Teacher-Training

In July 1981, Dato' Seri Dr. Mahathir bin Mohamad became the Prime Minister of Malaysia. After six months in office, he announced an initiative to learn from the experiences of Japan (and Korea) to promote nationbuilding in Malaysia. This was based on his belief that the secret of Japanese success and its remarkable development lies in its labor ethics, morale, and management capability. He felt a program that enabled young Malaysians to learn in Japanese would contribute to the economic and social development of Malaysia. For this purpose, Malaysia decided to dispatch its students to Japan, not only to build academic knowledge and technical know-how but also to learn about labor ethics and the discipline of the Japanese people (Embassy of Japan in Malaysia, 2018b).

This initiative was named the "Look East Policy" and was comprised of two parts. The first was to send Malaysian students to Japanese universities and institutes of technology. As Fig. 4.1 shows, the dispatch of Malaysian students under the Look East Policy declined between 1997 and 2000. But this decline was offset by the steep increase of Malaysian students going to Japan under the Higher Education Loan Fund Program (HELP), starting in 1999. The second was to send trainees to Japanese industries and training institutes. These programs were funded by the Government of Malaysia, while the Government of Japan supported these programs by sending Japanese teachers to Malaysia with some element of costsharing (Embassy of Japan in Malaysia, 2018b).

In May 2018, Tun Dr Mahathir assumed the premiership of Malaysia for the second time and indicated that the Look East Policy would not only be revived but also undertaken on a bigger scale (New Straits Times, 2018; The Star, 2018). Prime Minister Tun Dr. Mahathir Mohamad pointed to education, training, and investment as being among the areas in which Malaysia and Japan could benefit from working closely with each other.

(vi) Australia's Endeavour Leadership Program.

The Endeavour Leadership Program (ELP) was the Australian Government's two-way mobility program for short- and long-term study, research, and professional development with Australia's priority partner countries. The ELP supported Australia's first National Strategy for International Education 2025, which set out a ten-year plan for developing Australia as a global leader in education, training, and research by creating transformative partnerships and expanding student education and training, as well as professional and research mobility. The ELP provided opportunities for established and emerging leaders in Malaysia to undertake a global mobility experience within their study, research, or professional field in a higher education institution in Australia. In addition, Malaysia will have the opportunity to build enduring international networks and strengthen education and research engagement with Australia. This program was discontinued in 2019.

(vii) DAAD (German Academic Exchange Program)

The German Academic Exchange Service, or DAAD, supports over 100,000 German and international students and researchers around the globe each year, making it the world's largest funding organization of its kind. Founded in 1925, more than 1.9 million scholars in Germany and abroad have received DAAD funding, with many Malaysians benefiting from this program. DAAD promotes

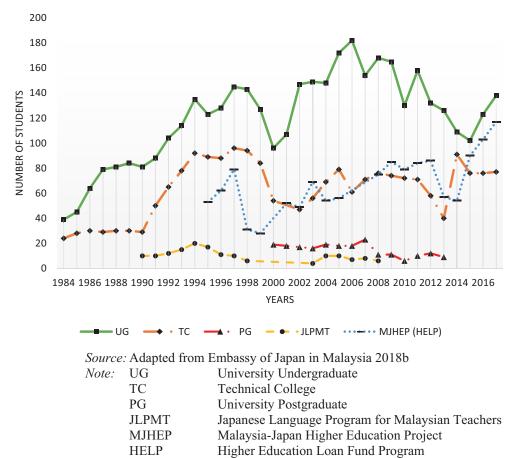


Fig. 4.1 Number of Malaysian students in Japan sent by the Malaysian Government under the Look East Policy

internationalization efforts at German universities and helps Malaysia strengthen and internationalize its higher education system and institutions. As of May 2018, DAAD reported the statistics on new offers of scholarships and other funding to Malaysians for various programs, including mobility (DAAD Malaysia, 2018).

(viii) MACEE—Fulbright Malaysian Scholar Program (MACEE)

MACEE was founded in 1963 as a binational commission for Malaysia and the United States to promote educational exchange between the two countries. MACEE's founding document is a bilateral agreement ratified by the Malaysian and the United States governments. Although the focus lies on the Fulbright Grant programs, over the years, MACEE has played an increasingly more prominent role in the overall binational educational partnership Malaysia-American Commission for Education Exchange (Malaysia-American Commission for Educational Exchange, 2018a).

Today, MACEE houses two important sections: the Fulbright program and Education USA Malaysia. Of relevance here is the Fulbright program. The Fulbright program was established when President Harry Truman signed legislation to use surplus war funding for international education exchanges. The aim was to increase mutual understanding between the people of the United States and people from other countries through classroom teaching and community engagement. The program eventually expanded and is now administered globally. The Fulbright section at MACEE is responsible for administering Fulbright grants and several non-Fulbright grants for Malaysians. The Fulbright program is known to have produced and enriched some of the most significant achievers in their respective fields, and the program in Malaysia is no different. The Malaysian Fulbright Scholar Program provides opportunities for Malaysian academics to develop or update their research through interaction with distinguished counterparts in the United States. By providing a mechanism and support for meeting and interacting with the best American scholars, the program seeks to promote dialogue on subjects of mutual interest to Malaysia and the United States (Malaysia-American Commission for Educational Exchange, 2018b).

Malaysia is not a major beneficiary of international donor/aid programs in monetary form from developed countries. However, it has benefited, for instance, from ADB Regional (not Malaysia-specific) Cooperation Technical Assistance programs (EEAS, 2013). Malaysia has graduated from the Canada International Development Agency (CIDA), and thus, Canada only provides a minimal number of higher education scholarships (EEAS, 2013). Between 1960 and 2004, official development aid to Malaysia grew from US\$12.8 million to US\$289.5 million per year—an increase from US\$1.56 per capita in 1960 to US\$11.49 per capita in 2004. Approximately 99% of official development aid in 2004 was bilateral aid, nearly all of this coming from Japan. In the mid-2000s, Malaysia presented itself as a donorrecipient identity founded on a "prosper-thy neighbor" and "soft power-mutual power" strategy, especially in relation to the higher education sector. Malaysia engaged mutually through trilateral and multilateral development cooperation mechanisms (Carle, 2015). In 2007, official development assistance and aid equaled only 0.11% of Malaysia's GDP. Arguably, Malaysia is, to a large extent, independent of international aid, especially for its higher education sector.

There are some bilateral arrangements between Malaysia and aid countries/agencies as follows.

(i) New Zealand Commonwealth Scholarships

The New Zealand Aid Program offers scholarships to people from Malaysia who are motivated to make a difference at home. New Zealand Commonwealth Scholarships are prestigious scholarships that recognize New Zealand's history and ties with the Commonwealth. Commonwealth Scholarships are part of the Commonwealth Scholarship and Fellowship Plan (CSFP), an international program under which Commonwealth countries offer scholarships and fellowships to citizens of other Commonwealth states (CSFP 2018). The purpose of the scholarships is set out in the CSFP with the following key principles:

- (a) to promote mutual cooperation and share educational experience among all Commonwealth countries;
- (b) to make the scholarship available across the Commonwealth; and
- (c) to recognize and promote the highest level of intellectual achievement.

NZ Commonwealth Scholarships are funded by the New Zealand Aid Program, the New Zealand Government's overseas aid and development program. They are managed by the New Zealand Ministry of Foreign Affairs and Trade.

(ii) The Higher Education Loan Fund Project (HELP)

HELP in Malaysia is a developmental assistance program provided by Japan to the Malaysian government. Founded in 1992, it provides financial assistance to Malaysian students who seek to obtain higher education in Japan. HELP2 (also known as the Twinning Program) consisted of one year of preliminary education and one year of college-level education before entering a Japanese university as a second-year student. HELP2 was a more advanced version of HELP1, running from 2001 until 2005. HELP3 started in 2005 and comprised one year of preliminary education plus two years of university education before transferring to a Japanese university as a third-year student. HELP3 was implemented as a means of updating the system by improving the local education of the target country. While HELP2 included the entire field of science and engineering, HELP3 focused on electromechanical and mechanical engineering. In 2014, the Malaysia Japan Higher Education Project (MJHEP), funded by the Malaysian government, was introduced as a continuation of HELP3.

(iii) The Islamic Development Bank financing package for Higher Education Sector

In most instances, many international organizations provide loans to Malaysia to strengthen its higher education institutions. For instance, the Malaysian government recognized USM as a research university in 2005, and in 2006, the Islamic Development Bank (IDB) provided a USD\$38 million financing package to help USM install modern and state-of-the-art teaching and research facilities (Islamic Development Bank, 2017). Subsequently, the curricula were transformed to focus more on market demand, and graduates were prepared to be absorbed into major industries such as engineering, medicine, science, and technology.

(iv) EU and Malaysia—Cooperation for Human Capital Development

The cooperation between the EU and Malaysia had almost reached a standstill by 2003, with little ongoing bilateral cooperation and Malaysia being a strikingly marginal beneficiary of EU-funded regional cooperation programs. Since the opening of the EC Delegation in April 2003, the cooperation between EC/EU and Malaysia has improved, and since then, this trend has gained strength. Seminars and conferences are paving the way for the more active involvement of Malaysia in the EU-funded Research Framework program, while in the higher education sector, there are prospects for greater cooperation in the field of human capital development in Malaysia (EEAS, 2013).

4.5 Historical and Empirical Reviews of the Impact of Study Abroad

In the past, Malaysia did not have a systematic process to evaluate the performance of Malaysians who had studied abroad. There were only anecdotal insights highlighting the benefits of study abroad programs, as reported by various alumni associations and picked up by the local press. Returning students' employment prospects and socioeconomic contributions to their home countries clearly had significant policy implications but were never traced in a systematic manner. This failure to carefully monitor the return on investment by the government especially regarding the contributions of returning students to national economic and social development—needs to be addressed.

Public Service Department (PSD) scholarships are some of the most sought-after scholarships by Malaysians, as recipients are adequately funded by the government to pursue their tertiary education. In addition, in the past, recipients of these scholarships would be guaranteed jobs in the public sector. In the more recent past, a majority of recipients have been sent abroad for further studies, even though initial preparatory studies may be undertaken locally.

In the context of the changing global higher education scenario and geopolitics, the activities of students returning to their home countries after a period of studying abroad have raised several important national security issues. The increasing focus on international education and the internationalization of higher education, focusing on global citizenship, and greater understanding and cooperation at the global and regional level are the oft-quoted benefits of studying abroad. However, at the other end of the cost-benefit spectrum, there is always the possibility of students returning home with ideologies that are seen as not in the interest of the nation. While the issues of brain drain, brain gain, and brain circulation are too familiar to Malaysian policymakers and the public when discussed in the context of economic development, the implications of Malaysians studying abroad in volatile regions, such as the Middle East, for Malaysian political stability and national security have been seen as an issue that demands urgent policy response. Arguably, the higher education sector and study abroad programs could be viewed as a major contributing factor to this predicament. Admittedly, Malaysians studying abroad are exposed to different cultural and social norms, as well as political ideologies, which they may try to introduce into Malaysian society upon their return. The openness of Malaysian culture and the democratic structure of the political system have made the introduction of foreign ideologies far easier than it would be in a less democratic nation. Indeed, in one of his first speeches in the aftermath of the Arab Spring, delivered to the Malay Student Association at Oxford University on 17 May 2011, then-Prime Minister Najib Razak propagated "justly balanced moderation" (Bülent & Ekim, 2015).

Nearly 47,400 Malaysian students went abroad for higher education in 2005, with the outbound count expanding to just under 65,000 students by 2015. Roughly six of every ten students flow on to the UK, Australia, or the US. However, Malaysian enrollment overseas was widely distributed outside of those top three destinations, with host countries in Africa (Egypt), the Middle East (Jordan), Europe (Russia, Ireland, France, Germany), and Asia (India, Japan) rounding out the top ten study destinations (INCEF Monitor, 2017). Despite the call for Malaysians to continue their studies locally, many are still contemplating studying abroad. It is interesting to note that this trend—along with the withdrawal process of the UK from the EU (BREXIT) and collaboration through flows of students between the Commonwealth, including Malaysia-would enhance collaboration further. Underlying these collaborations would be reported cases of shared experiences, common visions, and the use of the English language in the higher education sector (Baker, 2018).

There are plenty of anecdotal insights on the impacts of studying abroad for individual students. For instance, Rashidah and Nor Azlah (2016) examine the impact of studying in the UK on Malay/Bumiputera students. Arguably, being abroad greatly facilitates understanding and competencies in a foreign language-in this case, the English Language. The Star (2010) reported the case of Dinesh Kanavaji, 31, a practicing lawyer in Malaysia. Dinesh studied law in Britain in the late 90 s. His two-year course cost him about £15,000 a year or about RM90,000 annually, given the high exchange rate at the time. To Dinesh, studying abroad was a character-building experience. In addition, studying abroad also provides a unique opportunity for language and cultural immersion. Umi Aisah Asli et al. (2017) reported the beneficial results of their international study experience based on the preparation of a reflection journal. Evidently, exchange students highlighted many personal and social development aspects in the reflective journal.

4.6 Malaysia and the Impacts of Studying Abroad: Summary and Way Forward

Since Malaya's independence in 1957 and, subsequently, after the formation of the Federation of Malaysia in 1963, studying abroad in the UK and Australia has remained common among Malaysians. Later, studying in the USA became more fashionable. The Asian financial crisis altered this trend, as it became overly expensive for parents to support their children studying overseas, especially in the UK. It also became too expensive for the government to sponsor Malaysians studying overseas. Given these predicaments and the need to address other problems at that time, higher education reforms were undertaken. Various laws were introduced to regulate and supervise the higher education system and institutions to improve the quality of higher education provision in Malaysia. Study abroad programs continue but on a lesser scale, and they are directed toward specific countries with specific objectives.

A case in point is study abroad in Japan. As local universities have proved to be of satisfactory quality and many international branch campuses of reputable universities have been established in Malaysia, the outflow of Malaysians to study abroad has been significantly reduced. Internationalization strategies have been pursued since the mid-2000s, resulting in a steady inflow of international students to Malaysia. This inflow of international students has encouraged other internationalizationrelated initiatives at the institutional and system level. However, realizing that international exposure to improve intercultural understanding and competencies is an essential short-term study abroad objective, exchanges and other forms of mobility have also been encouraged and supported. Nevertheless, we cannot fully understand the impact of studying abroad without "purposeful and systematic engagement" with the returnees and a commitment to making the most of what they have to offer following their experience abroad (Rumbley, 2014).

The Federal Government's human resources development policies and MOHE's aspiration to internationalize Malaysian higher education and institutions have enabled many Malaysians to study abroad, either on their own or with government sponsorship. In some instances, funds for study abroad were provided in collaboration with other donor countries or agencies. For obvious reasons, privately funded and sponsored students are encouraged to study locally during difficult economic times. While time spent abroad is believed to have benefited Malaysians when they are back in Malaysia serving universities and the government, adverse economic circumstances may require some rethinking of the ways to achieve international exposure for academic staff. The COVID-19 pandemic and its attendant impacts have presented Malaysia with a different challenge in the context of studying abroad. In this respect, the MEBHE needs to be reset, with a serious re-alignment and updating of the plan's ten shifts for relevance in the post-pandemic era. Specifically, the internationalization agenda need not depend totally on physical mobility, and teaching and learning approaches will need to adopt a hybrid approach.

In the current and immediate post-pandemic context, there are still some constraints on regaining the momentum for study abroad among pre-service and in-service academic staff of public universities. Admittedly, even before the COVID-19 pandemic, Malaysian public universities were already reviewing their policies of sending staff for further trainings abroad. Among other things, this decision was prompted by the high incidence of non-completion of studies among those sent to study abroad, thus affecting universities' human resource planning and resource allocations for training from central agencies. Additionally, there will be other costs to universities and staff who have failed to successfully complete their studies. There are legal complications arising from such unfortunate circumstances for the staff and the universities.

Note: This chapter is adapted from the *Higher Education in Malaysia: Impacts of Study Abroad Programs on Academic Institutions*, a report published by the JICA Ogata Sadako Research Institute for Peace and Development (https://www.jica.go.jp/Resource/jica-ri/ja/publication/booksandreports/sgjqgc0000004nvuatt/20230313_Malaysia.pdf). The Author has obtained full permission from the JICA Ogata Sadako Research Institute for Peace and Development to reprint and adapt this report for this OA book.

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Morshidi Sirat, Emeritus Professor, has spent more than 40 years in academia and top management position at the Ministry of Higher Education (MOHE). Morshidi has served as Director of the National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia (USM) for almost 11 years. He then served as Vice-Chancellor of Universiti Malaysia Sarawak (UNIMAS) before moving back to the MOHE to take up the position of Director-General of Higher Education. Before assuming the position of Vice-Chancellor at UNIMAS, Morshidi was Deputy Director-General of Higher Education (Public Sector). Morshidi is now serving as Higher Education Advisor to the Minister of Higher Education.

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5

Impact of Study Abroad on the Development of Academic Staff: The Case of Universiti Sains Malaysia

Chang Da Wan, Magdalene Chooi Hwa Ang, Morshidi Sirat and M. J. Muhammad Sharrieffuddin

Abstract

Universiti Sains Malaysia is a public comprehensive research university. Established in 1969, it has a long-standing tradition of sending its academic staff abroad to study. This chapter focuses on Universiti Sains Malaysia as a case study to examine the impacts of study abroad. Based on primary data collected via an online survey questionnaire-completed by 592 academics and supplemented by 20 follow-up interviews-this chapter demonstrates that study abroad experience generally has a significant impact on academic work (notably on education- and research-related activities) compared to the study-at-home experience. The chapter also discusses re-entry experiences, the underlying challenges and more subtle nuances regarding the impacts of study abroad on academic life. Implications for national higher education agendas, institutional initiatives and research directions are discussed.

Keywords

Study abroad · Universiti Sains Malaysia · Academics · Higher education · Internationalization · Adaptation

5.1 Introduction

For many years, study abroad (SA) has typically been viewed as a vehicle for human capital development. Past studies (e.g., Anderson et al., 2015; Eduan, 2019; Paige et al., 2009; Sisavath, 2021; Tarrent et al., 2013) on SA outcomes have generally affirmed the many positive effects of international exposure, including enhanced skills and knowledge, global competence and engagement, international research collaboration, intercultural development and employability. However, the bulk of SA studies have focused on developed countries. They have also tended to explore the topic in a piecemeal fashion, targeting specific outcome dimensions, disciplines/industries and/or countries. For instance, Anderson et al., (2015) examined how American students in foreign study programs have benefitted from their SA experience in terms of their intercultural development and global competence. Harder et al. (2015) and Vetter and Wingenbach (2019) investigated SA impact on employability in the agriculture and natural resources industries. Other

C. D. Wan $(\boxtimes) \cdot M.$ C. H. Ang \cdot M. Sirat \cdot

M. J. M. Sharrieffuddin

National Higher Education Research Institute, Universiti Sains Malaysia, Penang, Malaysia e-mail: ipptn.wan@gmail.com

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studies explored SA outcomes, which include cultural engagement and career development (e.g., Hubbard & Rexiesen, 2020), international research collaboration (e.g., Eduan, 2019), global citizenship (e.g., Tarrent et al. 2013) and language acquisition and development (e.g., Collentine, 2009).

To our knowledge, relatively little research has drawn on the SA experiences of academics in developing countries. Even less common are studies that consider the effects of SA across a broader spectrum of academic work, such as the dimensions of research, teaching and supervision, administration/leadership and societal engagement. The focus on academics in developing countries is worthwhile for two main reasons. First, SA is a growing phenomenon in higher education (HE) (Cisneros-Donahue et al., 2012), particularly in the context of developing countries. Thus, such growth warrants efforts to measure the impact of SA experiences (Cisneros-Donahue et al., 2012) on academics' performance, given that universities are highly dependent on academic staff to fulfill their roles (Bentley et al., 2013) in developing knowledge societies (Castro-Ceacero & Ion, 2019). Furthermore, examining academics' international experiences is crucial for justifying the expenses of SA programs by demonstrating their benefits (Anderson et al., 2015). This is because SA programs are not only costly but also utilize resources that could otherwise be channeled toward study-at-home (SH) programs (Vande Berg, 2001).

Against this backdrop, the JICA Ogata Sadako Research Institute for Peace and Development's Empirical Research on Impacts of SA in Developing Countries offers hitherto largely unexplored perspectives and crucial insights from developing countries to the extant SA literature. Ten universities in four developing countries, namely Cambodia, Indonesia, Malaysia and Vietnam, were involved in this research initiative; Universiti Sains Malaysia (USM) is one of the two case studies for Malaysia. This chapter highlights the impact of study experience on pertinent work aspects of USM's academic staff. Primary data were collected from 592 academics who responded to an online survey and from 20 academics who participated in semi-structured interviews. The quantitative data obtained from the survey are useful for providing an institutional snapshot, allowing comparisons between the SA and SH groups. On the other hand, the qualitative data derived from the interviews provide a more indepth exploration of the study experiences as well as the re-entry experiences of individual academics who studied abroad.

The chapter first outlines the chronological development of USM, including the policies and initiatives for recruiting and sending academic staff abroad to study. It then presents the findings of the online survey and the interviews. Based on the quantitative and qualitative data, the case study of USM generally confirms the positive effects of SA on key aspects of academic work, including activities related to education and research, with the exception of social activities/volunteering. Interestingly, the interview data also reveal several challenges academics face regarding re-entry and transition, particularly among the younger returnees. The chapter concludes with a discussion of the implications for the development and implementation of national HE agendas and institutional initiatives that can help realize the full impact of academics' SA experience. Finally, research directions are presented.

5.2 The Development of Universiti Sains Malaysia

Founded in 1969, Universiti Sains Malaysia (USM) was the first university to be established by the Government of Malaysia. After Malaya gained its independence, the Higher Education Planning Committee was established under the chairmanship of the Minister of Education to review and make recommendations for the development and improvement of HE in Malaysia. The report was published in 1967, and one of the key recommendations was that a university college should be established in Penang (Government of Malaysia, 1967). By June 1969,

the first batch of 57 students had enrolled in the University of Penang, which was subsequently renamed USM.

When USM welcomed its pioneer batch of students in 1969, the only other university in the country was the University of Malaya (UM). UM, which was first located in Singapore, was established by the British colonial government by merging the King Edward VII Medical College and Raffles College. It was subsequently expanded to house a second autonomous campus in Kuala Lumpur. By 1962, the two campuses became the University of Singapore and UM. The way that UM was established and developed shows it was closely molded on the British university model (Khoo, 2005).

The committees and working groups responsible for conceptualizing and operationalizing the establishment of USM were comprised of individuals from UM or those who were educated under and were familiar with the British HE system. However, it is crucial to note that USM, at the outset, was earmarked to be different. While the Constitution for the University of Penang and the governing structure proposed were almost identical to those of UM (Suffian, 1969), and the fact that the first Vice Chancellor of USM was a renowned professor from UM, there were few other similarities between the two institutions.

Instead, USM has adopted a school system that is distinctively different from the faculty system of UM. The rationale behind the adoption of school-system is articulated below.

The existing Schools of the University and its Centre for Educational Services offer a range of eight first-degree courses. These courses are offered through the school system which is an innovation to the traditional Faculty organization of rigid departmental structures. Such a system allows for a certain degree of specialization in a chosen field of study while encouraging interdisciplinary studies in related fields (USM, 1972, 6).

As of 2020, USM has 2,003 academic staff across 26 schools and 17 research centers and institutes.

Further to having a school system, USM also adopted a separate system for research

centers and institutes. Thus, the Centre of Policy Research was set up in 1974—arguably becoming the first such initiative among Malaysian universities. Specifically, with the recruitment of academic staff and initiatives to send academic staff abroad, USM has, over the years, purposefully encouraged diversity instead of relying primarily on the dominant connection with the British. Hence, anecdotally, while the vast majority of academic staff from UM studied or were trained in the United Kingdom (UK), USM has academic staff who have studied in the United States (US), UK, Australia, Japan and many European higher education institutions.

5.3 Methodology

This study was conducted in two phases, beginning with an online survey questionnaire and followed by semi-structured interviews with selected participants from the survey.

5.3.1 Phase 1: Survey Questionnaire

The online survey was carried out between February and June 2020. Invitations to participate in the survey and the link to access the online survey were attached to the email sent out to all academic staff at the university. At the end of the data collection, a total of 592 responses were obtained, giving a response rate of 29.6%. The questionnaire consisted of items that asked for information relating to respondents' demography, study location and reasons for study location. The questionnaire also gauged the perceived impact of the respondents' study experience (either abroad or locally) on their skills and knowledge when engaging in various dimensions of academic work. The remaining items ascertained whether certain activities in which the respondents engaged as students (either abroad or locally) have significantly influenced their current work. Accordingly, the respondents were asked, "Do you think your study experience has enhanced your skills and knowledge in the following activities?" and "How much have the following activities/inputs during your study abroad/in Malaysia impacted your current work?" All the responses were anchored on a 4-point Likert scale, with 1 being "very much" and 4 being "not at all."

This chapter highlights the contributions of academics' study experience in three key dimensions, namely education-related activities, research-related activities and current work. The data collected were empirically analyzed using item-level analysis. Specifically, t-test analysis was conducted to compare the statistical differences in the responses between the SA and the SH groups.

Table 5.1 presents the demographic information of the 592 survey respondents: 53.5% had at least one of their tertiary education qualifications (either a bachelor's, master's or doctorate) abroad. Of the respondents, 54% were female, while those aged between 36-40 years were the largest group of respondents at 28% followed by 46-50 years with 19%. There were no respondents beyond the age of 60 (i.e., the mandatory retirement age in Malaysia), as only permanent and full-time academic staff were invited to participate. The distribution of academic ranks of respondents was similar to the population of academic staff in the university, where almost two-thirds were lecturers/senior lecturers, one-fifth were associate professors, and a tenth were full professors. Respondents from Medical, Dental and Health made up the biggest group across the field/discipline of their schools and centers, amounting to 34%, followed by Engineering, Applied Sciences and Applied Arts, each with 15% respondents. Lastly, 42% of the respondents had held at least one administrative position in the university.

Table 5.1 shows there are more women than men among the respondents in both the SA and SH groups. Those who studied locally are predominantly in the age groups of 26–30 and 46–50 years old, whereas the SA group is found mainly in the age groups of 36–45 and 51–60 years old. Across the field/discipline of the respondents, pure sciences, applied sciences and engineering have more respondents who have studied abroad, while the SH group is concentrated in other fields/disciplines. In terms of academic rank, lecturer (including senior lecturer) is the only group with more respondents who studied locally, compared to other ranks where more respondents studied abroad. Interestingly, more respondents who studied abroad have held administrative positions than those who studied locally. Among the positions held are director, dean, deputy dean, program head and coordinator.

The survey data also indicate that the UK is the top destination among the 317 respondents (54%) who have done at least one of their tertiary education qualifications abroad. For those who studied abroad at the master's level, the top five study destinations are the UK (16%), the United States (US) (6%), Australia (4%), Japan (2%) and Thailand (1%). While at the doctorate level, the top five are the UK (31%), Australia (14%), Japan (4%), the US (4%) and New Zealand (NZ) (2%).

Among the key reasons for the SA location are "more advanced discipline" (39%), "availability of scholarship" (27%) and "receiving recommendation" (19%). Conversely, the key reasons for studying in Malaysia include "affordability" (27%), "availability of scholarships" (25%) and "receiving recommendation" (16%).

5.3.2 Phase 2: Interviews

After conducting the online survey, we proceeded with the semi-structured interviews. As mentioned earlier, this qualitative approach offers purposeful reflection and detailed discussions, thus generating richer data not only pertaining to SA experiences but also to re-entry experiences and other elements of SA impact not captured by the quantitative results. Of the 233 academics who indicated their willingness to be interviewed, we found that 130 had studied abroad. Using purposive sampling guided by the criterion of selecting contrasting cases in terms of study location, field/discipline, gender, and job tenure, we narrowed down the sample size to 20 participants who were all from the SA group.

		Local	Abroad	Total
Gender	Male	120	150	270
	Female	155	167	322
	Total	275	317	592
Age Group	26–30	13	4	17
	31–35	46	45	91
	36–40	69	98	167
	41–45	49	54	103
	46–50	65	48	113
	51–55	25	37	62
	56–60	8	31	39
	Total	275	317	592
Field	Pure sciences	25	33	58
	Applied sciences	33	59	92
	Engineering	22	69	91
	Pure arts	23	21	44
	Applied arts	59	31	90
	Medical, dental and health sciences	103	96	199
	Mixed (PPPJJ)	10	8	18
	Total	275	317	592
Academic rank	Professor	14	48	62
	Associate professor	49	76	125
	Lecturer	211	189	400
	Assistant professor/research Associate	1	3	4
	Research assistant/assistant	0	1	1
	Total	275	317	592
Hold administrative position	Yes	96	152	248
	No	179	165	344
	Total	275	317	592

Table 5.1 Demographic Information of survey respondents

As this phase was intended as a follow-up, the interview questions revolved around three broad themes derived from the online survey questionnaire. They are education, research and current work. The interviews began with general questions to tap into information on the participants' alma mater and their current rank and position held (if any) at USM. The subsequent questions were semi-structured, and in some instances, open-ended probing questions were added to clarify or expand upon a thought brought up by the participants. Due to the COVID-19 pandemic restrictions, all the interviews were done virtually through Google Meet. The interviews were conducted in English and lasted between 30 and 70 min. The interviews were audio-recorded, transcribed and manually coded by at least two researchers. For the purpose of data analysis, the thematic analysis method was used to identify/capture sub-themes or patterns in the data that are important and interesting.

The demographic information of the participants is provided in Table 5.2.

	Frequency (N)	Percentage (%)
Gender		
Male	9	45
Female	11	55
Ethnicity		
Malay	12	60
Chinese	7	35
*Sabah Bumiputera	1	5
Study Location		
United Kingdom	10	50
Japan	3	15
US	2	10
Australia	2	10
New Zealand	2	10
Germany	1	5
Discipline		
Pure/Natural Sciences	4	20
Engineering	5	25
Medical Sciences and Health	5	25
Arts/Humanities and Social Sciences	4	20
Applied Sciences	2	10
Academic Rank		
Senior Lecturer/Lecturer	15	75
Associate Professor	3	15
Professor	2	10
Administrative/Managerial Po	sition	
Yes	8	40
No	12	60

Table 5.2 Demographic information of interview participants

Note Natives of Sabah

5.4 Findings

This section presents the findings from the survey and interviews, focusing on the impact of study experiences in enhancing academics' skills and knowledge when dealing with educationand research-related activities. The contribution of the experience of engagement in specific activities/inputs while studying to academics' current work is also explored. It should be noted that the thematic analysis of the interview data reveals noteworthy sub-themes (e.g., re-entry experience). Although not the focus of this study, we deem these sub-themes nonetheless salient to the SA experience and they therefore warrant further examination to better clarify the impact of SA on subsequent academic activities.

5.4.1 Education-Related Activities

There are nine indicators in the survey that represent academic skills and knowledge for education-related activities. Using a 4-point Likert scale (with 1 being "very much" and 4 being "not at all"), the respondents were asked, "Do you think your study experience has enhanced your skills and knowledge in the following activities?" The t-test results indicate a statistical difference between the means of the SA and SH groups on eight indicators, with the exception of developing teaching materials (see Fig. 5.1). To elaborate, the impact of study experience is greater for the SA group than the SH group on three education-related activities (i.e., developing/ revising courses, adapting new teaching methods for undergraduate students or organizing international joint educational programs) at the 5% significance level. Similarly, at the 1% significance level, the group that studied abroad reported a more significant impact on their knowledge and skills across five education-related activities, namely developing/revising education programs, teaching at overseas universities, conducting courses in foreign languages, initiating/implementing student exchange programs with foreign universities and inviting international researchers to own university for educational activities.

The interview results similarly reveal that the SA experience has contributed significantly to academics' skills and knowledge in performing education-related activities. For example, one participant stated the following:

My program abroad was definitely molding many of us to be [academics]. The way our program was structured was very highly researchand academic-oriented. In fact, the TA [teaching assistantship] component was embedded in our doctoral program, teaching us how to set

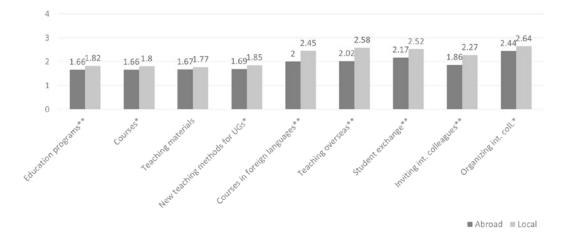


Fig. 5.1 Education-related activities. *Scale* 4-point Likert scale with (1) very much, (2) to some degree, (3) little, and (4) not at all p < 0.05 * p < 0.01

questions, teach and conduct research. It was a very academic-driven program. P15, female, aged 36, Master's and PhD (US).

Another participant shared that studying abroad has allowed her to gain hands-on experience in lab practices, which has in turn greatly influenced the development of her courses and delivery in class.

When I was a student, I was a lab facilitator because I'd like to gain experience in how lab practices are conducted overseas. As a lab facilitator, when a lab practical session is on, we have to check on the students to make sure they're doing the right thing. In fact, I still do that now in USM. Instead of relying on a tutor, I sit in and conduct every lab session myself, whenever possible, to explain everything so that my students can learn the topic well. To me, the lab component is a very crucial component in the study of science.

P10, female, aged 40, Master's (Malaysia) and PhD (UK)

The participant also added that the skills/ knowledge of tools like massive open online courses (MOOCs) and video conferencing that she acquired during her SA have proved to be extremely useful when her undergraduate classes had to transition to the online platform during the COVID-19 pandemic lockdowns.

Another two participants had similar views on the positive impact of their overseas teaching experience, specifically in enhancing their skills and knowledge in conducting courses/training back in Malaysia.

I was involved as a teaching assistant to help in conducting tutorial classes and lab work. My work is more on lab hands-on and because I've trained for five years to master certain courses, conduct lab demonstrations and simulations, I expect my students to learn on their own. Even if the analytical equipment is difficult to master, they still have to do it.

P9, male, aged 53, Master's and PhD (NZ)

When I was a student in Japan, I taught for four years on a part-time basis. The course I taught is 'Malay and Malay Culture' at Tokyo University of Foreign Studies. This teaching experience has equipped me with the necessary and relevant skills and knowledge that an academic needs. [...] because prior to studying abroad, I was an administrative officer in a local council.

P12, male, aged 54, Master's and PhD (Japan).

Regarding initiating/implementing student exchange programs with foreign universities and inviting international researchers for educational activities, the perceived impact of SA can be seen when academics leveraged their established network with international colleagues while they were abroad. This, therefore, gave SA academics an advantage over those who studied only in Malaysia.

4 2.98.86 3 2.39 2.36 2.03 2.21 1.9^{2.06} 2.06 2.04 1.86.01 2 1.8 1.44^{1.6} 1.66 1 51 51 1.38.41 1.36 Pattinatentcol.Prol Publish Malaysia Organise int cont obtain funds* aunchnews.prof APPHYPatent Publishoverseas lost int researchers Presentoverseas new supervision ■ Abroad ■ Local

Fig. 5.2 Research-related activities. *Scale* 4-point Likert scale with (1) very much, (2) to some degree, (3) little, and (4) not at all p < 0.05 * p < 0.01

5.4.2 Research-Related Activities

The respondents were also asked in the online survey if their study experience has enhanced their skills and knowledge in 11 research-related activities. Specifically, the question posed was, "Do you think your study experience has enhanced your skills and knowledge in the following activities?" As in the previous section, respondents answered based on a 4-point Likert scale (with 1 being "very much" and 4 being "not at all"). As shown in Fig. 5.2, the group that studied locally and the group that studied abroad are not statistically different in five out of the eleven research-related activities. The five activities comprise presenting at local conferences, publishing in Malaysia, participating in international collaborative projects, organizing international conferences and applying for patents.

However, at the 5% significance level, the two groups are statistically different in that the SA group reported that their study experience has enhanced their skills in publishing overseas, launching new research projects and obtaining competitive research grants compared to their peers who studied locally. Furthermore, the mean difference between the two groups is highly significant (at the 1% level) when it comes to dealing with three research-related activities, namely presenting at overseas conferences, hosting international researchers and adopting a new supervision style. The survey findings again confirm that the experience of SA has helped academics in relation to more effective engagement in research-related activities in the international arena when compared to the group that studied in Malaysia.

The interview findings, to some extent, corroborate the survey findings. Several participants opined that their SA experience has been instrumental in helping them to embark on new research projects, obtain research grants and establish international research collaborations. For instance, two participants recounted their experiences as follows:

As students, we had site visits and [we] sometimes took part in the testing by the industry. So that's how we [got] involved with the industry, through the projects which my professor was involved in. I am still in touch with the industry [in Japan] and they fund some of the research projects I am doing now, through the connections I have.

P5, male, aged 56, Master's and PhD (Japan)

The main idea of doing research, e.g., the research framework which I brought back from Japan, I try to tailor it for the suitability of our local instrument, facilities and even student capabilities. And this has helped me a great deal to conduct my own research. Moreover, the [research] collaborations which I established with the industry under the recommendation of my Japanese supervisors still continue even when I'm back here. P19, male, aged 34, Master's (Malaysia) and

PhD (Japan)

Another participant reported that his SA experience has not only developed his skills and knowledge in publishing overseas but has also helped him with respect to securing competitive research grants in Malaysia:

The system in Japan requires us to publish up to four or five papers first before we can submit our thesis. [This means] we've to go through the whole process of doing research and publications even before we can defend our thesis. This experience has directly helped me to publish overseas. Moreover, I managed to get two or three LRGS [Long-Term Research Grant Scheme] grants by applying the knowledge and skills I acquired overseas.

P12, male, aged 54, Master's and PhD (Japan)

Another common thread in the interview data pertaining to carrying out research-related activities in Malaysia is that access to facilities and equipment is glaringly limited in the country and that existing facilities and equipment are largely old and obsolete. Three participants (i.e., P6, P7 and P10), however, felt that the equipment/facilities they currently use are more advanced than the ones they used overseas. Regrettably, the equipment is often underutilized and poorly maintained. The reason given is that Malaysian universities lack the support of knowledgeable and qualified technologists. These shortcomings are essentially summed up by one participant.

Some of the equipment here is even more advanced [than abroad]. We have a few high-end machines, but there's no one to help me run and understand how to run. The technologists overseas know the inside out of the machine. They are permanent staff and they have degrees [some are even doctoral degree holders]. Whereas [...] in Malaysia, they give this responsibility to research students, but when they leave [...] we have a problem—the technical support is not there anymore.

P6, female, aged 40, Master's (Malaysia) and PhD (UK).

5.4.3 Current Work

The online survey also included the question, "How much have the following activities/inputs during your study abroad/in Malaysia impacted your current work?" There are five activities/ inputs of interest related to current work roles. These are coursework, supervision/tutorial work by faculty, independent research activities, group research activities and social activities/ volunteering. The respondents' answered based on a 4-point Likert scale, with 1 being "very much" and 4 being "not at all." Of the five indicators, we found statistical differences between the means of the SA and the SH group on three indicators (see Fig. 5.3). Reportedly, the SA group perceived that the supervision/tutorial, independent research activities (at the 1% significance level) and group research activities (at the 5% significance level) that they experienced as students abroad have had a greater impact on their current work roles than their counterparts who studied in Malaysia.

The perceived impact of the SA group's experience with supervision/tutorial is broadly replicated in the interview results. Some participants reported that they have honed many useful skills from the supervision process they underwent as students overseas. Subsequently, the experience has significantly influenced their way of supervising their own students now. Some examples of the contribution of supervision are provided below:

In my university, a discussion on research is [held] every week with the department or lab group [PG students and supervisors] to present their research... I gained a lot from these sessions... I [also] apply what I learnt as a student when supervising my postgraduate students now. P8, female, aged 29, Master's and PhD (UK)

My supervisors have taught me a lot about writing skills [for] academic writing. I went through a lot of training with my supervisors. Now, I am trying to pass whatever training [I have received] to my students. Because of some of my own bad

Fig. 5.3 Current work roles. *Scale* 4-point Likert scale with (1) very much, (2) to some degree, (3) little, and (4) not at all p<0.05 *p<0.01

experiences [with my supervisors], I will make sure that the same thing never happens to my students. When they ask questions, I am careful not to judge them but try to explain to them. Not to give them stress unnecessarily as I want them to enjoy the journey and be concerned with their mental health as well.

P16, female, aged 36, Master's (Malaysia) and PhD (Australia)

Supervision experience is totally different from that in Malaysia. Most supervisors in Japan prepare some kind of a module/pathway for their students [...] and we have to just follow them. I've learnt many things from this experience and now that I'm back in Malaysia, I extend this approach [to my supervision work] by implementing it with my students.

P19, male, aged 34, Master's (Malaysia) and PhD (Japan)

In relation to the perceived impact on their current work of the SA group's experience in carrying out independent research and group research activities work, the following two examples represent important aspects from the interview data:

When I was back in Malaysia, I established what I called [the] Tourism Research Cluster in 1998. This is the model/system which I picked [up] from my study experience in Japan. This cluster or "zemi" is an informal grouping of USM researchers who joined voluntarily and work independently or as a team in tourism research projects. The group started with only four core members and the wonderful thing is it then grew

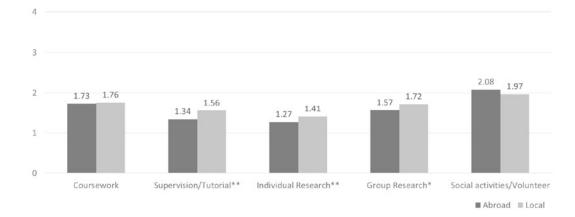
into a sustainable research cluster when we got the MYR5 million research grant. I also established another "zemi" which is more diversified with members from the social sciences, management, medical sciences, engineering, etc. ... They work together, with or without research grants.

P12, male, aged 54, Master's and PhD (Japan)

The question I asked myself when I was in Japan is, "What makes them so advanced? Because when I look at myself and them, physically we look the same. But I guess as a society they are more of a team and can get things done at a group level. So collaboration and teamwork are really important [aspects]. Also, organization... Japanese like to do things efficiently... they are already set out to do things from the start. It's as simple as, for example, we're given a task to, maybe... fold clothes, let's say we work in a laundry shop. The Japanese will first figure out the most efficient way to fold the clothes. But we Malaysians will just carry out the task using [a] more straightforward approach. I apply this Japanese principle in my own work and within the lab so that things can be done more efficiently. In some aspects, I've managed to influence my team members mainly in [doing] research itself. We perform certain experiments and protocols so that there is a proper workflow, and we can be more efficient as there is more control within the group.

P18, male, aged 42, Master's (Malaysia) and PhD (Japan).

On the other hand, the t-test results suggest that the experience of the two groups is not statistically different for coursework and social activities/volunteering. The insignificant finding for



coursework is perhaps not surprising, as both SA and SH groups are similarly expected to deliver with respect to coursework as part of academics' core responsibilities. However, the fact that the SA group did not report greater impact of their experience in engaging with social activities or volunteering compared to their peers who studied locally was rather unexpected. This is because the interview data show evidence of societal engagement/volunteering being commonplace overseas. For example, one participant shared the following:

The school I was attached to, which is the School of Psychology, organized community events annually. As an example, the Brain Science Project targeting younger children aims to educate them on topics like perception and other psychology topics. I was involved in some of these events... but now, back in Malaysia, I'm not as active as before. I'm still finding a group to do some volunteering work.

P8, female, aged 29, Master's and PhD (UK)

The interview data helps shed some light on this matter, including that the majority of the participants reported little or no involvement at all in any kind of community activities when they were abroad. Some reported that they could not volunteer due to their work schedule and commitments as students. When asked about community activities, one participant responded:

No, I wasn't involved in community projects because, as far as I'm concerned, my department did not require students' involvement in such activities. My program abroad was [...] very academic-oriented, with no emphasis on societal or industry engagement.

P15, female, aged 36, Master's and PhD (US).

In reply to the question of whether they are currently involved in such activities back in Malaysia, slightly more than half of the participants stated that they are still looking for possibilities. This finding is rather unsettling as it may suggest that academics in Malaysia tend to work in silos; in other words, there may be little attempt on a personal level to seek out opportunities to connect and give back to society. When asked for the reasons for their non-/limited involvement in volunteering work in Malaysia, some participants cited the mainly KPI-driven system in local institutions, which favors highimpact publications over societal engagement as a key inhibiting factor. Others opined that the structural set-up of local universities itself may have indirectly segregated the academy from the community. One participant surmised that, in foreign countries, having easy access to the university and its facilities may have somewhat facilitated the close working relationships between the university, local community and industry to solve local problems. He added that:

Society [works] very closely with the university. The university is part of society. [Whereas in Malaysia], we put our society outside [...]." P9, male, aged 53, Master's and PhD (NZ).

However, it should be noted that seven participants indicated that they have been involved in some level of volunteerism since returning to Malaysia. Their societal engagement efforts are primarily demonstrated through various community projects within the University-Community Engagement (UCE) cluster formed under USM's Division of Industry and Community Network (BJIM). This UCE cluster encourages academic staff to champion initiatives, efforts and activities that focus on establishing the university as a responsible, relevant and active partner of the community in addressing societal needs. One specific example of societal engagement is as follows:

I work a lot with NGOs now. We hold webinars via Facebook to try raise awareness among the masses, patients and professionals on premier immunology diseases or PID. Also, [...] to educate the PID professionals on how to manage their patients better.

P14, female, aged 34, Master's (Malaysia) and PhD (UK)

While not discounting or downplaying these academics' considerable and continuous commitments to society, it is not certain if their contributions are motivated by personal responsibility or an obligation to help as mandated by the faculty or university. That said, the interview results perhaps reveal one case demonstrating the true spirit of volunteerism, i.e., donating time and energy to the community as a social responsibility rather than for any financial reward. I was a non-monetary scientific advisor to a company that managed an eco-tourism business in Batu Caves. I offered free consultations on how to handle and protect bats. In return, I got help in the form of their manpower to support my own research work on bats. For instance, when there are special observations about bats, they would inform me and ask me to ID. This company closed down in 2018. However, I still have other links with local organic farmers in Penang and bat caves temples in Penang Hill. I will visit these places once monthly to monitor the bats and will share my knowledge t [with] the temple committee. They will then disseminate the knowledge to tourists and temple devotees, which [subsequently] helps conserve bats and their habitats more effectively.

P10, female, aged 40, Master's (Malaysia) and PhD (UK).

5.4.4 Additional Insights from the Interview Results

The thematic analysis of the interview data revealed a number of sub-themes. Two subthemes particularly stand out despite not being substantially captured by the survey results. Thus, we will now discuss these sub-themes in turn. We label them as (i) personal growth and development; and (ii) re-entry and transition experience, accordingly.

5.4.4.1 Personal Growth and Development

All of the participants concurred that their SA experiences have generally been positive. They also stated that having the opportunity to SA has helped them to grow in terms of both work and life aspects. Interestingly, the participants articulated the nature of their growth and development in the form of benefits. These are grouped under three broad categories, namely "attitudinal benefits," "relational benefits" and "professional development benefits."

First, with regard to attitudinal benefits, the participants claimed that their SA experience has had a significant impact on their attributes and mindset. They have become more independent, confident, adaptable and resilient, and they have a broader worldview/perspective. The following are some examples of such observations:

SA has changed me as a person. When I was in the university in Malaysia, I was very introverted. When [abroad], the experience has made me who and what I am now. To have the confidence to talk and express [my views], it's something I learned a lot when abroad.

P6, female, aged 40, Master's (Malaysia) and PhD (UK) $\,$

I think I've grown as an individual as well as professionally. I have wider perspectives about the world, I'm more confident and am able to position myself well.

P14, female, aged 34, Master's (Malaysia) and PhD (UK).

Second, as far as relational benefits are concerned, the interview results indicate that the study abroad experience has afforded the participants many opportunities to learn and hone numerous skills that include language competencies, problem-solving, survivability and reduced inferiority complex when dealing with foreigners. The SA experience has also given them good exposure to new cultures, thus minimizing intercultural anxieties. An excerpt from the interviews illustrates this aspect of growth and development.

Being overseas has opened up my mind. I was a shy person. The overseas experience has made me less afraid to approach potential research collaborators... it reduced my inferiority complex when it comes to dealing with foreigners. So now I can work with foreigners and not just (with) Malaysians. I must add that when we are in a foreign country, we are forced to come out of our comfort zone. We picked up survivability skills. The experience has also enhanced my language competencies.

P11, female, aged 38, Master's (Malaysia) and PhD (NZ).

Third, all the participants reiterated that the enhancement of the skills and knowledge crucial for academic work is a notable outcome of the educational experience overseas. They remarked that how they conduct research, teach, train and supervise their students has been positively impacted by their SA experience. For example, one participant recounted his experience abroad as an eye-opener: I'd say that my teaching would be probably different if I had not gone overseas... people over there [...] have this kind of mantra [...] whatever makes you happy, do it [...] compared to doing it because it is a good job or because it pays you a lot of money [...] Basically, this [has] influenced how I engage with my students now. I will encourage them to pursue what they like instead of you should score [an] A.

P1, male, aged 40, Master's (Malaysia) and PhD (UK)

Based on the above interview findings, it becomes evident that the role of SA experience extends beyond enhancing academics' skills and knowledge when dealing with their work. SA can also greatly contribute to academics' personal growth and development, thus confirming previous studies (e.g., Cisneros-Donahue et al., 2012; Dwyer, 2004).

5.4.4.2 Re-Entry and Transition Experience

The participants' re-entry and transition experience was reportedly bumpier for them when compared to their counterparts who studied locally. The challenges that the participants faced during the transition period included a lack of support/mentoring from senior staff or the faculty to kick-start their careers, resulting in them feeling demotivated. This was particularly true for younger academics with no prior work experience in the HE sector. The responses below illustrate some of the participants' frustrations and their personal attempts to overcome the challenges.

When I returned to work in Malaysia, I couldn't fit [into] the system that well. The way people do things here—punctuality, ethics approval for research, applying for grants, etc. It was like a culture shock to me. But I still tried to make the best of the situations I faced.

P17, female, aged 42, Master's (Malaysia) and PhD (UK)

As someone who came from the industry, it was quite hard for me to adapt initially. So I took the initiative to seek the senior lecturers' advice on how best to adapt to the academic world and to move forward.

P19, male, aged 34, Master's (Malaysia) and PhD (Japan)

There was definitely no support in my first placement when I returned to Malaysia. But it was not intentional because I was the only psychologist there. The department is for translational research and so I wasn't a good fit. Then I was transferred to another school which is a better fit, but I won't say that I got a whole lot of support there [...] the school was not extra supportive[...] just giving the bare minimum.

P15, female, aged 36, Master's and PhD (US)

There were also many instances of academics encountering challenges when it came to carrying out research work. The interview results indicate that one of the difficulties lies in forging sustainable research collaborations when they are back in Malaysia. The participants attributed this issue to the kind of research they conduct (e.g., transdisciplinary research is particularly difficult), the university bureaucracy and lack of funding. The following accounts reflect some of these concerns:

I found one or two lecturers in my field but not that many in USM [...] so it is a bit tough to collaborate [...] There were opportunities but different topics [...] so, this problem got me to seriously consider whether I should continue with my research interests or broaden my research areas. I am testing other areas now. I am also still collaborating with my former supervisor in some of my research projects.

P8, female, aged 29, Master's and PhD (UK)

Unless you know the local scholars well, forging a new collaboration is difficult [...] and time-consuming as we need to go through many layers of bureaucracy. The grant we received is not big, so the idea is to share resources. Nobody can sustain their research on a single grant.

P3, female, aged 49, Master's (Malaysia) and PhD (UK) $\,$

Interestingly, one participant points out that some of the personality traits she formed while living for close to 11 years in the US [pursuing her undergraduate, master's and doctoral degrees] may not work to her advantage when it comes to career progression or promotion prospects in the university.

My personal belief is that having studied abroad would have added more [value] if I were working in the industry [...] such that I won't have problems interacting with [the] US clients because I've the language competency and a good understanding of the American culture. For example, I'm not afraid to voice my disagreements because people in the US who voice their opinions are not afraid to be shamed or put down. But this trait of being open and critical does not seem to augur well for the local university culture.

P15, female, aged 36, Master's and PhD (US)

The findings on re-entry and transition experience clearly insinuate the strain and stress that can sometimes invoke a sense of helplessness or a loss of identity among the returnees. This is known as "reverse culture shock," where SA academics have to learn how to fit into the local academic culture upon returning home. In light of the above findings, we argue that the provision of adequate resources and support to facilitate academic work is extremely crucial in addressing the re-entry and transition challenges. The responses below may validate this contention.

In my case, the transition process was fine as I've spent considerable time in USM before, as an undergraduate and a Master's student. So I know what to expect. At the same time, I'm now in a research institute which is more focused on research. I believe the impact of transition would be greater if I were in a teaching faculty as I'd be doing more teaching for undergraduate programs. I'm also very lucky in the sense that my former Master's supervisor is around [in my department]. So there is still help, networking and support. I also know some of the lecturers personally. Therefore, they can offer, support and offer opportunities for research collaborations if needed. And I must say that they are happy to help.

P18, male, aged 42, Master's (Malaysia) and PhD (Japan)

5.5 Discussion

Based on the study findings, four points are worth highlighting. First, although a key focus of postgraduate education at the Master's or doctorate level is research training, the SA experience has the strongest impact on the international aspect of their research activities. Those who studied abroad have also evidently been able to leverage their past connections and networks established while studying abroad to maintain communication and strengthen their research work.

Second, the results showed those who studied abroad tend to have better skills and knowledge related to research. The scholarly contributions of those who studied abroad are more likely to be aligned with the priorities of the global research community. However, the interview data also illuminated multiple challenges and constraints encountered by those returning to Malaysia after their studies abroad. It is important to note that the challenges in the research dimension of their academic work are significantly greater than in other areas of academic work, such as teaching and supervising. These findings are consistent with past studies (e.g., Alkubaidi & Alzhrani, 2020; Fanari et al., 2021; Shin et al., 2014; Wan et al., 2022). The findings specifically resonate with those reported in a study by Shin et al. (2014) that examined the research productivity of returnees who studied abroad in South Korea, Hong Kong and Malaysia, and another study by Wan et al. (2022), which explored the adaptation of returning Malaysian PhD graduates from abroad into local universities.

Third, the insignificance of study experience on social activities/volunteering for both SA and SH groups is of some concern. One main reason could be due to a lack of focus in most doctoral programs to prepare and support students to engage with the community and society beyond their research work. Hence, academics are not able to draw on their study experience-regardless of whether it took place abroad or locally-to influence their perspectives on volunteering in their current work. By not giving back to society and/or remaining disconnected from important public debates beyond the campus, it has been argued that academics may eventually lose their relevance in society (Hoffman, 2016).

Finally, the interview data reveal that academics who study abroad face a number of challenges and constraints when they return home. These are largely attributed to structural constraints, lack of resources and support. The bumpy re-entry and transition experience could in turn impede academics' research productivity and work performance. In other words, due to these challenges, the gains of academics' SA experience might not be optimized to ensure that their potential contributions are fully realized. If this is true, it raises a genuine concern about sponsoring bodies not receiving adequate returns for SA investments. Not only is it a costly affair, but overseas education can also consume resources that could

otherwise be invested in SH programs (Vande

Berg, 2001). It is important to recognize that the decisions and destinations for studying abroad have been guided by policies and strategies at the national and institutional levels (see Chap. 4 in this book by Morshidi, 2024). Lamentably, the return, adaptation and socialization of these returning academics have been left almost entirely to the institutions and individuals to navigate their own paths. As this study has shown, the process of adaptation upon return has been far more challenging. Hence, for the SA experience to multiply its benefits across the university, there is a need for more concerted policies and initiatives that strategically chart the guidelines on sending academics abroad for their education and training. Equally critical is the demonstration of overt efforts by the HE sector to ease academics' return by providing avenues and generous support across the national policy framework, institutional and individual levels; for example, setting up a mentoring system to support younger academics and those with little work experience in HE. Other initiatives could take the form of providing pathways for research, teaching collaborations and research grants, particularly for niche and transdisciplinary research. These efforts can essentially facilitate academics to tap into their SA experience, thus enabling them to contribute more significantly to the development of HE in Malaysia.

5.6 Conclusion

This study on academics' study experiences incorporates the perspectives of developing countries into the existing SA literature. Based on quantitative and qualitative data, the study affirms the contributions of SA experience to enhancing academics' skills and knowledge. Without a doubt, the SA experience has had a positive impact on the development of USM academics and has a more significant effect than local experience on different dimensions of academic work, namely education- and researchrelated activities, as well as current work. The study also reveals that the re-entry and transition experience of academics appears to be fraught with a number of challenges and constraints. Acknowledging these challenges is plausibly an important first step (Wan et al., 2022) in the development and implementation of more concerted policies and initiatives by the HE sector that strategically set out the guidelines of SA programs, including better support for academics when they return to work.

Future research on the impact of SA experience on academic work dimensions and productivity may benefit from the inclusion of other faculty members' (e.g., superiors and peers) perspectives to address the issue of self-serving bias that can potentially arise from self-reports. Also, the duration of SA experience should be considered in future studies. This would be useful in confirming whether the age-old notion of "more is better" (i.e., the longer the SA experience, the more significant the impact is) (Dwyer, 2004) held by scholars in the SA field holds water in the context of developing countries. It would also be interesting to analyze differences in SA outcomes by study location, language studied, disciplines and gender. Finally, further research is warranted to ascertain if the personal characteristics of participants (such as personality traits), and not just the SA experience alone, might account for some of the significant differences found between the SA and SH groups.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Chang Da Wan was Director of the National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia. Chang Da has vast experience in undertaking research in the area of higher education policy and practice and has published widely on the subject. He has also undertaken consultancy and capacity-building projects for various national agencies in Malaysia and international organizations, including UNESCO and UNICEF. He read economics at the University of Malaya and the National University of Singapore, before going on to read education for a doctorate at the University of Oxford.

Magdalene Chooi Hwa Ang Hwa was a Research Fellow at the National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia. Prior to her contractual appointment with IPPTN, she was an Associate Professor at the Centre for Research on Women and Gender, Universiti Sains Malaysia and at the Faculty of International Business and Finance, Universiti Malaysia Sabah. She has conducted empirical research and consultancy projects for industry and various agencies, including the Ministry of Higher Education, the Sumitomo Foundation and the Penang State Government. Beyond the work domain, she is a certified HRDF trainer and a trained lay counselor. She also volunteers for the International Aid for the Protection and Welfare of Animals (IAPWA) in Penang, a UK-founded animal welfare charity. She holds a B.Ed. (Hons.) from the University of Nottingham (U.K.) and an MBA and a PhD from Universiti Sains Malaysia.

Morshidi Sirat is an Emeritus Professor with more than 40 years of experience in academia and highlevel management positions at the Ministry of Higher Education (MOHE). Morshidi served as Director, the National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia (USM) for almost 11 years. He then took on the role of Vice-Chancellor, Universiti Malaysia Sarawak (UNIMAS), before moving back to the MOHE to take up the position of Director-General of Higher Education. Before assuming the position of Vice-Chancellor at UNIMAS, Morshidi was Deputy Director-General of Higher Education (Public Sector). Morshidi is now serving as Higher Education Advisor to the Minister of Higher Education.

M. J. Muhammad Sharrieffuddin was a Research Officer at the National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia. Apart from this collaborative project with the Japan International Cooperation Agency—Research Institute (JICA RI), he was also involved in organizing the Global Higher Education Forum.

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6

Transformative Experience Through Networking Opportunities Abroad: A Case Study of Universiti Teknologi Malaysia

Shadiya Mohamed Saleh Baqutayan, Adibah Binti Abdul Latif, Sharifah Hafizah Syed Ariffin, Siti Hasliah Salleh and Sathiabama T. Thirugnana

Abstract

The number of people participating in study abroad programs is growing every year as governments, universities, institutions, and organizations become increasingly involved. One reason for this growth is the need to develop the skills of higher education professionals to elevate university rankings. This chapter presents the case study of Universiti Teknologi Malaysia (UTM) and analyzes the impact of faculty members' experiences abroad. Data were collected using a web-based questionnaire with a sample of 324 participants from different faculties and programs at UTM. An interview was then conducted with nine participants

S. M. S. Baqutayan (🖂)

Perdana Centre, Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia, Johor, Malaysia e-mail: shadiya.kl@utm.my

A. B. A. Latif Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia, Johor, Malaysia

S. H. S. Ariffin Faculty of Electrical Engineering, Universiti Teknologi Malaysia, Johor, Malaysia

S. H. Salleh · S. T. Thirugnana Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia, Johor, Malaysia to offer purposeful reflection and detailed discussions of participants' experiences. The results show that study abroad experiences positively influenced education and research-related activities, with a significant increase in participation in international collaborative research projects and networking. This contributed to the advancement of UTM as a research-focused university. The new knowledge and skills acquired through study abroad have led to an increase in the number of research papers and attracted international research funding, international collaborations, and networking.

Keywords

Study abroad · Skills acquired · Networking opportunities · Internationalization of higher education · Universiti Teknologi Malaysia (UTM)

6.1 Introduction

As the world becomes increasingly open and internationalized, university academics, students, and staff need to interact, work together, and strive for the wellbeing and prosperity of mankind. Good partnerships with institutions from other countries are therefore essential to

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achieving sustainable international collaboration, making internationalization a core value of most universities. This is particularly the case for Universiti Teknologi Malaysia (UTM), which specifically recognizes the importance of preparing its students and staff to become global citizens. The main purpose of UTM's internationalization is to realize academic, economic, and cultural benefits for the universityespecially its students and staff-as well as its community and region, with reciprocal benefits extending to the international community. Commitment to internationalization has implications for curricula, teaching, research, administration, selection and promotion of staff, student recruitment, marketing, service learning through student and staff mobility, quality review, the university budget and communication.

Promoting internationalization and improving its world ranking is an ambitious and valuable goal for UTM that can lead to significant impacts on the institution, its students, staff, and the broader community. In order to achieve this, UTM needs to further develop its global perspectives and connections by expanding student and staff experiences abroad through educational partnerships and other international linkages. This will help the university to enhance its good international reputation, as it strives to enter the world rankings of the world's top 100 universities (Munusamy & Hashim, 2019).

UTM's internationalization efforts align with its goals of producing well-rounded graduates with a global mindset. The university fosters international collaborations to provide students with opportunities for international experiences as a way of contributing to its reputation as a globally oriented institution. The Global Outreach Programme (GOP), introduced at UTM in 2009, is an initiative that allows students to gain valuable academic, cultural, and industrial experiences abroad. This program is multifaceted, offering three distinct modes of participation. Firstly, a technical and experiential component provides students with exposure to real-world settings, including communities, workplaces, organizations, and natural environments (Kasim et al., 2012). Such experiences can significantly enhance students' practical understanding of their fields of study and prepare them for the challenges of the global workforce. Secondly, cultural immersion and local assimilation are designed to promote intercultural understanding and personal growth among students. By immersing students in different cultural contexts and encouraging crossdisciplinary experiences, the university seeks to foster a diverse and adaptable student body. And lastly, service learning involves the integration of community service with instruction and reflection. This approach not only enriches academic knowledge but also instills a sense of civic responsibility and community engagement among UTM students.

This emphasis on providing real-world academic content, promoting intercultural understanding, and supporting sustainable human development reflects the growing recognition of the interconnected nature of our world and the need for a well-rounded education that prepares students for a globalized society. Student and staff exchange programs, branch campuses, twinning programs, and distance learning are approaches that many universities use to achieve internationalization. Such programs offer students and faculty opportunities to engage with different cultures, perspectives, and educational systems, which can enhance their learning experiences and broaden their perspectives (Altbach & Knight, 2007). Sending academic staff to study abroad is an important facet of internationalization. When professors and researchers immerse themselves in foreign academic environments, they gain fresh insights into teaching methodologies, research practices, and disciplinary developments. This cross-pollination of ideas and methodologies can then be used to enrich the educational offerings of their home institutions.

Faculty members who return from such experiences often incorporate their newfound knowledge and pedagogical approaches into their teaching (Altbach & Knight, 2007). This, in turn, benefits students by exposing them to diverse teaching styles and global perspectives. International cooperation among universities

through academic staff exchange programs can also be an effective way of sharing expertise and resources across borders, allowing universities to contribute to the collective advancement of knowledge and promote more inclusive and globalized education. In essence, the internationalization of higher education is not just about acquiring knowledge from other countries but also about building bridges between cultures, fostering mutual understanding, and addressing global challenges collaboratively. This approach prepares students and academics to be adaptable and culturally sensitive, as well as equipping them to tackle complex international issues.

Finally, studying abroad provides an investment opportunity that may benefit both the host and home countries. For host countries, international students inject money into their national economies (Davis, 2003). For the home country, citizens who engage in study abroad bring back new knowledge, skills, and intercultural understandings (Cohen et al., 2005; Gacel-Avila, 2005). Thus, enabling student participation in international programs is essential for diversifying and maximizing their learning experiences and personal development.

6.2 Development of University Teknologi Malaysia

Universiti Teknologi Malaysia (UTM) is a prominent Malaysian public research university focused on engineering and technology education, research, and innovation. It was established in 1904 as a technical school and was upgraded to university status in 1971. In 1975, the Institute reached another milestone when it adopted the official name Universiti Teknologi Malaysia (UTM) and the Rector's position was upgraded to that of Vice-Chancellor. The Deputy Vice-Chancellor responsible for students' affairs was also appointed to look after the demands and welfare of the increasing student population. In 1976, the government approved the new University Constitution and the University Senate and Council were established. In line with this changing status, the university began focusing on the establishment and development of its academic faculties; as the years progressed, several newer faculties were established. For instance, the Faculty of Engineering underwent a significant transformation, dividing into three distinct and independent faculties: Civil Engineering, Mechanical Engineering, and Electrical Engineering. These three specialized engineering faculties, in conjunction with the Faculty of Built Environment and the Faculty of Surveying, as well as the establishment of the Centre for Science Students and Centre for Humanities Students, laid the foundation for the majority of academic programs offered at Universiti Teknologi Malaysia (UTM) today.

Today, UTM has three campuses; the main campus is located in Skudai, Johor Bahru, a technologically rich and culturally vibrant area in the southernmost part of Malaysia, with another established in Pagoh, while its older branch city campus is situated at Jalan Semarak, Kuala Lumpur. Currently, UTM has ten faculties offering undergraduate and postgraduate courses, with about 17,500 full-time undergraduate students and 3,200 postgraduate students. The university workforce is comprised of 1,877 full-time academic staff and 2,061 supporting staff. Having produced around 200,000 technical graduates and qualified professionals in its history, UTM has earned its place as Malaysia's Premier University for engineering and technology. However, the research culture at UTM has intensified since the university became the fifth Malaysia Research University (MRU) in 2010. UTM is viewed as one of the key players for knowledge, research innovation, and talent development, contributing to Malaysia's technology and the emergence of a knowledgedriven economy.

Seeking sustainable impacts, UTM has established a holistic and conducive innovation ecosystem in which academia, industry, communities and government agencies are able to co-create, co-develop and participate actively in finding innovative solutions to challenges that impede nation-building. Over time, UTM has developed and maintained collaborative relationships with other universities, institutions sity by opening up new ideas and perspectives. Currently, the opportunities for international collaboration-person to person and organization to organization-are increasing in urgency and importance, concurrent with UTM's growing interest and involvement. According to Prof. Datuk Ir. Dr. Wahid bin Omar, the Vice Chancellor of UTM, the university has achieved significant success through collaborations with partners from academia, industry, community, and government agencies. At UTM, the value and purpose of international collaboration are rooted in enhancing the lives of others through the creation of new knowledge and venturing into research and innovation that translates to the needs of the industry and the community. However, a sustainable impact can only be realized through a synergistic alliance, as each stakeholder has its own unique perspectives and goals.

These changes have led to a need for clearer policies, better procedures, and greater administrative support services. To meet this need, UTM is creating policies and regulations for internationalization while reaffirming the university's support for internationalization (Office of International Affairs Universiti Teknologi Malaysia 2009). As noted above, internationalization is central to the values of UTM, which recognizes the importance of preparing its students to be global citizens. UTM's working definition of internationalization is "the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of postsecondary education" (Knight, 2003). Based on this definition, UTM strives to promote its activities in regard to quality teaching and learning, research, and social contribution as an internationally recognized university. Moreover, UTM acknowledges the importance of supporting its students and staff to become global citizens and hopes that they will actively engage in activities that internationalize the curriculum, research, and other aspects of university life. Thus, the university encourages individuals and departments to participate in internationalization activities (Office of International Affairs, Universiti Teknologi Malaysia 2009).

As a result, UTM has achieved several accomplishments across various domains; it was ranked number 188 in the 2024 Quacquarelli Symonds (QS) World University Rankings, reflecting its strong international standing and its commitment to academic quality, research, and overall institutional performance. UTM also was ranked number 39 in Asia, underscoring its significance and influence within the continent's higher education landscape. Several UTM academic courses have been named Top Subjects by the QS World University Ranking, signifying the university's expertise and strength in Architecture and Civil and Structural Engineering. These achievements collectively demonstrate UTM's ongoing dedication to delivering quality education, fostering research excellence, and making a positive impact in various academic and professional spheres. UTM has also been actively pursuing strategic partnerships with various international institutions in Asia, the Middle East, Africa, Europe, and America to enhance its global presence and facilitate academic and research collaboration. Such recognition can promote continued growth and motivate the university community toward greater accomplishments.

At present, the Malaysia-Japan International Institute of Technology (MJIIT) provides a notable example of UTM's commitment to international collaboration, with the aim of advancing technological progress in Malaysia and the ASEAN region. Established through joint efforts between Japan and Malaysia, MJIIT focuses on education, research, and the exchange of knowledge in various technological fields. It serves as a platform for students and researchers from both countries to engage in academic and cultural exchange while contributing to the advancement of technology and innovation. MJIIT's collaborative approach is intended to foster a diverse learning environment where students and faculty from Malaysia and Japan can work together, share expertise, and contribute to the development

of cutting-edge technologies. The institute often emphasizes the exchange and mobility of both students and staff, which helps promote cross-cultural understanding and the transfer of knowledge between the two nations. The establishment of MJIIT demonstrates the significance of international partnerships in education and research, as it brings together the strengths and expertise of both Malaysia and Japan to address technological challenges and promote economic growth in the ASEAN region. This type of collaboration not only benefits the participating countries but also contributes to global innovation and progress.

Based on the above discussion, the objective of this study is to examine and present the impact of studying abroad on education and research-related activities of academic staff, with UTM providing a case study on how study abroad has benefitted the university and broader society.

6.3 Research Methods and Data

A mixed-method approach was used in the study. First, a quantitative method was used to quantify the opinions of UTM academic staff to obtain respondents' views on study abroad. Second, a qualitative approach was used to conduct interviews to add depth and context to the survey results. The following sections describe the research methods in more detail.

6.3.1 Quantitative Survey

The questionnaire seeks to understand the impact of studying abroad or studying at home (in the context of master's or doctoral level education) on various activities at UTM. These activities include education, research, and society-related activities. Understanding the impact on these areas can provide insights into the benefits of studying abroad or at home. The questionnaire also assesses whether respondents have engaged in the past five years to evaluate the ongoing involvement of respondents in these areas. The online survey (in English) on the WebCAS Formulator web-based questionnaire platform was conducted over a 6.5-month period (January 1–June 15, 2022). Potential participants (all UTM employees) were contacted via email invitations, WhatsApp, phone calls, and knocking on office doors and asked to participate in the survey. A total of 338 participants agreed to answer the survey questions. Individuals were informed of the purpose of the study and how the study would be conducted. However, the non-Malaysian nationality and non-academic staff were deleted.

The questionnaire includes questions common to people with study abroad (SA) experience and those who chose to study at home (SH), as well as questions specific to each group. Common questions for both groups relate to the personal attributes of the respondents, including gender, age, faculty, and job title. This information helps in characterizing the sample. One of the key questions is whether the respondent has studied abroad. If the respondent responds affirmatively, the questionnaire asks for additional details regarding the destination country, the university they attended, the year they received their degree, and the main source of funding for their study abroad expenses.

Separate versions of the questionnaire were prepared for those who studied abroad and those who had not. This was because their experiences and perspectives are likely to differ significantly. While there were separate versions, the questions were aligned to allow for a comparison of responses between the two groups. This alignment involves asking similar questions in both versions but tailoring them to the specific experiences of each group.

This questionnaire was designed to gather data to assess and compare the experiences and impacts of studying abroad versus studying at home on various aspects of the academic and professional lives of respondents at UTM. The data collected was then analyzed to gain insights into how international education experiences influence individuals' contributions to the institution and their personal and professional growth.

Manage-			Gender	Total	
rial_Posi- tion			Male	Female	
No	Study	No	34	60	94
	Abroad	Yes	22	48	70
	Total		56	108	164
Yes	Study	No	18	35	53
	Abroad	Yes	44	63	107
	Total		62	98	160
	Total		118	206	324

Table 6.1 Study abroad status and managerial position

 by gender at UTM

The following tables show the disaggregation of the participants' characteristics and backgrounds (SA n=170; SH n=128). The distribution is based on their gender, nationality, whether they had studied abroad, and whether they had held an administrative position at UTM. Table 6.1 shows the cross-tabulation among the respondents according to selected characteristics.

Table 6.1 provides a comprehensive crosstabulation of the 324 respondents, breaking down their characteristics by managerial position, gender, and study abroad status. Among the non-managerial positions, 94 (34 males; 60 females) did not study abroad, while 70 (22 males; 48 females) had studied abroad.

For respondents holding a managerial position, the trend is somewhat different. Among the 160 respondents, 53 did not study abroad (18 males; 35 females), while 107 had studied abroad (44 males; 63 females). Across both managerial categories, the total data show that 147 respondents did not study abroad, while 177 did, with a slightly higher number of females in both categories.

The table reveals interesting insights into how study abroad status correlates with other demographic factors such as managerial position and gender. The data suggests that women are slightly more inclined towards studying abroad, irrespective of their managerial status. These findings could serve as a basis for further investigation into the social and professional impacts of study abroad.

6.3.2 Qualitative Research

After completing the online survey, researchers conducted semi-structured interviews. The interviews aimed at eliciting participants' experiences as a result of studying abroad. This qualitative approach offers purposeful reflection and detailed discussions on participants' study abroad experiences. Interviewees were selected from among those faculty members who indicated in their questionnaire responses that they were willing to participate in the interviews. Using purposive sampling guided by criteria, researchers selected contrasting cases in terms of age, gender, study location, field or discipline, and duration with the university. All of the nine interviewees had participated in study abroad programs.

Table 6.2 lists the faculty members who were individually interviewed, disaggregating them based on their age, gender, study location, discipline, and duration with UTM.

6.4 Findings

6.4.1 Impact on Education-Related Activities

This section aims to provide an empirically rigorous examination of the impacts of studying abroad across a range of activities in education. Figure 6.1 compares the impacts on various educational activities between academic staff who studied abroad and those who studied at home. The impact levels for each group were measured in the survey using a Likert scale for nine teaching-related activities encompassing a wide range of academic and international educational endeavors, including developing and revising educational programs, courses, and teaching materials and conducting courses in

Code name	Age	Gender	Study location	Field/discipline	Duration with UTM
R1.1	56	Female	University of Sheffield (UK)	Soft computing	28
R1.2	42	Female	University of Queensland (Australia)	Electrical engineering	18
R1.3	57	Female	University of Manchester (UK)	Policy management	9
R1.4	78	Male	University of Aberdeen (UK)	Animal nutrition	29
R1.5	73	Male	University of Hawai'i (US)	Marine, Geography	10
R1.6	55	Female	California State University (US)	Business administra- tion	20
R1.7	52	Female	Waseda University (Japan)	Semiconductor mate- rial engineering	8
R1.8	61	Male	University of Wales Institute of Science & Technology, Cardiff (UK)	Engineering (Computer Systems)	23
R1.9	56	Female	University of Nottingham (UK)	Intellectual property (Biotechnology)	20

 Table 6.2
 List of interviewees from UTM

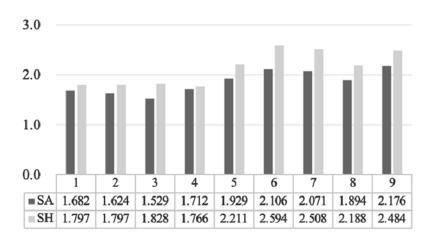


Fig. 6.1 Comparison of study abroad and study at home impacts on education activities at UTM. *Note* 1. Scale: 4-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all. *Note* 2. *p<0.05, **p<0.01. *Note* 3. SA n=170, SH n=128

foreign languages. Other survey items are for teaching at overseas universities, initiating student exchange programs, inviting international researchers from foreign universities, and organizing international joint educational programs.

- 1. Developing/revising education programs
- 2. Developing/revising courses
- 3. Developing/revising teaching materials
- 4. Adopting new teaching methods for undergraduate students
- 5. Conducting courses in foreign languages

- 6. Teaching at overseas universities
- 7. Initiating/implementing student exchange programs with foreign universities
- 8. Inviting international researchers to your university for educational activities
- 9. Organizing international joint educational programs

The comparison of study abroad (SA) and study at home (SH) results shows that SA had lower means, indicating greater impacts for all questions. Statistically significant differences can be seen in seven questions out of nine, showing stronger impact for SA faculty members who studied abroad. Even in cases where classes are taught in English or researchers are invited from abroad, the results show a larger impact for those who studied abroad.

Both SA and SH faculty reported a relatively significant impact on developing and revising programs, courses, and teaching materials for undergraduate students, as well as adopting new teaching methods for undergraduate students. On the other hand, teaching at a foreign university, concluding an exchange agreement with a foreign university, and conducting international joint programs are less impactful for SH faculty than the other items. In these aspects, SA faculty are more influenced by their study abroad experience than SH faculty, although not to the same extent as curriculum development and revision.

The results of the interviews also clearly show that study abroad experiences have a significant impact on educational activities. Conducting interviews with academic staff can provide a more qualitative perspective and help explore potential differences that might not have been evident in the quantitative data. By combining quantitative and qualitative approaches, researchers can gain a more comprehensive understanding of the factors that influence academics' experiences and teaching practices, including the impact of their study location.

The qualitative results of this study indicated a significant impact of study abroad experiences on the education-related activities of academic staff. Study abroad experiences can profoundly influence individuals, including educators, in various ways. For example, several participants [R1.1, R1.4 and R1.5] indicated that:

Studying abroad expanded my networking opportunities, improved my English proficiency, enhanced the discussions, and fostered active learning in my classes [R1.1].

Study abroad allows me to be exposed to the science and scientific advances of the day, and to understand the science in a universal language [R1.4].

Studying abroad indeed offers me a wide range of benefits, such as a high-quality education, exposure to diverse perspectives, interdisciplinary opportunities, strong academic support, critical thinking and communication skills.

The above examples demonstrate the role that study abroad plays in supporting the items "Adopting new teaching methods" and "Conducting courses in foreign languages." These findings were reinforced by participants R 1.7 and R1.4, as follows:

I have gained proficiency in Japanese Language and have the confidence to initiate a student exchange program; now I know what the process is for student exchange programs.

Study abroad allowed me to exchange programs with other universities, exchange lecturers, and supervisors when I later became CEO of UTM.

These two accounts also provide specific examples of "Initiating/implementing student exchange programs with foreign universities." Another participant [R1.1] indicated that,

After coming back from the UK, I faced difficulties and challenges in organizing joint educational programs. This is because the agreement for joint programs takes time, and thus, students prefer pursuing a traditional PhD or masters instead of a joint program.

This is a good example of "Organizing international joint educational programs." The results of the above quantitative survey and qualitative interviews indicate that faculty members' experiences of studying abroad had a significant impact on their education-related activities after they return to their home countries. They indicated that they exchange experiences with colleagues who studied locally. This knowledgesharing can create a ripple effect, enriching the educational knowledge of their colleagues. As an example, participants R1.3 and R1.8 indicated the following:

On top of that, I would like to share my experiences with my colleagues so that they can have a similar experience.

Once I got back to Malaysia, I provided training and raised awareness among UTM staff that resulted in a significant increase in member engagement with research, rising from 10% to 30%.

The quantitative and qualitative results in education-related activities revealed that studying abroad did have a meaningful impact, albeit in ways that might not be easily measured or quantified. This highlights the importance of considering both quantitative and qualitative data when evaluating the impact of educational experiences. It also underscores the richness and complexity of the effects of studying abroad on academic staff, which may not always be captured by numerical measurements alone. This kind of finding can be useful for understanding the nuanced effects of educational experiences on individuals and may call for further exploration or more holistic assessments of the impacts.

6.4.2 Impact on Research-Related Activities

The subsequent results section offers a comparison of study abroad impact on a variety of research-related activities between academic staff who studied abroad and those who studied at home.

Given the increasing emphasis on international exposure in academia, the present study assesses whether studying abroad significantly influences academics' research activities. Using independent samples t-tests, the following section presents the mean scores for each selected research activity. The results are outlined in Fig. 6.2 and accompanied by a narrative summary for further contextualization.

- 1. Making presentations at academic conferences in Malaysia
- 2. Making presentations at academic conferences overseas
- Publishing articles in academic journals/ books in Malaysia
- Publishing articles in academic journals/ books overseas
- 5. Participating in international collaborative research projects with international researchers
- 6. Hosting international researchers

- Organizing international conferences at your home university/country
- 8. Launching new research projects
- 9. Obtaining competitive research funds
- 10. Applying for patents
- Adopting new research supervision methods or laboratory management systems for graduate students

As Fig. 6.2 shows, there was a stronger impact for SA than SH academics when it came to presenting at academic conferences in Malaysia. Likewise, SA had a bigger impact on attending and presenting at international conferences compared to their SH counterparts. However, both SA and SH groups had a similar impact in terms of contributing to local and international journals.

When we turn to more collaborative efforts like international research projects and hosting international researchers, SA academic staff displayed a slightly higher but not statistically significant impact. This suggests that SA academics increased their impact by engaging in international collaboration, but not to a degree that sets them firmly apart from SH academics. Organizing international conferences was an area where SA academics clearly had a strong impact from their study abroad experiences compared to their SH peers.

Lastly, in launching new research projects, securing competitive research funds, and applying for patents, the results showed no marked differences between the two groups. This suggests that regardless of whether academic staff studied abroad or at home, the impacts from these research-related activities are similar.

In summary, while studying abroad does seem to correlate with higher participation in certain international academic activities, such as presenting at conferences both in Malaysia and overseas, as well as organizing them, it does not uniformly translate into greater scholarly productivity or collaboration in all spheres.

Overall, the study suggests that academic staff who have studied abroad are significantly more involved in specific research activities,

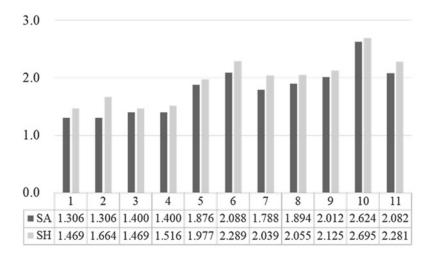


Fig. 6.2 Comparison between study abroad and study at home academics on research activities at UTM. *Note* 1. Scale: 4-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all. *Note* 2. *p<0.05, **p<0.01. *Note* 3. SA n=170, SH n=128

particularly in giving academic presentations in Malaysia and overseas and organizing international conferences at their home universities. However, in other aspects, like publishing articles and obtaining research funds, both groups showed similar levels of impact. Thus, while studying abroad may enhance some areas of research activity, it does not seem to be a defining factor across all of the dimensions examined in this research.

These outcomes are similar to those articulated in the interviews, where many faculty members reported specific examples of the impacts on their research-related activities. For example, a respondent who studied in the UK [R1.1] indicated the following:

Studying abroad influenced my research skills and enhanced my ability to apply for patents, obtain research funding, organize international conferences, and participate in collaborative research projects. [...] Studying abroad gave me the opportunity to conduct international research.

This is a demonstration of the results for "Obtaining competitive research funds" and "Applying for patents." Another participant who studied in Australia [R1.2] indicated that.

Studying abroad is a transformative experience that shapes personal skills and the academic

journey. It has indeed helped me to build my confidence and given me the opportunity to participate in international research projects and collaborate with friends and the supervisor from my university in Australia.

This is a specific example of "Participating in international collaborative research projects with researchers of the host country where you studied," as well as "Participating in international collaborative research projects with international researchers." Two participants who studied in the UK [R1.3 and R1.9] also indicated that they gained research skills:

In the UK, I learned the systematic method of doing research.

In the UK, as part of my research endeavors, I learned structural thinking skills, critical thinking skills, analyzing thinking skills, deep thinking skills, and design thinking skills.

This is a specific example of "Adopting new research/supervision methods." However, other participants indicated that they developed their research skills in Malaysia and not overseas, as R1.4 and R1.6 stated:

I was a young officer and I was the science adviser—that was the beginning of my research skills [...] [I] learned most of my research skills in Malaysia, it is an individual interest; I was encouraged by my interest in learning from other universities.

I was not really into research while I was abroad, I learned most of my research skills in Malaysia.

Studying abroad can enhance research-related activities for staff in various ways, but it is essential to recognize that the impact can vary significantly from person to person. Not everyone needs to study abroad to gain this experience and some individuals may gain similar skills at home. It depends on the individual's circumstances, motivations, and the specific opportunities available to them. Another participant who studied in the UK as well [R1.8] indicated the following:

Studying abroad gave me the opportunity to develop strong industry links, pattern recognition skills, and problem-solving abilities.

This is a good example of "Applying for patents" as well as "Participating in international collaborative research projects." The results of both quantitative and qualitative surveys have shown that faculty members' experiences of studying abroad have a significant impact on their research-related activities once they return to their home countries. The evidence gathered from both the survey and interviews suggests that faculty members who have had international study experiences tend to be more engaged or productive in their research activities once they return to their home countries. This is a widespread observation, as exposure to international experiences frequently broadens one's perspectives and opens avenues for new research interests, collaborations, and opportunities.

6.4.3 Value of Studying Abroad

Participants in the interviews emphasized that the value of studying abroad continues to be not only gaining knowledge in academic activities and research writing but also receiving significant benefits in other aspects of their personal and professional lives: they gained academic commitment, intercultural understanding, language competency, networking, and career development, as well as personal growth. As two interviewees who studied in the UK [R1.8 and R1.9] stated,

I learned about discipline. Supervision time is determined from the beginning of your study it's at a specific time of the week. If you miss that time, you need to wait until next week at the same pre-determined time. Time management, discipline and professionalism are what I learned.

We need to really change from spoon-feeding to facilitating the students; overseas, the lecturers always facilitated us and never spoon-fed us. Thus, we need to move from giving knowledge to instilling wisdom. I learned how to do my job professionally.

As seen in the two quotes above, the value of studying abroad is not only the acquisition of academic research-related activities but also learning about discipline, manners, and attitude—a key aspect pointed out in several interviews. In addition, when asked about the impact of their study abroad experience, several participants emphasized the experience of learning about a new culture, as indicated by R1.7 and R1.3:

The culture was totally different. I learned about a new culture.

I learned in an open-minded culture, and our culture is sometimes very close-minded.

As also seen in the interview, the value of studying abroad included learning how to communicate with students. For example, two respondents [R1.1] and [R1.2] indicated the following:

I believe communication with admin officers is a very important matter; therefore, I have become more keen when dealing with students.

I have become more approachable; I accommodate the students in a respectful manner.

In addition, in interviews, when asked about the impact of their study abroad experience, one participant talked about the data system, as indicated by R1.3:

The system abroad is different. They have a strong shared data system that is very systematic and available anytime. In Malaysia, the quality of data is quite different because abroad they have a very good data management system.

Additionally, when asked about the impact of study abroad, participants emphasized the importance of networking, as indicated by [R1.5], [R1.6], [R1.3] and [R1.4]:

Studying abroad enhances my ability to build diverse, global networks by providing me with the opportunities to interact with individuals from different cultures and backgrounds. The skills I gained during my time abroad positively influence my networking effectiveness and longterm career prospects.

I think I started early on networking, while I was doing my Bachelor's and MBA in the United States back in the late 1980s. I was doing a project under the Small Business Administration (SBA) in the United States. I benefit a lot from networking activities.

Study abroad has influenced my networking a lot until today. I established networks with the US, UK and European Union, and now, I am expanding my network into ASEAN.

Study in Japan has helped me to develop friendships/networking with the Japanese universities.

All respondents indicated that they maintain their networks with supervisors and friends from overseas. Two participants [R1.8 and R1.9] indicated their views as follows:

I have tried to keep networks with the latest field in which I studied since I have been in so many colleges and universities in the UK.

I still keep in touch with my supervisor, who often visits Malaysia; indeed, he introduced me to his supervisor when I was in the UK. We have several generations of supervisors".

Overall, studying abroad is a multifaceted experience that enriches individuals in numerous ways. It offers a holistic learning experience that extends beyond academia and research. It can have a profound impact on individuals, shaping them in multiple ways and better preparing them for personal and professional life. Studying abroad exposes the UTM staff to different cultures, languages, networking, and research and academic benefits. The knowledge and skills acquired during this venture contribute to personal growth, academic development, and future career success. Additionally, study abroad has a ripple effect on the home institution, enhancing its educational and research activities by bringing in fresh perspectives and experiences.

6.5 Discussion

Studying abroad can be a highly rewarding experience for university students, including those from Universiti Teknologi Malaysia (UTM). Study abroad offers numerous opportunities for personal and professional growth, exposure to different cultures, and the chance to develop academic and professional skills. While UTM is a reputable institution, studying abroad provides additional benefits to staff members.

This chapter compared the activities of academic staff who studied abroad with those who studied at home. The survey and interview results illustrate the multifaceted nature of how study abroad can impact academic staff. Both quantitative and qualitative data insights reveal meaningful-albeit hard-to-measure-impacts. Study abroad experiences can profoundly influence educators. These impacts can manifest in various ways, such as organizing international joint educational programs. Based on the results of this study, it is evident that academic professionals who have studied abroad gain significant benefits in various aspects of their work. Such findings are valuable for understanding the nuanced effects of educational experiences. The impacts of studying abroad are not limited to easily quantifiable factors but can encompass more qualitative, personal, and experiential dimensions. The study's results may call for further exploration or a more holistic assessment of the impacts of studying abroad on academic staff. Understanding these impacts more comprehensively can inform educational policies and practices related to international experiences for educators.

In the context of research-related activities, a notable distinction emerged between faculty members who pursued international study experiences and those who pursued domestic education alone, specifically in certain research domains. Academic staff who studied abroad exhibited a greater propensity for engaging in academic presentations, participating in international collaborative research projects, and networking. These findings suggest that their exposure to international contexts and experiences may foster their motivation and capability to partake in these activities on a global scale. Nonetheless, the study also underscores that in other facets of research, such as publishing scholarly articles and securing research funding, both groups-those with international study experience and those without-demonstrated comparable levels of impact. This implies that while studying abroad can positively influence certain dimensions of research activity, it may not necessarily be the sole determinant of success across all aspects of research. In summary, studying abroad can significantly boost an academic's participation in specific facets of research, particularly with regards to global engagement, networking, and international conferences. However, it should be noted that it is not the exclusive determinant of success across all research domains. Various other factors, including personal interest, work experience, institutional support, and research interests, also exert considerable influence on shaping an academic's research activities.

6.6 Conclusion

In conclusion, studying abroad offers a remarkable experience that underscores the university's dedication to excellence in teaching and learning, research, and societal impact, all while fostering the internationalization of the university and internationally recognized academic staff. Studying abroad can be a transformative experience that helps individuals grow personally. Living in a foreign country often provides students with new perspectives, challenges, and experiences that can contribute to personal growth and academic performance. Immersion in a different academic environment can help academics to increase their networking. This, in turn, leads to greater collaboration in research. Moreover, the global experiences gained through studying abroad can also enhance the university's international reputation, ultimately contributing to its ranking and recognition.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Shadiya Baqutayan Ph.D., is a senior lecturer at Universiti Teknologi Malaysia. She is credited as the author of more than 150 publications listed on Scopus, ISI, and H-index. She has published on psychology, leadership, innovation, and public health in academic publications, including World Cancer Research Journal and European review for medical and pharmacological sciences. She has local and international memberships in organizations such as the American Psychological Association, the Malaysian Psychotherapy Association (MPA), the American Association Of International Researchers (AAIR) (New York, USA), and the Asia-Pacific Chemical, Biological & Environmental Engineering Society (Hong Kong, USA, China). She undertook a training course on science, technology and innovation (STI) policy from "The University of Manchester" in 2014 and received a professional certificate in STI Policy Management from UTM Perdana-ISTIC.

Adibah Binti Abdul Latif is an Associate Professor in the School of Education, Faculty of Social Sciences and Humanities Universiti Teknologi Malaysia. Her academic journey has been marked by significant milestones, including a Ph.D. and a Master's degree in Educational Measurement and Evaluation. She currently serves as a research fellow at a Centre of Excellence at UTM, focusing on education and global well-being. From 2017 to 2020, she held a pivotal role in overseeing the quality of academics at UTM. Her notable research interests are educational assessment, instrument development, and Rasch measurement model analysis. With a passion that extends beyond academia, she continues to contribute actively to the educational landscape, particularly in the realm of assessment.

Sharifah Hafizah Syed Ariffin received her B.Eng (Hons) from London in 1997 and obtained her MEE and Ph.D in 2001 and 2006 from Universiti Teknologi Malaysia and Queen Mary University of London, respectively. She is currently Associate Professor in the Faculty of Engineering, Universiti Teknologi Malaysia. She worked at UTM Academic Leadership (UTMLead) from 2016 until 2021 and has been involved with numerous

leadership talent development programs in Higher Education Institutions. As a professional electronic engineer, she has headed several talent search programs at UTM for potential young leaders and incumbent developing leaders. She has been involved with many other leadership and talent management research projects nationally and internationally.

Siti Hasliah Salleh is a Senior Lecturer at Universiti Teknologi Malaysia (UTM). Her academic background was in Health Physics (Bachelor's Degree) and Policy Studies (Ph.D.), focusing on radiation emergency and disaster policy. Her employment at UTM began in 2008 as a research officer, and after completing her Ph.D., she became an academic. She teaches the Foundations of Science, Technology and Innovation (STI) Policy, Policy Development, and Research Methodology. She has participated in numerous policy-related research and consultancy projects funded by government agencies and private organizations. Her areas of interest in research include policy-making, monitoring and evaluation, disaster preparedness, and quantitative research instrument development.

Sathiabama T. Thirugnana received her Ph.D. in Electronics Engineering from Waseda University of Japan in 2015. She is currently the Director of UTM Ocean Thermal Energy Centre and a Senior Lecturer at Universiti Teknologi Malaysia. She is registered with the Board of Engineers, Malaysia (BEM), MBOT, IEM, IEEE, IET and Energy Institute of UK and Malaysia. Currently, she is focused on Ocean Thermal Energy Conversion (OTEC) and its efficient technology to achieve the Sustainable Development Goals (SDGs) and 2050 decarbonization action plans with O&G industries. She returned to her homeland, Malaysia, via the Brain Gain program under the Ministry of Human Resources in 2008, and since then, she has been actively involved in knowledge-transfer initiatives.

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Part III Impacts of Faculty Study Abroad on Higher Education in Indonesia



Higher Education Development and Study Abroad Experiences of Faculty in Indonesia

Bagyo Y. Moeliodihardjo

Abstract

This chapter provides an overview of the higher education sector in Indonesia, Bandung Institute of Technology (ITB) and Gadjah Mada University (UGM), and a discussion of the impact of faculty study abroad programs. As of 2022, there are 4,481 higher education institutions in Indonesia. While the higher education enrollment rate has now reached 40% and the number of students exceeds nine million, the quality of education continues to be a challenge. The government's higher education policy calls for collaboration with external stakeholders, promotion of internationalization, and enhancement of equitable access. The government continues to offer a variety of scholarship programs, with Japan as the largest destination, followed by the United Kingdom and the Netherlands. ITB and UGM are considered top universities, both representing Indonesia. ITB is an engineering university with approximately 1300 faculty members and 25,000 students, while UGM is a comprehensive university with approximately 3600 faculty members and 50,000 students. This study has confirmed that study abroad programs have significant impacts, most notably in terms of

B. Y. Moeliodihardjo (🖂)

Universitas Indonesia, Jakarta, Indonesia e-mail: bym@cs.ui.ac.id improved curriculum and faculty-student relationships. It also demonstrates the importance of strengthening the ties between returning students and the host country and conducting research based on the needs of employers, local business and industries, as a means of deepening the impacts of study abroad programs.

Keywords

 $\label{eq:constraint} \begin{array}{l} Indonesia \cdot Study \ abroad \cdot Higher \ education \cdot \\ University \ development \cdot Lecturers \cdot \\ ITB \cdot UGM \end{array}$

7.1 Introduction

The objective of this study is to collect information on the impact of Indonesian study abroad programs based on data and accounts from two major institutions, Institut Teknologi Bandung in Bandung (ITB) in Bandung and Universitas Gadjah Mada (UGM) in Yogyakarta. The basic information survey is essential for providing an overall understanding of the target universities.

The study was carried out between May and August 2018. The author has undertaken desk research and an analysis of publicly available secondary information, such as reports and articles. The research also comprised in-depth interviews with selected officials at ITB, the Ministry of Research, Technology and Higher

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Education (MoRTHE), as well as the Ministry of Development Planning/National Development Planning Agency. Since the report has been prepared based on the above-mentioned method, it is unavoidable that the author's personal opinions have been included in some sections of this chapter.

Unfortunately, it was not possible to undertake a visit to UGM before the conclusion of the formal agreement of this project. In order to meet the deadline, the author has gathered information on UGM from various alternative sources, mostly those available online.

7.2 National Higher Education

7.2.1 Historical Background

Higher education in Indonesia does not have a long history, beginning at the end of the nineteenth century with the establishment of a medical education program for Indigenous doctors in Jakarta. Before World War II, the number of active students hovered around 200, though almost 1000 students were registered at the time. After independence in 1945, several professional schools (Engineering and Sciences in Bandung, Agriculture in Bogor, and Medicine in Surabaya) were consolidated under Balai Perguruan Tinggi in Jakarta, which became Universitas Indonesia in 1950. In the late 1950s and early 1960s, schools located outside Jakarta were gradually turned into independent universities, including Airlangga University (UNAIR) in Surabaya, Hasanuddin University (UNHAS) in Makassar, ITB in Bandung, and IPB in Bogor.

7.2.2 Current Higher Education Landscape

Institutions

As of April 2022, there are a total of 4481 institutions offering higher education in Indonesia (PDPT 2022). In Table 7.1, institutions are grouped into four categories according to their

Table 7.1 Distribution of tertiary institutions in Indonesia

	Public	Private	Total
Universities	124	2990	3114
Islamic institutions	90	1105	1195
Service colleges	171		171
Open university	1		1
Total	386	4095	4481

Source PDPT (2022)

status: universities, Islamic institutions, and service colleges, along with an Open University.

As institutions, universities are under the jurisdiction of Ministry of Education, Culture, Research, and Technology (MOECRT) and are open for admission to any high school graduate. Islamic institutions focus on Islamic studies and are the responsibility of the Ministry of Religious Affairs (MoRA). Service colleges aim to produce graduates with special competencies to serve the government's needs.

Governance

Law 22/1999 decentralizes the responsibility for managing most sectors—including education—to the districts and municipalities. Nevertheless, the responsibility for managing the higher education system is still in the hands of the central government due to its role in promoting national integration.

Under the current administration, MoECRT is responsible for all levels of education, as well as culture. The Directorate General of Higher Education and the Ministry of Research, and Technology were merged into the Directorate General of Higher Education, Research, and Technology (DGHERT), with responsibility of managing higher education, excluding vocational institutions. All non-university research institutions have been merged under the National Research and Innovation Agency (BRIN).

Following the enactment of Law 12/2012, 21 institutions were converted into legal entities. A legal entity has a governing board as its

	2004	2007	2012	2018	2021
Operation & maintenance	3.386	5.07.2	9.817	17.430	16.168
Investment	2.37.4	4.746	11.672	15.150	17.607
Self-gene- rated	1.487	3.150	11.116	9.700	10.603
Total	7.237	12.958	32.605	41.280	44.378

Table 7.2 Government budget for higher education

 2004–2021 in IDR trillion¹

Source MoECRT (2022)

highest authority, although a representative of the Minister of MoECRT is also an ex-officio member of the board.

Funding

Public funds allocated for education have been steadily increasing over the last decade, particularly after the Consultative Assembly (*Majelis Permusyawaratan Rakyat - MPR*) amended the Constitution in 2005, mandating that 20% of the budget had to be allocated to the education sector.

The 2018 budget shows the combined budget of DGHE and the Ministry of Research and Technology (MoRT), indicating that the increase shown in Table 7.2 might be misleading. The allocated government budget for higher education institutions (DGHE) has actually decreased since 2015. Due to concerns over public outcry on high tuition and fees charged by public institutions over the last few years, MoRTHE has recently introduced a cap on tuition tariffs, resulting in a significant decrease in self-generated revenue.

Enrolment Rate

The Gross Enrolment Rate (GER) has significantly improved from 18.2% in 2004 to 39.17%—or over 9.28 million students in 2021. However, the GER is still considered moderate compared to neighboring ASEAN countries,

Table 7.3 Student enrolment in Indonesia tertiary institutions

	2004	2007	2012	2018	2021	
Enrolment (million)	3.86	4.37	5.38	6.12	9.28	
GER (%)	18.2	20.6	27.1	33.37	39.17	
GER (%) 18.2 20.6 27.1 33.37 39.1						

Source MoECRT (2022)

such as Malaysia (43%) or Thailand (49%) (World Bank, 2021) (Table 7.3).

Although the issue of quantity is always important, ensuring more equitable access to higher education for disadvantaged populations is widely considered a more pressing issue for Indonesia. However, due to rapid technological advancements, the goal of expanding higher education has become much easier to fulfill.

Quality and Relevance

Data recently acquired from Statistics Indonesia (BPS) shows that the overall unemployment among workers is around 6.8 million, or 5.5% of the total workforce. In higher education, the proportion of unemployed graduates is higher among three-year vocational graduates than university graduates.

The increasing percentage of unemployed graduates from the vocational program over the last five years, as illustrated in Table 7.4, is worrisome. Since vocational education requires much higher investment and per-student unit costs, this phenomenon deserves serious attention. The significant spike in 2020 is most likely due to the COVID-19 pandemic.

Table 7.4 Percentage of unemployed workers in Indonesia by educational attainment

	2019	2020	2021
Primary or less	2.39	3.61	3.61
Junior secondary (SMP/MTs)	4.72	7.46	7.45
Senior secondary (SMA/MA)	7.87	9.86	9.09
Vocational secondary (SMK)	10.36	13.55	11.13
Three-year college (Diploma)	5.95	8.08	5.87
University	5.74	7.35	5.98

Source BPS (2022)

¹These figures do not take inflation into account.

	Α	В	С	Excellent	Very good	Good
Public Islamic institutions	6	49	7	1	8	10
Private Islamic institutions	0	34	253	0	9	301
Service institutions	6	55	1	2	18	20
Public institutions	30	42	0	14	13	16
Private institutions	25	7.37	698	17	81	448
Total	67	817	959	34	129	795

Source BAN-PT (2022)

In addition to relevance, quality is also a central issue in higher education. Among other factors, quality is reflected in accreditation results, which are assessed by the National Accreditation Agency for Higher Education. Table 7.5 shows that just 34 programs (3.08%) successfully acquired an "excellent" accreditation rating, demonstrating that quality is still problematic.

In 2010, Indonesia produced the fewest international publications among the major ASEAN countries. In order to rectify the problem, MoRTHE set the goal of increasing the country's international publications as its highest priority, resulting in a significant improvement. Figure 7.1 shows that the number of publications from Indonesia, as indexed by SCOPUS in 2019, has surpassed Malaysia, Thailand, and Singapore for the very first time.

7.2.3 Higher Education Policies and Strategies

In 2019, the new MoECRT administration launched new policies and programs designed to promote, encourage, and provide support for universities to strengthen their collaboration with stakeholders, including overseas institutions. The newly launched programs include matching funds for joint industrial research, downstreaming inventions/discoveries, supporting start-ups, competitive funding for selective programs, student credit-earning activities from placements in industry and community, sabbatical leave for faculty members, staff exchange with industry, and international collaboration. Since this study was conducted in 2018, further details on these activities are beyond the scope of this study and not included in this chapter.

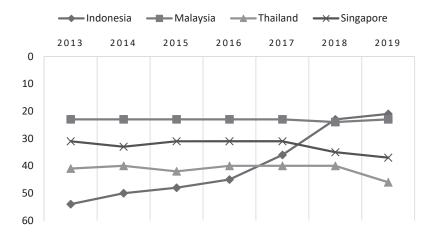


Fig. 7.1 Rank of international publications in Indonesia, Malaysia, Thailand and Singapore, as indexed by SCOPUS. *Source* MoECRT (2022)

Table 7.5 Results of program

 and institutional accreditation at

 tertiary institutions in Indonesia

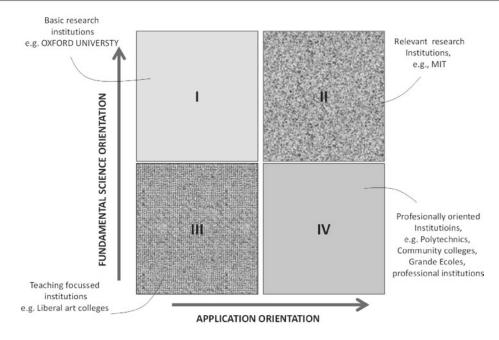


Fig. 7.2 Mission differentiation. Source Stokes (1997), Hatakenaka (2008)

Mission Differentiation

In order to improve educational quality in coping with current global challenges, institutions are expected to focus their activities according to their selected mission. It is almost impossible for any institution to rapidly improve quality without focusing on a specific mission. In the foreseeable future, it is predicted that institutions may not have sufficient resources or expertise to focus on fundamental research. Therefore, higher education institutions are encouraged to focus on either the right-hand side or the bottom-left of the rectangle of Fig. 7.2.

The selection of the focal mission for each institution should be based on an in-depth analysis in self-evaluation. The government offers support for institutions in choosing their appropriate mission by providing a variety of funding mechanisms and technical assistance.

Internationalization

The internationalization of higher education is imperative due to the increasing interactions among nations aiming to address global problems that require multilateral solutions. Internationalization at the level of individual institutions can be grouped into the following three levels of developmental stages (Cheng, 2009):

- Level 1: international recognition
- Level 2: student and faculty exchange as part of an academic program
- Level 3: accessibility to the international community, including faculty members and students

Until 2017, non-trade barriers made it almost impossible for foreign universities to operate directly in Indonesia. The regulations required foreign universities to jointly establish a local foundation with a local university. Moreover, the bureaucratic requirements for foreign professors to teach were onerous, scaring away most applicants.

To accelerate the number of institutions reaching Level 3, MoRTHE announced plans to open the market to foreign universities. At the same time, the government eased the procedure for foreign lecturers to acquire a license and visa. Currently, MoRTHE is reviewing proposals from a few foreign institutions to establish campuses.

Improving Equitable Access

The disparities between different groups and populations have serious social and political implications in archipelago countries, such as Indonesia. Higher education can potentially provide opportunities for social mobility to reduce such gaps. The following four different causes of access limitation can be identified:

- Economic background, whereby high school graduates cannot apply due to lack of funding support;
- Geographical isolation, whereby high school graduates live in isolated areas far from any higher education institution;
- Academic ability, whereby high school graduates do not have sufficient academic ability to undertake education programs in higher education; and
- Limited available spaces in higher education, whereby the higher education sector has limited space to accommodate demand.

Box 7.1: Bidik Misi

Bidik Misi is a DGHERT scholarship program to support high school graduates from disadvantaged backgrounds. Only students with excellent academic performance are eligible to apply. Recruitment is carried out when students commence Grade 12, before they complete their final examinations. Selection is conducted through a rigorous evaluation process, including home visits and interviews with parents.

Students from disadvantaged backgrounds are mostly discouraged from applying since there is no guarantee of available funds until the end of the study period. Therefore, the scholarship is guaranteed for four years until they finish their studies. It includes tuition, living allowance, books, travel from their location to the targeted university, and research funds for final-year students.

This program has come to be considered the most successful Indonesian scholarship program. Nonetheless, some critics of the program argue that, among other issues, it is exclusive to academic performance (rather than academic potential) and that the fixed scholarship amount does not take into account the variety of CPIs across different regions.

As of 2022, DGHERT has provided around 400,000 scholarships through the *BidikMisi* program (see Box 7.1). Currently, recipients need to have excellent academic performance. But many students from disadvantaged backgrounds do not perform well academically due to their financial circumstances, i.e., the need to assist their families in earning an income. In the future, therefore, DGHERT plans to broaden the program to also include students with academic potential, who have not been accommodated so far for a variety of reasons.

Since 2015, MoECRT has launched an affirmative program called *Afirmasi Pendidikan Tinggi* (ADik), which provides scholarships for school graduates from Papua and other isolated regions. In 2018, almost 3500 students benefited from this program.

Improving Quality and Relevance

The government is eager to provide assistance and support for private institutions to improve their quality. However, it is not feasible to design an effective program for all of the existing 2990 private institutions. The government is encouraging the merger and amalgamation of small private institutions to establish new larger institutions. Currently, student enrolment in most private institutions is <1000, making their operation very inefficient. DGHERT plans

	Public	Private	Total
Universities	82,608	182,844	27.5452
Islamic institutions	21,597	21,981	43,578
Service colleges	11,022	-	11,022
TOTAL	115,227	204,825	320,052

 Table 7.6
 Distribution of lecturers in Indonesia

Source PDPT (2022)

to develop programs to provide technical assistance and subsidies for private institutions to improve the quality.

7.2.4 Academic Staff Development

As many domestic graduate programs were insufficiently mature to offer postgraduate programs until the 1970s, most recipients had to enroll in graduate programs offered by overseas institutions (Table 7.6).

Currently, the total number of lecturers is 320,052, with <50,000 (or 16%) holding PhD degrees. Supported by multilateral agencies, a project coordinated by the Ministry of Development Planning (BAPPENAS) plans to significantly increase the number of PhDs. across the entire public sector.

As local graduate programs have developed their own resources and gained experience, quality and capacity have increased significantly. The government has also improved its financial capacity to provide funds for lecturers to pursue advanced degrees abroad. Hence the combination of these two improvements has increased MoRTHE's capacity to increase the number of PhD holders.

MoRTHE does not yet have a strong or clear strategy for human resource development.² Without such a long-term strategy, achieving a critical mass of academics may be a challenging task, delaying important breakthroughs and meaningful impacts.

7.3 Study Abroad Programs

With increasing prosperity, the number of selffunded students studying abroad has increased significantly over the last decade. Currently, the total number of students studying abroad is likely to have exceeded 250,000.³

7.3.1 Institute for Education Fund Management (LPDP)

The Constitution requires that 20% of the government budget be allocated to the education sector, as noted in Sect. 7.2.2. However, at the end of every fiscal year, a portion of the funds are left unspent. In 2010, the Parliament and the government agreed to accumulate these unspent funds into an endowment for education.

То effectively manage the endowment, a dedicated agency was established in 2011. Called the Lembaga Pengelola Dana Pendidikan (LPDP or Institute for Education Fund Management), the agency is responsible for providing funds for scholarships, research, and the reconstruction of education facilities (only in special cases such as natural disasters). Although LPDP provides scholarships for both domestic and overseas study, this report limits itself to aspects related to overseas study. The government policy is aimed at consolidating all funds allocated for scholarships under LPDP.

7.3.2 MoECRT-Sponsored Scholarships

Since MoECRT tracks all students studying abroad under government-sponsored scholarship programs, more accurate data is available. However, the ministry does not have access to any information on the number of self-funded students or recipients of other sources of scholarships. The database does not include lecturers

²Interview by the author with Intan Ahmad, Director General of Learning and Student Affairs, MoRTHE, May 18, 2018.

³It was not possible to obtain more accurate data on the number of students studying overseas.

from Islamic institutions or IAIN/UIN.⁴ The following sections provide an overview of these scholarship programs.

Scholarships for Excellent Lecturers (BUDI)

Scholarships for Excellent Lecturers (BUDI) program was initially referred to as the Overseas Graduate Scholarship (Beasiswa Pendidikan Pascasarjana Luar Negeri or BPPLN). It does not require recipients to have a high undergraduate GPA, although a letter of admission from the targeted institutions is essential. The more lenient selection criteria for this program allowed 551 lecturers to study abroad in 2022 (MoECRT 2022). The name of this program was later changed to the Scholarship for Excellent Lecturers (Beasiswa Unggulan Dosen Indonesia or BUDI). BUDI limits itself to PhD scholarships through which 218 lecturers are currently studying abroad, drawing funds from the LPDP (MoRTHE 2017).

Masters Toward Doctorate Education Program (PMDSU)

The level of selectivity in the entrance examinations for public universities in Indonesia is widely recognized, particularly for the more popular programs such as Medical Sciences at the University of Indonesia (UI) or Electrical Engineering at ITB. However, this competitive aspect does not extend to graduate programs.

In order to attract the best students, MoECRT provides scholarships to the best undergraduate graduates (*cum laude*) to directly continue their study right through until the completion of a PhD program. This program is called the Masters toward Doctorate Education Program (*Pendidikan Magister menuju Doktor untuk Sarjana Unggul* or PMDSU). Undergraduate students with high GPAs are lured into a graduate program directly before graduation. They can commence graduate research while finishing their final year of undergraduate coursework, a process that will significantly reduce the time required to complete their thesis.

As a result of this program, 18 new PhDs graduated and 97 articles were published in reputable journals in 2017. In 2017, MoECRT provided support for 8,480 students studying in domestic PhD programs and 975 students in overseas programs (MoRTHE, 2017).

Bilateral Scholarship Programs

Since the establishment of LPDP, MoECRT has tried to optimize the available government funds by entering into agreements with bilateral agencies to co-finance scholarship programs. In one popular scheme, MoECRT covers the travel expenses and travel documents for scholarship recipients, while the bilateral partner covers the tuition and stipends. Such schemes allow MoECRT to support a larger beneficiary population. This scheme has been implemented in conjunction with the Indonesian German Scholarship Program (IGSP-DAAD), the Netherland's Dikti-Neso Scholarship Program, the US's Dikti-Fulbright Grants, and the UK's Newton-Ristekdikti Scholarship Programme.

Philanthropic Organizations

In addition to the aforementioned agencies, a few other countries and philanthropic organizations offer scholarship programs through a variety of different schemes. These programs are mostly small in terms of beneficiary population, usually limited to one to three recipients per agency at most. Examples of such programs include the Hong Kong PhD Fellowship Scheme (HKPFS), Mexico's AMEXID scholarship, Saudi's King Fahd University of Petroleum and Minerals (KFUPM), Cambridge International Scholarships, France's INSEAD, the Oxford Clarendon Scholarship, ENS de Lyon, Leiden University's Excellence Scholarship program (LExS), and the Warwick Chancellor's International Scholarship.

⁴IAIN = Institut Agama Islam Negeri, UIN = Universitas Islam Negeri.

tion countries		
Japan	131	24.58%
United Kingdom	106	19.89%
Netherlands	55	10.32%
Australia	54	10.13%
Taiwan	44	8.26%

Table 7.7	Distribution	of	students	in	top	five	destina-
tion countr	ies						

Source MoECRT (2022)

7.3.3 Destination Countries

The highest percentage of students studying abroad under MoECRT scholarships are those studying in Japan (24.58%), followed by the UK (19.89%), Netherlands (10.32%), and Australia (10.13%), as illustrated in Table $7.7.^{5}$

English-speaking countries, such as the UK and Australia, require a minimum level of English proficiency that is difficult to achieve for some students, particularly from less established institutions. For these applicants, countries with more lenient language requirements, such as Malaysia, are preferable.

7.3.4 Home Institutions

The majority of scholarship recipients (373, or 75.2%) are from public universities, while private universities are only represented by 123 students, or 24.80%. A small number of remaining recipients come from within the MoECRT administration (Fig. 7.3).

7.3.5 Fields of Study

In order to be relevant to national development, government policy is to prioritize STEM, as mentioned in Sect. 7.2.4. However, as presented in Fig. 7.4, a relatively high proportion of lecturers studying abroad are currently in the social science

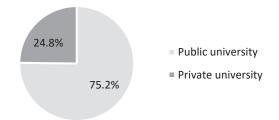


Fig. 7.3 Distribution of recipients by public or private home institution. *Source* MoECRT (2022)

field—almost double that of basic sciences. This confirms the statement of a key MoECRT officer during the interview that the ministry does not yet have a strong and clear strategy toward human resource development (see Sect. 7.2.4).

7.3.6 Alumni Associations

In order to capitalize on the common spirit of studying in the same country, graduates have established alumni associations. The largest memberships are the Association of Indonesian Alumni from Japan (Persatuan Almuni Djepang—PERSADA), the Association of Australian Alumni in Indonesia (Ikatan Keluarga Alumni Australia-IKAMA), the Netherlands Alumni Association in Indonesia (Ikatan Alumni Nederland-IKANED), and the German Alumni Association (Ikatan Alumni Jerman—IAJ).

Activities conducted by these associations vary depending on the officers in charge of the associations. Therefore, most activities do not continue beyond the terms of the officers in charge. *Persada* was very active in the 1980s, even successfully establishing a private university bearing its name, *Universitas Darma Persada*. However, in recent years, its activities have not been widely reported. Activities conducted by the German Alumni Association (IAJ) were at their peak during President B. J. Habibie's term of office from 1998 to 1999⁶ but slowed significantly after that.

⁵Data is acquired from unpublished materials in MoECRT's database. Full disclosure of this information requires formal authorization from each respective party.

⁶President B. J. Habibie was a graduate of RWTH Aachen University.

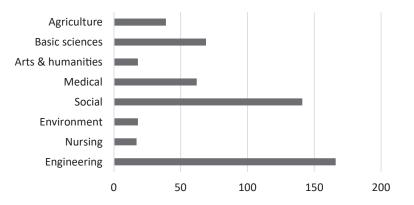


Fig. 7.4 Distribution of stuents by field of study. Source MoRTHE (2017)

7.3.7 Reviews of the Impacts of Study Abroad

The main beneficiary of studying abroad is unquestionably the recipients themselves in terms of improvement of skills as well as knowledge. Thus, these benefits can be considered private goods. However, in many cases, additional intangible benefits are more important and may be regarded as public goods, as defined by Kuncoro (2009). These benefits are assessed in the following sections:

- In pursuing their degrees, students are exposed to a different work ethos and are able to absorb the scientific culture and the academic atmosphere at the host institution, which can be considered as public goods. Other experiences may take the form of leadership, governance, culture, and democracy, which are mostly public goods, as they could potentially spill over to the surrounding community once the graduates return.
- While knowledge can now be acquired via ICT, specific experiences can only be acquired on site, exemplified by the phrase *learn at the feet of the Master.* In this context, research-based training may have a greater impact compared to course-based programs. Although research based education according

to Humboldtian principles are mostly thought of as archaic, the basic concept is still relevant today. It is well understood that, in an age of massification of education, a globalized world, and rapid technological advancement, the pure Humboldtian might be seen as out of date. A modification of the original concept to be more suitable for modern-age implementation is needed.

Many overseas scholarship programs were designed as segmented programs, with cost components limited to providing support through overseas scholarships, i.e., travel, living costs, research, books, and tuition. The following points illustrate the observations made during this study.

Firstly, in its early development, few institutions or candidates paid much attention to the selection of host countries, institutions, or programs. They were grateful to have the opportunity to study at an overseas institution, an experience that was then considered an extreme luxury. Until 1970, returnees were allowed to bring a car with them on their return home as part of their personal belongings, and for many, this provided the only possibility of having a car.

As prosperity has increased, overseas study is no longer considered such a luxury. Although most are still unable to afford to finance it privately, a growing number of middle-class families are more than willing to allocate a significant portion of their income to provide the best education for their children.

Nowadays, some premiere domestic institutions have mature graduate programs, supported by well-qualified professors and state-of-theart laboratories. These programs seek out the best students as inputs to ensure that they grow and become world-class and are therefore in direct competition with programs offered by overseas universities. Consequently, at least in some fields, students should be strongly encouraged to study in these domestic programs unless overseas programs provide clear benefits and advantages. The units responsible for overseeing scholarship programs should discourage candidates from studying in lower-quality overseas programs.

Secondly, while some returnees are quite successful in pursuing activities that positively impact society, many have failed to fully utilize their skills and knowledge. The following possibilities could be considered as potentially adverse outcomes for returnees:

- Some failed to make any changes or improvements to their home institutions. They were then co-opted by the mainstream laissez-faire, and no significant impact can be expected.
- Some tried hard to make changes but failed due to resistance from the surrounding community. As time passed, they became frustrated and gave up, and finally transferred to other institutions (mostly non-educational institutions) or even moved overseas. They might be personally or individually successful, but they failed to make any institutional impact.
- The third possibility, perhaps the rarest, is that they fought hard to make changes, leading to significant improvements.

The third possibility is more feasible when the number of returnees is sufficiently large to create a critical mass (see Box 7.2). They would also need support from key stakeholders, i.e., supra-structure, regulatory infrastructure, peers, and the local culture. The case of Politeknik

Manufaktur Bandung (see Box 7.3) shows that a holistic and coherent package implemented from the beginning of the establishment can also make a difference.

For well-established universities, such as ITB and UGM, the diversity of destination countries and institutions brings greater benefits than a coherent development design package, as was applied to the Politeknik Manufaktur Bandung. Such package includes overseas scholarship, human resources and financial management, strategic planning, developing linkage with employers, defining institutional vision and focus, the single complete package approach is more suitable for newly established institutions or relatively young institutions.

Box 7.2: The Berkeley Mafia

In order to replace the Dutch professors sent back to their home country in the late 1950s, a significantly large number of young lecturers were sent to pursue advanced degrees at US institutions, supported by grants from USAID. Two of the largest groups were from the Faculty of Economics—UI (in cooperation with The University of California, Berkeley) and ITB (in collaboration with the University of Kentucky). The group from the Faculty of Economics was perhaps the largest group from an institution to pursue degrees at one single institution (UC Berkeley).

After returning from their studies between 1960 and 1975, most sought to be involved in developing the Indonesian economy. However, the political situation did not allow them to implement the theories they had learned. After the failed coup attempt in September 1965, the new administration relied on the advice of lecturers from the Faculty of Economics in formulating its economic policy.

Due to the trust they gained, their influence was felt in almost all branches of the government between 1970 and 1990. Parties jealous of their success and privilege called them "the Berkeley Mafia." This is probably the best case to illustrate the impact of overseas study on economic development. Another example of successful reform is the systemic development of higher education initiated by the returnees from the US to IPB and ITB in the 1980s. They introduced a more structured system of study to replace the old continental Europe "free" style of study.

Without any intervention, it is difficult for such programs to have a sustained positive longterm impact. When returnees fail to achieve the expected impact, the biggest loser is students, who are denied the opportunity to gain the benefits of having a better-educated teacher. The author is of the opinion that a coherent and wellplanned program of overseas scholarship has a higher possibility of success.

Box 7.3: Politeknik Manufaktur Bandung

In 1975, the Swiss government provided a grant to establish the Swiss Polytechnic Mechanics in Bandung, and it began to take admissions in 1976. The grant was not limited to civil works and equipment but included scholarships for lecturers, visiting professors from Swiss institutions, and technical assistance to develop a Swiss model of vocational education.

Polytechnic The Mechanics in Bandung (PolMan Bandung) was so successful that in 1980 the World Bank provided a loan to establish six new polytechnics using it as a model. Since then, hundreds of public and private polytechnics have been established. A large majority of the new polytechnics see PolMan Bandung as their role model for development. While the original Swiss grant was terminated long before 1980, the legacy of the Swiss culture of vocational education continues even today.

This may comprise the best example of a coherent development package that has achieved a long-term impact, lasting much longer than the project itself. A similar example, in a different context, can be seen in the establishment and subsequent development of Politeknik Elektronika Negeri Surabaya (PENS), supported by JICA assistance.

Other key concerns regarding the success of overseas study abroad in include the following aspects.

- (a) Pre-departure training to develop an understanding of appropriate issues and matters relevant to the local social and natural environment is worthwhile. In addition to lectures or seminars on culture and the prevailing regulations of the destination country and institution, a small scholarship allowing candidates to visit local industries and discuss problems and other issues would be beneficial.
- (b) In some cases, recipients are offered the opportunity to extend their stay in the host country to continue their research. Since they are registered as scholarship recipients, they need approval from their employer (home institution). In prevailing regulations on student visas also mean that destination country employers will require them to change their visa status.

While this opportunity is very central to the development of networks, most proposals are unfortunately rejected, either due to the regulations on passport extensions or the lack of understanding on the employer's side. Successful cases can only be observed in the case of "rebellious young Turks," whereby recipients and direct supervisors at the home institution agree to take the risk without formal approval.

The most valuable benefit acquired from this scheme is the graduates' understanding of the needs of industry, business, employer, and community at large. After returning home, for quite a significant period, they will be able to choose the most relevant areas for developing research agendas. In many cases, they are able to maintain communication with their former host institutions and industries—and even develop opportunities for collaboration.

(c) Home institutions should develop a longterm institutional strategy to provide the basis for selecting the fields and institutions for study abroad programs. The link between the institution's priority fields of study with the corresponding overseas program should become a primary criterion.

Such a selection process is likely to be more effective when the intended supervising professor's publications have been rigorously studied by a faculty committee before deciding whether to send a lecturer. Nevertheless, many institutions may not possess a sufficient level of sophistication and competence to conduct the required assessment. To address this and provide additional support, DGHERT could establish a panel of national experts in relevant fields to offer advice and recommendations.

- (d) In the future, a re-entry program specifically designed for each type of institution will be required to prepare returnees to begin their "second life" at home. Suitable re-entry programs should be developed to accommodate each institution's unique characteristics, and a centrally designed program should be avoided. Since many institutions might not have sufficient capacity to develop such programs, a panel of national experts could be assigned to provide assistance.
- (e) In the case of Indonesia, the Center of Sciences and Technology (*Pusat Ilmu Pengetahuan dan Teknologi* or *Puspiptek*) in Serpong, previously administered under the Ministry of Research and Technology, is equipped with state-of-the-art laboratory equipment. To date, the sharing of these facilities with academic researchers is still hampered by bureaucratic procedures.

7.4 Institut Teknologi Bandung—ITB

7.4.1 Historical Perspective

The history of ITB is closely linked to the struggle of the young nation in the first few years after the independence of the Republic of Indonesia. The *Technische Hoogeschool te Bandoeng* (TH te Bandoeng, TH Bandoeng, or THS) was established by the Dutch colonial government in 1920. It was closed following the outbreak of World War II but reopened in 1944 by the Japanese Military Government under the name *Bandung Kōgyō Daigaku* (BKD).

When Universitas Indonesia (UI) was formally established in 1950, the campus in Bandung became its Faculty of Engineering and Faculty of Natural Sciences. Finally, on March 2, 1959, it became a fully independent institution: the *Institut Teknologi Bandung*.

7.4.2 Institutional Profile

Governance

The highest prevailing regulation for ITB, the ITB statute, was decreed as Government Regulation 65/2013 and signed by the President of the Republic of Indonesia. Governance of ITB is overseen by the Board of Trustees, which is responsible for defining general institutional policies, approving institutional strategies and the master plan, appointing and dismissing the Rector, reviewing the annual budget, and overseeing the overall operation of the institution, among other roles.

The Academic Senate, the highest authority in academic matters, consists of lecturers representing academic disciplines. In addition to the elected members, the Rector, Vice-Rectors, and Deans are ex-officio members of the Academic Senate.

The department is the smallest resource unit, which reports to the faculty's dean. It is responsible for managing resources and offers one or

Campuses

plans for each department.

The main campus of ITB is located in the Bandung urban area, accommodating around 25,000 students. In the last 50 years, however, the city of Bandung has become overdeveloped, and the 29-hectare campus is now considered overcrowded, with no possibility of further expansion.

To accommodate more students as well as activities, an additional 40-hectare campus was acquired in Jatinangor, east of Bandung, in 2016. By 2018, this campus housed around 300 students. ITB's policy is that all new study programs will be located on the Jatinangor campus. Two additional campuses in the Cirebon and Walini areas are currently in preparation.

Academic Programs

ITB offers education programs in a wide variety of academic disciplines across 32 study programs—from sciences, engineering, business and management to arts and design. These programs are offered in eight faculties, five schools, and a graduate school.

Academic Staff

According to the most recent data, the total number of teaching staff is 1361 (ITB, 2018b). Around 75% of teaching staff have a PhD degree, 22% a Master's degree, with the remaining holding a Bachelor's degree.

Due to its heavy teaching load for conducting service courses, the Faculty of Mathematics and Natural Sciences has the highest number of teaching staff (205). All first-year students are required to take basic courses in mathematics, physics, and chemistry, all taught by staff from this Faculty. Many programs still require relevant advanced courses in mathematics, physics, and chemistry, even after the common first year.

A significant number of the teaching staff in the Faculty of Arts and Design only hold Bachelor's degrees, although many have produced internationally acclaimed artworks and are considered maestros. In this discipline, achievements are not measured by academic degrees, and the artworks created are a more important indicator of achievement.

Student Enrolment

The overcrowded urban campus in the city of Bandung did not previously allow ITB to expand its enrolment. Therefore, the student enrolment was capped at 25,000. Only after its acquisition of the Jatinangor campus was gradual expansion possible (Fig. 7.5).

The enrolment in the Master's and Doctorallevel degrees is significantly lower than the undergraduate program, as these programs require individual supervision.

Financing

As an elite university, ITB has received various forms of support through government and international funding. Previous major investments in research infrastructure and graduate education have been provided under the World Bank projects, e.g., University Development II and URGE. The URGE project provided competitive grants for inter-university centers. Under the World Bank-supported "Quality of Undergraduate Education" project, ITB has successfully acquired additional funding for several of its programs. Significant investment in infrastructure has also been received under the Japan Bank for International Cooperation (JBIC) ITB Development Projects 1 and 2.

Figure 7.6 presents the sources of funds in ITB in the last four years. The government allocation was significantly decreased in 2015 by 17.6%. It increased slightly in 2016 before

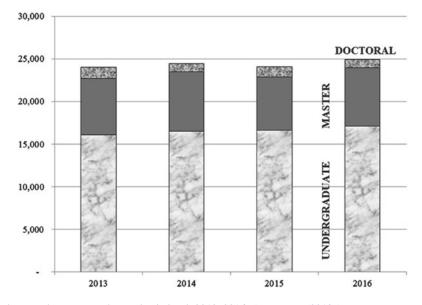


Fig. 7.5 Student enrolment at ITB by academic level, 2013–2016. Source ITB (2018a)

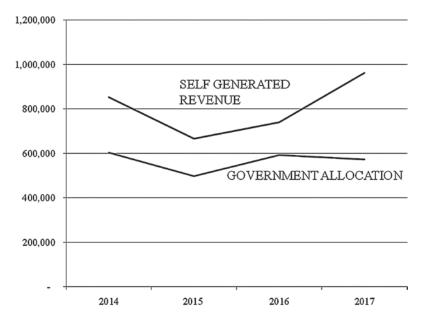


Fig. 7.6 Sources of funding for ITB, 2014–2017 in IDR million. Source LKITB (2017)

falling again by 3.2% in 2017. The government's contribution to ITB has been worrisome, with a declining trend over the last four years.

On the other hand, self-generated revenue has consistently increased over the last three years. Sources of self-generated revenue include student tuition and fees, consultancy contracts, interest, profits, and private grants. In 2012, a law was passed capping the proportion of tuition and fees that can be acquired from students, while the option of expanding student enrolment was hampered by an overcrowded urban campus.

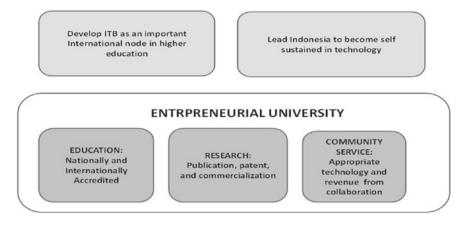


Fig. 7.7 Conceptualization of ITB 2020. Source ITB (2015)

7.4.3 Institutional Policy

Mission Statement

The vision of ITB is to be an outstanding, distinguished, independent, and internationally recognized university that leads changes toward the welfare improvement of the Indonesian nation and the world. The mission statement of ITB, as stated in its Strategic Plan 2017–2020, is to innovate, share, and apply sciences, technology, arts, social sciences, and humanities, to produce excellent human resources for the betterment of Indonesia and the world (ITB 2015).

Strategic Plan 2017–2020

Based on the stated vision and mission, ITB has developed a Strategic Development Plan for 2017–2020 (Fig. 7.7).

The two main objectives will be achieved through excellence in teaching, research, and innovation, as demonstrated in the following section.

Excellence in education will be achieved by ITB through:

- producing reliable and trustworthy graduates; and
- becoming the center for culture and an academic atmosphere that nurtures creativity and innovation.

Excellence in research will be achieved by ITB through research to:

- solving community problems;
- identifying, discovering, developing, and adding value to the Indonesian assets; and
- supporting ITB's role in the advancement of science, technology, and arts through global cooperation.

Excellence in community service, innovation, and entrepreneurship will be achieved by ITB through:

- services and collaboration with society as relevant to its academic competency;
- community services that are integrated with education and research;
- consistently capitalizing on creativity and innovativeness to produce innovation; and
- entrepreneurial spirit.

Destination country	Graduated	On going
Japan	312	4
United States of America	191	2
France	170	
Australia	129	5
United Kingdom	126	1
Germany	95	2
Netherlands	90	2
Canada	33	
Belgium	22	1
Thailand	18	

Table 7.8 Number of PhD graduates at ITB by top ten destination countries

Source ITB (2018b)

7.4.4 Study Abroad Programs

Nominations for staff applying for overseas study are initiated by the Group of Expertise (*Kelompok Keahlian or KK*)⁷ according to the strategic plan. Consistency in selecting fields of study based on institutional strategy, choice of host institutions, and destination country for staff varies between KKs. The central administration does not impose any preferences.⁸

The insufficient directions from each KK and institution could split the expertise in the KK, potentially leading to fragmentation. Staff with similar scientific expertise could fail to reach the critical mass to build strong research groups and expertise, undermining team spirit.

Japan is the top destination country with the highest number of graduates from ITB, followed by the USA, as illustrated in Table 7.8. The number of staff that have graduated from the USA has declined significantly in recent years, and most USA graduates have either retired or passed away.

Currently, the highest number of ongoing staff studying abroad is in Australia, trailed by

Academic disciplines	Graduated	Ongoing
Mathematics and Natural Sciences	191	3
Civil and Environmental Engineering	168	1
Industrial Engineering	138	1
Electrical and Informatics Engineering	136	1
Mechanical and Aeronautical Engineering	123	
Mining and Petroleum Engineering	98	2
Earth Sciences and Techno- logy	94	
Architecture Planning and Policy Development	92	4
Business and Management	74	2
Life Sciences and Techno- logy	68	1
Arts and Design	45	2
Pharmacy	44	1

Table 7.9 Number of PhD graduates at ITB by aca-

Source ITB (2018b)

demic field

Japan. Consistent with Sect. 7.4.2, the Faculty of Mathematics and Natural Sciences has the highest number of staff who have graduated from an overseas institution, as depicted in Table 7.9.

Most ITB staff studying abroad are relatively young, as they do not have any significant family obligations. Somewhat older staff who choose to study abroad are either seeking to continue their doctorate program at home or undertaking a "sandwich" program.⁹

The main risk of studying abroad is the potential loss of opportunity to get involved in significant initiatives in Indonesia since, as experts in their fields, they are commonly consulted by members of a variety of sectors.

⁷See Sect. 7.4.2.

⁸ Interview by the author with Irawati, Vice Rector of Resources and Organization ITB, May 23, 2018.

⁹A sandwich program is a collaborative program by two or more universities. It is designed to be conducted partially at the home institution in Indonesia and partially at a partner overseas university.

Staff with PhD degrees, however, have better opportunities.

7.4.5 Impacts of Study Abroad

ITB is an old and well-established institution and ranks as the top university in Indonesia; therefore, the impacts of studying abroad might be unique and not applicable to other, more junior institutions. The following points are the excerpts illustrating the findings from the visit to ITB.¹⁰

- (a) The teaching tradition is considered wellestablished at ITB, deriving its legacy from the Dutch academic tradition. However, the research culture is relatively new, even for ITB, and still requires significant nurturing. Developing a research culture requires consistency and commitment. Networking with previous research groups and supervisors could strengthen the endeavor. Nevertheless, networking with researchers from domestic institutions is just as or even more critical. Academics with the same research interests should establish communities and associations. They should also organize conferences and seminars, and establish scientific journals.
- (b) The special case of Adi Indrayanto (see Box. 7.4) depicts a champion who is persistent in pursuing his dream of a regulatory framework that will be supportive of domestic

technology industries. Many of his colleagues focus instead on pursuing scientific achievements in the laboratory.

Adi is fighting for a better regulatory environment for the technology industry. His endeavor is typical of an engineer's passion for collaboration with industries to bring their inventions to the market, usually referred to as the "Triple Helix."

Box 7.4. National Policy on Technology Development

Adi Indrayanto earned his Master's in Canada and his PhD from the University of Manchester in Neural Networks. Even before departing from Indonesia, he had already developed a very strong passion for technological policy. He firmly believes that Indonesia will only develop its research-based industries if appropriate policies are in place.

During his study in the UK, he spent a large portion of his time participating in gatherings on developing technological policies. After returning to Indonesia, he became one of the strongest advocates for the development of a national technological policy. One of his primary accomplishments is the establishment of a government policy called Tingkat Komponen Dalam Negeri (TKDN). This policy mandates the inclusion of a certain proportion of domestic components in locally marketed products. It has been implemented in many industries and requires producers to establish production facilities in Indonesia.

Developing a government regulation that requires support from various government agencies and manufacturers is a significant achievement. It requires tremendous negotiation skills and endurance to acquire consensus from the interests of many diverse sectors.

¹⁰The author conducted in-depth interviews with Professor Edy Tri Baskoro, the designated counterpart at ITB. He was accompanied by Dr Indra Noviandri, the Vice Dean of the Faculty of Mathematics and Natural Sciences. In order to obtain information on institutional policies, the author conducted a session with the Vice-Rector of Resources and Organization; Vice-Rector for General Administration, Alumni, and Communication; and an officer from the Directorate of Personnel. In-depth interviews to acquire information on individual experiences were carried out with Professor Mikrajuddin Abdullah and Dr Adi Indrayanto.

Several times, Indrayanto has set up experimental start-up companies based on innovations produced by ITB laboratories, but each time, these companies have failed. From these failures, he is currently developing joint final-year projects involving the School of Business & Management and the Department of Electrical Engineering, aiming to produce marketable products in technology.

(c) The special case of Mikrajuddin Abdullah (see Box 7.5.) depicts a champion who works outside the mainstream. The success of his almost eccentric strategy in pursuing excellence has been demonstrated in numerous publications in reputable international journals. As a physicist that typically focuses more on fundamental science, his strong passion for relevance is extraordinary.

Nevertheless, his strategy might not be easily replicated across different disciplines. For some fields, such as chemistry, access to laboratory equipment is essential.

Box 7.5. Relevant Quality Research

In 1998, Mikrajuddin Abdullah was granted an overseas scholarship from the Monbusho after his applications had been repeatedly (six times) rejected. He earned his PhD from the University of Hiroshima in 2002 in Chemical Engineering with 15 publications in reputable international journals. Although he was admitted to study Chemical Engineering, he was able to choose research topics relevant to his department in ITB, the Department of Physics.

His previous application failures gave him opportunities to better understand the relevant problems facing his fellow countrymen. In many cases, the supervisor's research is irrelevant to Indonesia but facilitated by state-of-the-art scientific equipment, generous funding, and supported by conducive research environment. When they return home, they find that the environment is significantly below the level required to satisfactorily continue their research. Some can only publish articles when provided with post-doctoral opportunities at their previous host institution.

Based on this concern, he requires his PhD students to choose relevant research topics from simple phenomena. He has successfully supervised ten PhDs, each with four published articles in reputable international journals—again much higher than the standard requirement. In total, he has published a record of 7.5 articles in accredited international journals.

The physical process observed from the simple phenomenon of extracting fluid by squeezing a towel provides one example of how he chooses a research topic. Most of his research does not require sophisticated and expensive equipment. In one case, he modified simple kitchen equipment (e.g., a toaster) to support his research.

- (d) Many recipients follow the supervisor's suggestions in choosing research topics with little consideration of their relevance to the average Indonesian. Returnees are shocked when they discover that there is insufficient support for research work in their home institution. Some are only able to publish during post-doctoral research at their previous host institutions. This indicates that the local research culture has not been strongly developed inside many existing KKs, and such situations are not sustainable in the long run.
- (e) Learning from the Mikrajuddin case, predeparture training might be needed to expose candidates to the issues relevant to Indonesia, as presented in the previous study (Moeliodihardjo et al., 2012). The training could be designed as a small scholarship for short-term industrial internships to identify the problems faced in these industries.

- (f) Returnees are studying in many different countries with a wide variety of education systems. For a well-established institution such as ITB, diversity has enriched the education system. Different results might be observed in younger institutions, where greater diversity might increase the risk of disintegration.
- (g) The following points summarize information obtained from the interviews on the institutional impacts of studying abroad:
 - The most substantial institutional impact introduced by the returnees was in relation to changes to the curriculum. This could comprise changes to the content and substance, structure, or even the entire system.
 - At first, the doctoral program was conducted as a fully research-based program accompanied by a thesis defense at the final stage. It was later shifted toward a more blended system with the introduction of qualifications accompanied by mandatory and elective courses. It demonstrates the influence of the European, US, UK, and Japanese education systems.
 - The student-teacher relationship has become more relaxed and egalitarian as it absorbs the Western-style educational culture. Transparency of academic records also reflects cultural changes in the institution.
 - Another essential aspect that has been significantly affected by returnees concerns occupational health and safety, such as procedures for dealing with hazardous substances in the laboratory.

7.5 Universitas Gadjah Mada— UGM

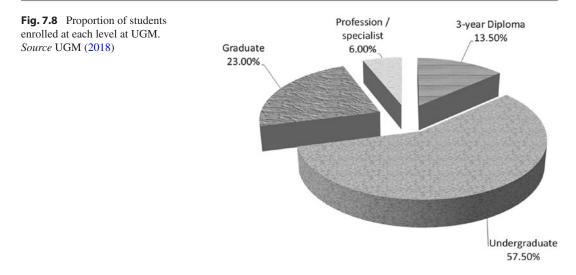
7.5.1 Historical Perspective

The history of the establishment of Universitas Gadjah Mada (UGM) is as colorful as the drama of the country's struggles following the proclamation of independence of the Republic of Indonesia. During the independence war of 1945-1949, Jakarta was occupied by Netherlands Indies Civil Administration (NICA) troops, who enforced a ruling that all administrative offices had to move to Yogyakarta. A group of academics initiated a process to establish a new national university in 1946, called Balai Perguruan Tinggi Gadjah Mada. The university took its name from Gadjah Mada, the Prime Minister (1290-1374) of the ancient Empire of Madjapahit. At the same time, several leading academics from THS Bandoeng initiated the establishment of Sekolah Tinggi Teknik in Yogyakarta. At that time, the spirit of nationalism was very strong that a group of academics initiated the establishment of a new national university. It was initially called Universiteit Negeri Gadjah Mada, but in 1949, the institution changed its name to Universitas Gadjah Mada (UGM). However, the young Republic did not have sufficient resources to build the required infrastructure for UGM. Fortunately, the Sri Sultan Hamengku Buwono IX, then the reigning Sultan of Yogyakarta, was quite generous in loaning a significant part of his palace to conduct education programs. Later the Sultan also donated 183.36 ha of his land to UGM (Buchori & Malik, 2004).

7.5.2 Institutional Profile

Governance

The highest prevailing regulation, the institutional statute, was decreed as the Government Regulation 67/2013, signed by the Indonesian President. The governing board of UGM comprises the 19-member Board of Trustees, whereby the Chair, Vice Chair, and Secretary are elected by the members of the board. The Board of Trustees is responsible for formulating general institutional policies, selecting the Rector, approving the strategic plan and annual budget, and assessing the Rector's performance, among other roles.



Campuses

The current UGM campus is situated at Bulaksumur in the Special Region of Yogyakarta. The Bulaksumur campus is located on 183.36 hectares of land, which previously belonged to the Sultan of Yogyakarta and was donated to UGM by the late Sultan Hamengku Buwono IX (UGM, 2018).

UGM also conducts class lectures in remote locations in specific fields, such as management and accounting. Since these graduate programs are mostly targeted toward employed students, these selected locations are in big cities, such as Jakarta and Surabaya.

Academic Staff

In 2017, the number of teaching staff in UGM was 3,608. This represents the largest number of teaching staff in any university in Indonesia, apart from the Open University. A significant proportion of academic staff (36.7%), or 1327, hold a PhD degree (PDPT 2018). The number of staff recorded in the national database (PDPT) only includes permanent staff. Some programs might employ a significant number of non-permanent teaching staff from businesses and industry.

Student Enrolment

UGM enrolls the largest number of students at a single campus in the country, with a total student enrolment of 47,081 in 2018. Students are enrolled in undergraduate, graduate, three-year vocational diplomas, and professional/specialist programs, as illustrated in Fig. 7.8.

Financing

UGM receives support for its major investments in research infrastructure from several World Bank projects, e.g., University Development II and URGE. Several undergraduate programs in UGM have successfully acquired competitive grants (e.g., QUE) and other funding schemes. Under the JBIC UGM development project, UGM also received significant investment in infrastructure.

The sources of funding for UGM can be grouped into government allocation and selfgenerated revenue. The self-generated revenue includes consultancy contracts, interest, profits from commercial ventures, and private grants. The government allocation has been steadily decreasing, while on the other hand, self-generated revenue has increased (Fig. 7.9).

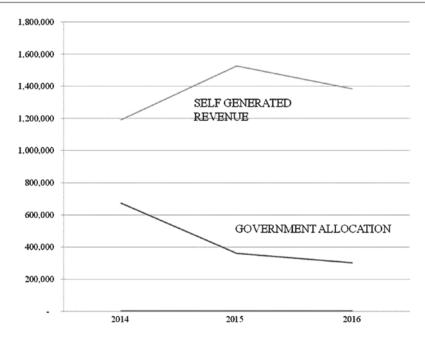


Fig. 7.9 Sources of funding for UGM from 2014 to 2016 in IDR million. Source LKUGM (2016)

7.5.3 Policies and Strategies

Main Policies

The vision of UGM is to be a pioneering, worldclass national university, excellent and innovative, to serve the nation and humanity based on national cultural values and ideology, Pancasila. The mission of UGM is to provide education, conduct research, and maintain community services, as well as the preservation and development of knowledge that is excellent and beneficial for society.

Strategic Plan 2012–2017

The stated objective is to develop UGM toward becoming the best possible institution by conducting the following activities, as formulated in its Strategic Plan 2012–2017 (UGM, 2012). This will be achieved by:

- producing excellent and competent graduates;
- enhancing national referral research, which is environmentally friendly and responsive to community problems;

- encouraging the community's independence and sustainable prosperity through services;
- developing management that is just, transparent, accountable, participative, integrated, effective use of resources; and
- promoting strategic, effective, collaborative activities with relevant partners.

In order to achieve these objectives, the following strategies were formulated. There is a need to:

- establish comprehensive scientific development relevant to the needs of the community, government, and industry;
- solve national problems and ensure partiality toward marginalized groups in the community;
- optimize the use of resources by implementing information technology;
- develop networks to strengthen education, research, and community services' resources; and
- build the capacity, responsiveness, and accountability for the management of education, research, and community services.

Destination country	
Japan	431
Australia	297
United States of America	219
United Kingdom	180
Netherlands	17.4
Germany	111

Table 7.10 Number of PhD graduates at UGM by top six destination country

Source UGM (2018)

7.5.4 Study Abroad Programs

Almost 90% of PhD holders in UGM have graduated from overseas institutions. A significant proportion of them (22.55%) acquired their PhDs in Japan, followed by 15.54% from Australia, 11.46% from the USA, 9.42% from the UK, 8.58% from the Netherlands, and 5.81% from Germany, as illustrated in Table 7.10. Most of the senior staff consists of graduates from the USA who earned their degrees in the 1970 and 1980s.

7.5.5 Impacts of Studying Abroad

The following points summarize the observations that can be drawn from the information obtained on UGM.

A significant institutional impact of studying abroad is demonstrated by staff who graduated from Japan. A strong link between the graduates and their *sensei* is continuously well-maintained after they return home. The best example of this phenomenon is Prof Ika Dewi Ana, who has successfully developed numerous inventions, patents and products out of her research collaborations.

Although weaker in personal relationships, the German "connection" has attracted significant research funding and support for research. The case of Dr Doni Prakasa Eka Putra, who graduated from RWTH Aachen, Germany, serves as a prime example of this. He has successfully attracted significant funding to undertake research collaborations with German institutions and furnish a state-of-the-art geological laboratory. Most graduates from English-speaking countries, such as the UK, USA, and Australia, do not experience such advantages.

7.6 Conclusions and Recommendations

7.6.1 Conclusions

The following section summarizes the salient points of the findings and key recommendations of this study.

- (a) For study abroad scholarships to be successful, a coherent and well-planned program is essential.
- (b) A coherent development package can be considered an important approach, particularly for newly established institutions where qualified human resources are not readily available. The case of Politeknik Manufaktur Bandung (Polman) and Politeknik Elektronika Negeri Surabaya (PENS) are good examples.
- (c) In cases where strong political consensus can be reached to focus on a specific field, a large number of academic staff could be given overseas scholarships to reach a critical mass. Lessons can be learned from cases such as the development of the national macro-economy in the 1970s and 1980s.
- (d) At established institutions such as ITB and UGM, the diversity of countries where overseas study was undertaken helped to enrich the academic atmosphere. At young and newly established institutions, on the other hand, different schools of thought and cultures could be problematic and might create unnecessary friction.
- (e) A strong bond between the alumni and the learning institution needs to be developed and maintained, particularly after graduates return to their home institutions. The case of the link between Japanese universities and their graduates offers a model of best practice.

(f) Although quantitative studies are yet to be conducted, most graduates appear to find it difficult to apply their skills and knowledge to solve problems at home. The problem of relevance might need more attention in the future.

7.6.2 Recommendations

There are two potential programs that could be used to enhance existing staff scholarships for studying abroad. These programs were proposed in the "Final Report: Developing Strategies for University, Industry, and Government Partnership," prepared by the Education Sector Analytical and Capacity Development Partnership (Moeliodihardjo et al., 2012).

The first program could provide candidates with a small grant that offers short-term exposure to local industries before they undertake their PhD studies abroad. At the end of the program, the candidates may be able to select a more appropriate scientific discipline relevant to the problems faced by local industries.

The second program could provide returnees with a small grant, allowing them to undertake one or two short internship stints in local industries or for staff from industries to have a shortterm R&D assignment at a university.

Notes: The interviewees granted permission to the editors and authors to publish their names and the content of the interview in this book.

This chapter is adapted from the *Higher Education in Indonesia: Impacts of Study Abroad Programs on Academic Institutions*, a report published by the JICA Ogata Sadako Research Institute for Peace and Development (https://www.jica.go.jp/Resource/jica-ri/ja/publication/booksandreports/sgjqgc0000004nvuatt/20230313_indonesia.pdf). The Author has obtained full permission from the JICA Ogata Sadako Research Institute for Peace and Development to reprint and adapt this report for this OA book. Acknowledgements The author is grateful for the opportunity provided by the Japan International Cooperation Agency (JICA) and the funding from the University of Tokyo to carry out this study. Appreciation is also extended to the respondents from the MoRTHE; Ministry of Education, Culture, Research, and Technology (MoCERT); National Development Planning Agency/Ministry of National Development Planning (Bappenas/MPPN); ITB; and UGM.

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Bagyo Y. Moeliodihardjo is currently a member of the Board of Higher Education at the Ministry of Education, Culture, Research, and Technology of Indonesia and an independent consultant in higher education management. He served as the Foundation Dean of the Faculty of Computer Science at the Universitas Indonesia. He graduated from the University of Indonesia and Ohio State University. After the Dean's term, he served as an independent consultant in higher education management for various organizations, including the Japan International Cooperation Agency, The German Academic Exchange Service (DAAD), the World Bank, the US Education Development Center, the Asian Development Bank, the European Union, Nuffic, the Australian Agency for International Development, the Government of Sri Lanka and the Japan Bank for International Cooperation.

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8

Impacts of Study Abroad on the Internationalization of Higher Education in Indonesia: Drawing on the Experiences of Faculty Members at Institut Teknologi Bandung

Naoki Umemiya, Yudi Soeharyadi and Nobuko Kayashima

Abstract

This chapter presents a case study of the Bandung Institute of Technology (ITB), examining the impacts of faculty members' study abroad experiences. The study is comprised of quantitative and qualitative data from 914 responses to a questionnaire survey and interviews with over 30 faculty members. The results show that study abroad experiences have had positive impacts on many education, research, and society-related activities, contributing to the development of ITB and the Indonesian education community. The new knowledge and skills gained from studying abroad have led to the establishment of new educational programs, acquisition of research funds, and contributions to academic societies. ITB's education and research activities have been enriched through the cooperation of faculty members, who have brought

N. Umemiya (🖂)

Center for Global Education and Discovery, Sophia University, Tokyo, Japan e-mail: n-umemiya-9a6@sophia.ac.jp

Y. Soeharyadi

Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Bandung, Indonesia

N. Kayashima

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan back a range of experiences from different study-abroad destinations. Furthermore, in this new era when the internationalization of universities is directly linked to the improvement of education and research standards, faculty members with study abroad experiences are leading ITB's internationalization initiative by establishing double degree programs, developing international programs in English, and creating flexible curricula to promote collaboration with overseas universities. These faculty members are laying the foundation for ITB to advance in the era of the internationalization of higher education.

Keywords

Study abroad · Higher education · Internationalization · Faculty members · Indonesia · ITB

8.1 Introduction

This chapter presents a case study of Bandung Institute of Technology (ITB), one of the two target universities in the Republic of Indonesia in the JICA Ogata Sadako Research Institute for Peace and Development's research project, "Empirical Study on the Impact of Study Abroad in Developing Countries."

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In developing countries, many highly skilled human resources, such as central government officials and university faculty members, have had the experience of studying abroad. Since study abroad is an important means of transferring knowledge and technology from overseas and has a significant impact on bilateral relations between countries of origin and the host countries, many developed countries have utilized Official Development Assistance to invite international students from developing countries. As a result, study abroad experience has a significant impact on the changing of mindsets, acquisition of knowledge and skills, and career development, which in turn supports the social and economic development of the country. Therefore, for many developing countries, studying abroad is considered to have substantial impacts not only on individual students but also on the development of the dispatching country.

Looking at previous research, many studies have been conducted on the impacts of study abroad. For example, the Study Abroad for Global Engagement (SAGE) project, conducted by Paige et al., (2009), examined the impact of 21,569 US students who studied abroad from 1960 to 2007. In addition, many evaluations of specific study abroad programs, such as the assessments of the impacts of the Erasmus Program, an intra-regional study abroad program in Europe, conducted by Teichler and Staube (1991), the European Union (2014) and Teichler (2017), found positive impacts on the academic and career development of individuals who had studied abroad, as well as on their self-confidence and multicultural understanding. Kahn and MacGarvie (2012) discussed ways that the Fulbright Foreign Student Program helped program participants to develop knowledge in science and engineering. Haupt (2022) examined the impact of short-term international mobility of academics on their research collaboration with the host country after their return under the Fulbright Scholar Program.

These studies all found that study abroad programs had positively enhanced the academic competence, career development, self-confidence, and multicultural understanding of the individuals who studied abroad. However, many of the previous studies examined the impact of studying abroad either from developed countries to developed countries or from developing countries to developed countries through stand-alone scholarships. Few studies have examined the impacts of study abroad from developing countries to a range of diverse countries on developing countries themselves.

With this background, JICA Ogata Sadako Research Institute for Peace and Development, together with Japanese and overseas researchers, has been conducting an empirical research project on the impact of study abroad on developing countries by focusing on major universities that play an important role in developing countries as centers for knowledge-based formation as well as fostering human resources for leadership. In order to clarify the implications of study abroad on the development of developing countries, we have conducted empirical research on its impacts among university faculty members, who are integral to achieving the various goals of universities (Calikoglu et al., 2022). Specifically, research has been conducted on ten target universities in four countries in Southeast Asia, namely Indonesia, Malaysia, Cambodia, and Vietnam. This chapter presents the case study of ITB among the ten universities studied.

ITB is a university located in Java, Indonesia, with 12 faculties and 37 research centers, 1,447 faculty members, and 23,848 students as of January 2023.¹ ITB was selected as one of the target universities for this study because it is the oldest engineering university in Indonesia, founded in 1920 and is one of the leading engineering universities in the country (Moeliodihardjo, 2023).

In this case study, we conducted a quantitative and qualitative survey, collected data, and analyzed and discussed the data to clarify the impact of ITB faculty members' study abroad experiences on ITB. The next section describes

¹Bandung Institute of Technology website. Retrieved January 7, 2023, from https://www.itb.ac.id/.

the research method and data, followed by findings and discussion in Sect. 8.3, and finally, the conclusion in Sect. 8.4.

8.2 Research Method and Data

8.2.1 Quantitative Survey

In this case study, after collecting basic data on the development of ITB from its inception to the present and faculty study abroad through a literature review and basic survey, a questionnaire survey was administered in December 2019 to approximately 1,400 faculty members of ITB, and valid responses were obtained from 914 faculty members. The target faculty members for the questionnaire included both those who had studied abroad and those who had not, and an attempt was made to clarify the impact of study abroad experiences by obtaining responses from both groups and comparing them.

The questionnaire consists of questions that are common across the survey target groups for those who have studied abroad and those who have not, as well as questions prepared for each target group. In the former, in addition to questions on personal attributes such as gender, age, faculty, and job title, respondents were asked whether or not they had studied abroad, the country where they studied, the university where they studied, the year they received their degree, and the main source of funding for their study abroad expenses. On the other hand, in terms of the questions prepared for each target group, separate versions of the questionnaire were prepared for those who had studied abroad and those who had not. However, the questions were aligned so that the responses could be compared. Specifically, the questionnaire asks about the impact of studying abroad or studying at home at the master's or doctoral level on various activities at ITB, such as education, research, and society-related activities, as well as whether they have engaged in related activities in the past five years.

Table 8.1 Origin of respondents' master's degrees

291
576
47
914

Table 8.2	Origin	of res	pondents	doctoral	degrees

0 1	0
Study abroad	527
Study at home	193
No doctoral degree	194
Total	914

Table 8.1 shows where the respondents obtained their master's degrees: 291 faculty members obtained their degrees abroad, 576 faculty members obtained their degrees domestically, while 47 faculty members do not hold master's degrees as they only hold doctoral degrees. Table 8.2 shows where the respondents obtained their doctoral degrees: 527 faculty members obtained their degrees abroad, 193 obtained their degrees domestically, and 194 do not hold a doctoral degree.

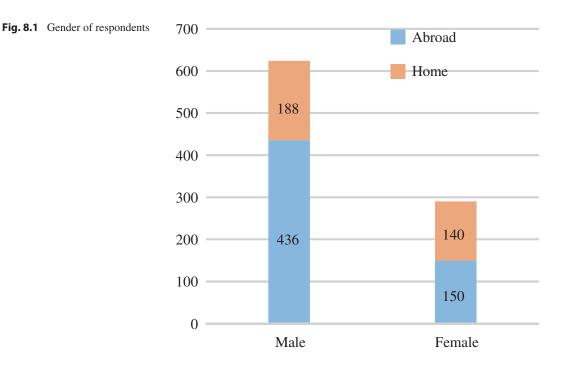
There are 586 faculty members who have studied abroad at both or either the doctoral or master's level and 328 faculty members who have never studied abroad at either level (Table 8.3). In this case study, the former are treated as having studied abroad and the latter as having not studied abroad.

In terms of gender, 624 respondents were male and 290 were female (Fig. 8.1), with 79 in their 20s, 226 in their 30s, 209 in their 40s, 261 in their 50s, 135 in their 60s, 3 in their 70s, and 1 unknown (Fig. 8.2). In terms of position, the largest number of faculty members (337) were lecturers. However, they also held a wide range of positions, including research assistants, assistant professors, associate professors, and professors (Fig. 8.3), and they belong to the 12 faculties that make up ITB (Fig. 8.4).

Table 8.4 summarizes the top nine countries where faculty members studied abroad at the

Classification	Number	Master's and doctoral degree recipients	Number
Study abroad	586	Doctor: Study abroad	527
		Doctor: Study at home Master: Study abroad	22
		Master: Study abroad	37
Study at home	328	Doctor: Study at home	169
		Doctor: Study at home	2
		Master: Study at home	157
Total	914	Total	914

Table 8.3 Percentage of respondents who have studied abroad versus those who studied at home



master's and doctoral levels, respectively, and the number and percentage of faculty members who received their master's and doctoral degrees within Indonesia. In each case, the top four countries with the highest number of study abroad faculty members are Japan, the U.S., France, and Australia. On the other hand, the percentage of faculty members who have not studied abroad, i.e., those who obtained their degrees in Indonesia, is 26.8% at the doctoral level and 66.4% at the master's level, indicating that the percentage of faculty members who obtained their degrees in Indonesia is particularly high at the master's level.

8.2.2 Qualitative Research

Following the quantitative survey, individual interviews and focus group discussions (FGDs) with ITB faculty members, university management members, and higher education administrators were conducted from July to August 2022 to collect qualitative data. Specifically, 30

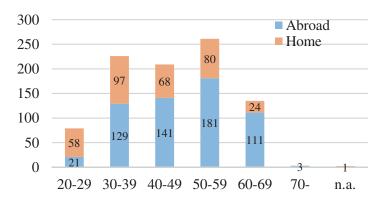


Fig. 8.2 Age of respondents

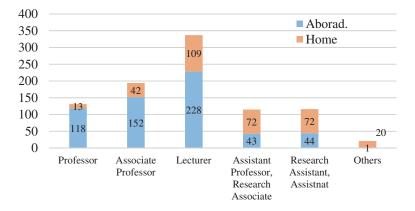


Fig. 8.3 Positions held by respondents

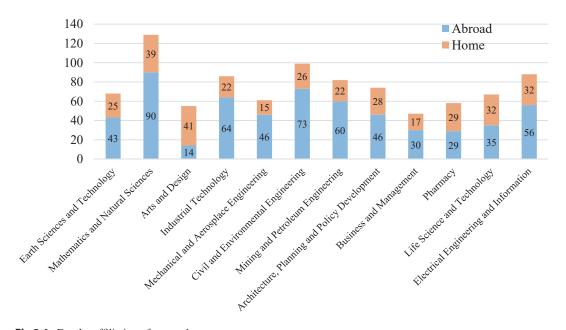


Fig 8.4 Faculty affiliation of respondents

	Countries of destination for master's degrees			Countries of des	Countries of destination for Ph.D	
	Country	Number	Ratio (%)	Country	Number	Ratio (%)
Study abroad	Japan	63	7.3	Japan	164	22.8
	USA	49	5.7	USA	60	8.3
	France	37	4.3	France	52	7.2
	Australia	32	3.7	Australia	51	7.1
	UK	24	2.8	Germany	48	6.7
	Canada	19	2.2	UK	43	6.0
	Netherlands	15	1.7	Netherlands	41	5.7
	Germany	14	1.6	Canada	9	1.3
Study at home	Indonesia	576	66.4	Indonesia	193	26.8

Table 8.4 Countries of destination for faculty members who have studied abroad

ITB faculty members were interviewed individually for about one hour each, either in person or online, to ascertain how their study abroad experience has affected their education, research, and other activities after returning to their home countries, along with specific examples. In addition, face-to-face interviews were conducted with the Vice Rector of Academic and Student Affairs, the Director General of Higher Education at the Ministry of Education, and the former Director General of Higher Education at the Ministry of Education to confirm the transition and current status of the study abroad policy of the Indonesian government and ITB. These interviews were conducted as semi-structured interviews.

FGDs for 20 senior university faculty members, including the deans of each faculty, and FGDs for 26 faculty members were conducted face-to-face at ITB to ascertain the factors behind the transition of ITB faculty members to study abroad and how their study abroad experience has influenced their activities and the development of ITB after their return to their home countries.

Table 8.5 lists the faculty members who were individually interviewed, including their faculty affiliation, position, age, gender, destination country for doctoral degree, destination country for master's degree, and date of interview. Interviewees were selected from among those faculty members who indicated in their responses to the questionnaire that they were willing to participate in the interviews. At least some of the participants had studied in a variety of major destination countries, so the interviews aimed at eliciting their experiences in those countries. As a result, the interviewees also consisted of a diverse mix of ages and genders.

8.3 Findings and Discussion

8.3.1 Impact on Educationrelated Activities

As discussed above, the questionnaire included questions on the impact of studying abroad/ studying at home in relation to a series of activities. The following section discusses the results of the analysis of the impact of each of these activities, looking in turn at "education-related activities", "research-related activities," and "society-related activities."

The questionnaire asked "Do you think your study experience enhanced your skills and knowledge in dealing with the following activities?" on a 4-point Likert scale (with 1 being "very much" and 4 being "not at all"). The results of the *t*-test comparison between the study abroad group and the study-at-home group are summarized in Table 8.6.

Faculty	Position	Age	Gender	Destination for master	Destination for Ph.D.	Interview date
School of architecture, planning and policy development	Lecturer	30s	Male	Australia	Australia	August 2
Faculty of mathematics and natural science	Professor	50s	Male	Australia	Australia	August 2
Faculty of mining and etroleum engineering	Professor	50s	Male	Japan	Australia	August 5
aculty of industrial echnology	Lecturer	30s	Female	N/a	Australia	August 9
chool of architecture, lanning and policy evelopment	Head Lecturer	50s	Male	N/a	Australia	August17
aculty of mechanical and erospace engineering	Professor	60s	Male	France	France	August 4
aculty of mathematics nd natural science	Head Lecturer	40s	Female	France	France	August 11
aculty of mathematics nd natural science	Head Lecturer	40s	Mega	Japan	France	August 11
chool of pharmacy	Professor	50s	Male	France	France	August 18
aculty of mathematics nd natural sciences	Professor	60s	Male	N/a	Germany	August 9
chool of pharmacy	Professor	50s	Male	Indonesia	Germany	August 11
aculty of mathematics nd natural science	Head Lecturer	40s	Male	Malaysia	Germany	August 15
aculty of earth science nd technology	Head Lecturer	50s	Male	Indonesia	Germany	August 16
aculty of mathematics nd natural science	Head Lecturer	40s	Female	Indonesia	Indonesia	August 4
aculty of mathematics nd natural science	Associate Pro- fessor	50s	Male	Japan	Japan	August 1
aculty of mathematics nd natural science	Head Lecturer	40s	Male	Indonesia	Japan	August 3
aculty of mathematics nd natural science	Professor	50s	Male	Indonesia	Japan	August 3
aculty of mathematics nd natural science	Professor	50s	Male	Japan	Japan	August 4
aculty of art and design	Lecturer	50s	Male	Indonesia	Japan	August 4
chool of pharmacy	Professor	50s	Male	Indonesia	Netherlands	August 4
chool of architecture, lanning and policy evelopment	Lecturer	30s	Male	Netherlands	Netherlands	August 9
Faculty of art and design	Lecturer	40s	Female	Netherlands	Netherlands	August 11
School of pharmacy	Professor	50s	Female	Indonesia	Netherlands	August 18

Table 8.5
 List of interviewees

(continued)

Faculty	Position	Age	Gender	Destination for master	Destination for Ph.D.	Interview date
School of electrical and informatics engineering	Lecturer	50s	Male	Canada	UK	August 11
Faculty of mechanical and aeronautical engineering	Lecturer	50s	Male	N/a	UK	August 15
Faculty of earth science and technology	Head Lecturer	40s	Male	Indonesia	UK	August 18
Faculty of civil and environmental enginee- ring	Professor	60s	Female	N/a	USA	August 5
School of business and management	Assistant Pro- fessor	40s	Male	Indonesia	USA	August 25
Faculty of industrial technology	Lecturer	50s	Female	Indonesia	USA	August 28
Faculty of civil and environmental enginee- ring	Head Lecturer	50s	Male	USA	USA	August 29

Table 8.5(continued)

Table 8.6 Responses to questions regarding impact on education-related activities

Questionnaire (See Note 1)	Study Abroad		Study at home		t-Test	
	n	Mean value	n	Mean value (See 2)		
Developing/revising education programs	533	1.343	305	1.502	-3.382**	
Developing/revising courses	533	1.319	302	1.487	-3.660**	
Developing/revising teaching materials	529	1.293	301	1.39	-2.433*	
Adopting new teaching methods for undergraduate students	531	1.350	301	1.505	-3.293**	
Teaching at overseas universities	532	1.914	298	2.329	-6.566**	
Initiating/implementing student exchange programs with foreign universities	527	1.719	298	2.007	-4.638**	
Inviting international researchers to your university for educational activities	531	1.638	296	1.916	-4.467**	
Organizing international joint educational Programs	529	1.70	298	1.913	-2.883**	

Note 1 Participants were asked "Do you think your study experience enhanced your skills and knowledge in dealing with the following activity" on a 4-point Likert scale (1 being "very much" and 4 being "not at all"). *Note* 2 * p < 0.05, ** p < 0.01

The results of the analysis show that the study abroad groups had lower means and statistically significant differences in all the questions. The lower mean score indicates a greater impact, as the question was asked on a 4-point Likert scale (1 being "very much" and 4 being "not at all"). In other words, on average, the study abroad group reported that their study abroad experience had a more significant impact on improving their skills and knowledge to perform each of the activities.

Furthermore, based on these results, many faculty members in the interviews reported specific examples of the impact on their education-related activities. For example, a Faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his master's degree in 1992 and his doctorate in Australia in 1996, stated the following:

Study abroad experiences had an impact on new undergraduate and master's courses. Before I returned to Australia, ITB did not offer courses in my area of expertise, Computational Mathematics and Graph Theory. The Ph.D. program at my Australian university was research only with no coursework, but while I was doing my Ph.D. I used my Ph.D. experience to design and prepare undergraduate and master's courses and established these courses immediately upon my return.

This is a specific example of "Developing/revising courses." Another faculty member in his 50s at the Faculty of Mathematics and Natural Science, who received his master's degree in 1992 and Ph.D. in 1996 in Japan, said that,

When I established a doctoral program in my own department ten years ago, I used a lot of my experience from studying in Japan. In particular, how I ran the doctoral program and how I selected students were based on my Japanese experience. For the former, we did the same as the Japanese doctoral program, which is research-based and does not include coursework. However, only the coursework required by the university, such as research ethics and research methods, was conducted. For the latter, we followed the Japanese practice of no written examinations, only presentations and interviews.

This is a specific example of "Developing/revising education programs." Furthermore, a faculty member in his 50s at the Faculty of Mechanical and Aeronautical Engineering, who received his Ph.D. in the UK in 2004, stated the following:

Study abroad had a significant impact on my teaching methods. As a Ph.D. student, I sometimes assisted professors in their lectures. In the ITB, traditionally, there is a tendency to force students to study, but in the UK, there is a tendency to value the independence of students and support them to become independent, and a faculty member is like a facilitator. Students are encouraged to think for themselves and ask questions if they do not understand something. Many students have had a passive education up to high school, but at university, they are encouraged to work actively. Teaching is done in a less stressful atmosphere and in a conducive atmosphere. I have introduced this instructional approach at ITB.

This is a specific example of "Adopting new teaching methods for undergraduate students." The results of the above quantitative and qualitative surveys indicate that faculty members' experiences of studying abroad have a significant impact on their education-related activities after they return to their home countries.

8.3.2 Impact on Research-related Activities

Table 8.7 summarizes the results of the *t*-test comparison of the means of the responses to the research-related activities between the study abroad and study-at-home groups. The same question asked about the extent to which their study experience enhanced their skills and knowledge in carrying out each activity on a 4-point Likert scale (1 being "very much" and 4 being "not at all").

The results of the analysis show that the study abroad group had a lower average for 10 of the 11 items, i.e., on average, the study abroad group reported that their study abroad experience had a greater impact on their skills and knowledge in carrying out these activities. The results also show statistically significant differences in six of the ten items. On the other hand, the mean value of the study-at-home group for "Applying for patents" was the only item with a lower average than that of the study abroad group, and there was a statistically significant difference between the two groups. In the FGDs, it was pointed out that the longer period of education and research activities in Indonesia may have led to stronger ties with local industries, which in turn may have had an impact on patent applications by the study-athome group.

If we look at the activities that showed statistically significant differences, it should also be highlighted that the results show statistically significant differences between the two groups, with the study abroad group having a lower

Questionnaire (see Note 1)	Study abroad	d	Study at hor	ne	t-Test
	n	Mean value	n	Mean value	(See Note 2)
Making presentations at academic conferences in Indonesia	528	1.309	303	1.294	0.356
Making presentations at academic conferences overseas	525	1.28	300	1.603	-6.280**
Publishing articles in academic journals/books in Indonesia	526	1.422	303	1.469	-0.929
Publishing articles in academic journals/books overseas	522	1.339	301	1.691	-6.137**
Participating in international collaborative research projects with international researchers (excluding the host country where you studied)	527	1.736	332301	1.977	-3.585**
Hosting international researchers	528	1612	300	2.047	-6.609**
Organizing international conferen- ces at your home university/country	527	1.66	299	1.669	-0.138
Launching new research projects	523	1.382	299	1.398	-0.329
Obtaining competitive research funds	525	1.587	298	1.698	-1.835
Applying for patents	521	2.461	298	2.248	2.744**
Adopting new research supervision methods or laboratory management systems for graduate students	525	1.699	297	1.96	-3.782**

Table 8.7 Responses to questions regarding impact on research-related activities

Note 1 Participants were asked "Do you think your study experience enhanced your skills and knowledge in dealing with the following activity" on a 4-point Likert scale (1 being "very much" and 4 being "not at all "). *Note* 2 * p < 0.05, ** p < 0.01

mean than the study-at-home group for all the international activities. The differences were significant for the items "Making presentations at academic conferences overseas", "Publishing articles in academic journals/books overseas", "Participating in international collaborative research projects with international researchers," and "Hosting international researchers." This finding will be discussed further below.

In the interviews based on these results, many faculty members reported specific examples of the impacts on their research-related activities. For example, a faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his master's degree in 1999 and his Ph.D. in 2002 in Japan, emphasized the following: My study abroad experience had the greatest impact on my research activities. I learned how to manage my research, how to control students, how to obtain research funding, and how to present at conferences. I can say that I learned the culture of research. I also learned what to emphasize to the research fund committee members. As a result, I won the Asahi Glass fund for seven consecutive years.

This is a specific example of the impact on research activities, including "Obtaining competitive research funds." In addition, another faculty member in his 30s in the School of Architecture and Planning Policy, who received his Ph.D. in the UK in 2004, claimed.

I copied my supervisor's research supervision methods. My supervisor always gave me critical comments. He also questioned each sentence of each draft paper written by the student. Following his example, I have my students submit drafts of their presentations at least one day in advance of lab meetings, and I review them and give them feedback after checking the content with their oral presentations and have them revise their presentations after the meeting. At the same time, students are given "freedom." The final decision, including whether or not to listen to advice, is made by the students themselves. This is an egalitarian approach that I learned in Europe.

This is a specific example of "Adopting new research supervision methods or laboratory management systems for graduate students." Furthermore, another faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his master's degree in 1992 and his doctorate in 1996 in Australia, noted that,

Together with my supervisor in Australia, I launched an international journal on graph theory. It has now been indexed by SCOPUS. I also organized many international workshops. My supervisor introduced me to many prominent researchers who became my collaborators.

This is an example where the study abroad experience had an impact on the launch of a new academic journal, which extends beyond the scope of the item "Publishing articles in academic journals/books overseas," and it is an example of a significant impact on research activities not only at ITB but also in Indonesia as a whole. The results of the above quantitative and qualitative surveys indicate that the study abroad experience of the faculty members has a significant impact on their research-related activities after their return to their home countries.

8.3.3 Impact on Socially Relevant Activities

Table 8.8 summarizes the results of the *t*-test comparison of the means of the responses of the study-abroad and study-at-home groups for the society-related activities. The same question asked about the extent to which their study experience enhanced their skills and knowledge in carrying out each activity on a 4-point Likert scale (1 being "very much" and 4 being "not at all").

The results of the analysis show that the study abroad group had a lower average for six of the seven items, i.e., on average, the study abroad group reported that their study abroad experience had a greater impact on the improvement of their skills and knowledge in conducting these activities. The results also show statistically significant differences in three of the six items. On the other hand, only the "Contribution to community development activities" item had a lower mean value for the study-at-home group with no statistically significant difference found. This may be due to the fact that the study-at-home group has stronger ties with the local community because of their longer period of education and research activities in Indonesia, which is also the reason given for the lower average value of the study-at-home group in the patent applications mentioned above.

If we look at the activities that showed statistically significant differences, again, it should be highlighted that the results show statistically significant differences between the two groups, with the study abroad group having a lower mean than the study-at-home group for all the international activities; namely, "Contributing to international academic societies", "Contributing planning/formulation/implementato policy tion as a member of advisory committees, etc. for international organizations", "Contributing to joint activities with the international academic societies", "Contributing to policy planning/formulation/ implementation as a member of advisory committees, etc. for international organizations," and "Contributing to joint activities with the international industrial sector." This finding will also be discussed below.

Furthermore, based on these results, many faculty members in the interviews reported specific examples of the impact on their societyrelated activities. For example, a faculty member in his 40s in the Faculty of Mathematics and Natural Sciences, who received her master's degree in 2000 and her Ph.D. in 2002 in France, on her own experiences:

From 2016-18, I served as president of the Indonesian Mathematical Society, which has

Questionnaire (See Note 1)	Study abroad		Study at home		t-test
	n	mean value	n	mean value	(See Note 2)
Contributing to domestic academic societies	528	1.447	308	1.464	-0.354
Contributing to international academic societies	527	1.662	338	2.107	-6.969**
Contributing to policy planning/formu- lation/ implementation as a member of advisory committees, etc. for your government	524	1.849	305	1.967	-1.698
Contributing to policy planning/ formulation/ implementation as a member of advisory committees, etc. for international organizations	523	2.143	304	2.52	-4.950**
Contributing to joint activities with the domestic industrial sector	524	1.947	304	1.987	-0.596
Contributing to joint activities with the international industrial sector	518	2.33	298	2.648	-4.168**
Contributing to community develop- ment activities	524	1.729	305	1.636	1.654

Table 8.8 Responses to questions regarding impact on society-related activities

Note 1 Participants were asked "Do you think your study experience enhanced your skills and knowledge in dealing with the following activity" on a 4-point Likert scale (1 being "very much" and 4 being "not at all "). *Note* 2 * p < 0.05, ** p < 0.01

3,000 members. The impetus goes back to 2014, when the then-president nominated me as the secretary. Later, that led me to be deeply involved in the organization of the Asian Mathematical Society in 2016 as acting chairperson, where I became friends with the presidents of the Indonesian Mathematical Society and other national mathematical societies. When the election for president of the Indonesian Mathematical Society for 2016 took place, I was advised that I knew the people involved very well, so I should run for the position. I decided to give it a try and ran for the presidency. [In response to a question about the relationship between these activities and her study abroad experience], "I am not sure, but I think the then president chose me as the secretary in part because he thought he needed someone with international experience and who could communicate well with many international people.

This faculty member also stated:

My own students have become faculty members at universities all over Indonesia, forming a large 'family' in the field of mathematics in Indonesia. A large family has also been formed abroad through overseas networks. I am happy to be able to contribute to the development of mathematics education in Indonesia.

This is a specific example of "Contributing to domestic academic societies." It can also be seen that, through her position as president of the society and through her students becoming university faculty members throughout Indonesia, her study abroad experience has made an impact on the development of mathematics education not only at ITB but also in Indonesia as a whole. In addition, another faculty member in his 50s in the School of Pharmacy, who obtained his Ph.D. in Germany in 2002, observed that,

Due to the nature of the field of pharmacy, we often work with private companies. Both pharmaceutical companies and food companies. I also help a lot with the Food and Drug Agency of the Indonesian government. In doing so, the knowledge I learned in Germany has been useful. In particular, the knowledge of Chemical Structure has been very useful. I am also able to apply the logic method that I learned in my Ph.D. program. This is a specific example of "Contributing to joint activities with the domestic industrial sector." Another faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his master's degree in 1992 and his doctorate in 1996 in Japan, stated that,

I was the rector of a private university in Indonesia for four years from 2015 to 2019. Graduates of Japanese universities have gained a sense of cooperation with others and other fields. I believe I was able to win the presidential election because of such ability [Sense of cooperation] that I developed in Japan.

Furthermore, another faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his Ph.D. in 1992 in Germany, declared that,

I have been president of domestic academic societies, and I was able to do so because of the German way of thinking that I learned in Germany. Also, until most recently, for six years, I was the Vice Rector of the Sumatra Institute of Technology for five years and then concurrently served as the Rector for one year. Every Tuesday, I would fly to Sumatra and return to ITB on Thursdays. In my management work, I used time management, problem-solving skills, and the ability to plan new things, all of which I had learned while studying in Germany. Conversely, I was elected president of the university because of those abilities.

These are examples of faculty members who became presidents of national academic societies or rectors of other universities based on their study abroad experience, and through these experiences, they have had an impact on raising the overall standard of university education in Indonesia. The results of the above quantitative and qualitative surveys indicate that the study abroad experience of the faculty members has a significant impact on their society-related activities after their return to their home countries.

8.3.4 Impact on International Activities

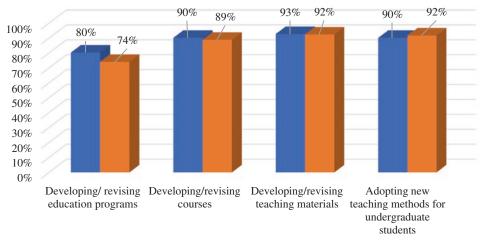
The results of the above analysis reveal that study abroad experience is particularly

conducive to the promotion of international activities. The results showed study abroad groups, on average, reported that their study abroad experience had a greater impact on improving their skills and knowledge to carry out all of the international activities, whether education, research, or society-related activities. These international activities of academic staff have led to the further internationalization of their universities (Romani-Dias et al., 2019; Rumbley & de Wit, 2017).

In addition, the questionnaire also asked the question, "Did you conduct the following activities in the past five years (2015–2019)?" Fig. 8.5 compares the percentage of respondents who answered "yes" to this question on the various education-related activities between the two groups. The circles indicate that the "yes" responses of those who had studied abroad exceeded those of those who studied at home by more than 10 percentage points, all of which are international activities. Figure 8.6 shows a comparison of the responses for research-related activities, and the YES answers for those who had studied abroad exceeded those for those who had studied at home by more than 10 percentage points for the activities circled, most of which again are international activities. In other words, a larger percentage of the study abroad group than the study at home group are engaged in international activities.

In light of these results, in the interviews, a number of faculty staff who had studied abroad reported specific examples of the impact of their study abroad experience on their international activities. For example, a faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his master's degree in 1992 and his doctorate in 1996 in Australia, stated the following:

We have established a master's double degree program with Kanazawa University in Japan, which has produced 60 graduates so far. It is the first double degree program at ITB and was designed in one year. We decided to launch the program in collaboration with Kanazawa University, as there were only a few universities in Asia that had a program in computational mathematics, namely





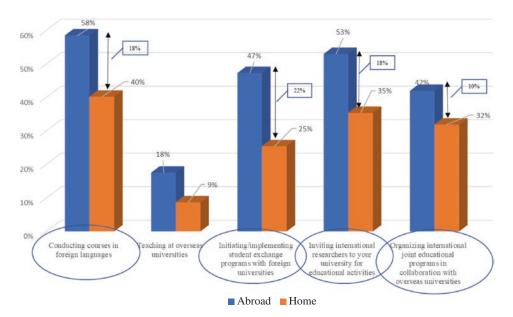


Fig. 8.5 Percentage of respondents who answered "yes" on education-related activities

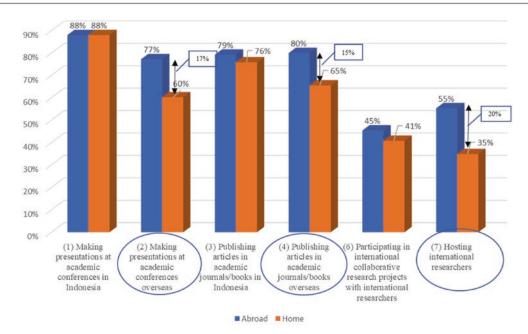
Nanyang Technological University (NTU) in Singapore and Kanazawa University. Later, the program was also launched with a university in Spain. Two Japanese students have graduated from the program. Graduates of this program are now working in other universities in Indonesia, and each university is copying and implementing this double degree program.

Another faculty member in his 50s at the School of Pharmacy, who received his master's degree

in Indonesia in 1997 and his doctorate in the Netherlands in 2006, affirmed that,

I established a four-year double degree program with a supervisor in the Netherlands. I have sent seven students on Erasmus and LPDP scholarships.

These are examples of how study abroad experiences have impacted the establishment of double degree programs. Furthermore, another faculty



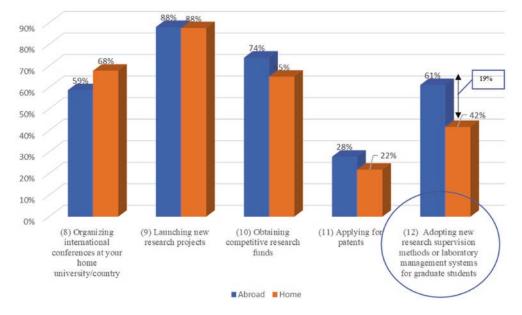


Fig. 8.6 Percentage of respondents who answered "yes" on research-related activities

member in his 40s at the School of Business and Management, who received his master's degree in Indonesia in 2009 and his Ph.D. in the United States in 2015, stated that, We are also in the process of establishing an international joint MBA program, where students spend one year studying at ITB and one year at a partner university. We have already established this program with several universities, including

Boston University. I would like to do the same with the US university where I did my doctoral work, but until now, the bottleneck has been the fact that ITB does not have AACSB, the international accreditation for MBA programs. However, ITB was able to obtain AACSB accreditation in November of last year and will consider doing so in the future. In order to obtain this kind of international accreditation, there is a process where an evaluator comes to ITB to evaluate the program, and my knowledge from my doctoral studies was useful in preparing for this process. In other words, it is necessary to show that the program is prepared and implemented according to international standards, and it is useful to have experienced international standards while studying abroad. The presence of a certain number of international students and a certain number of foreign faculty members are also criteria that are verified in the accreditation process.

This is another example of the establishment of a double degree program, but at the same time, it is a demonstration that study abroad experience can be used for obtaining international accreditation, which is necessary to promote the establishment of such double degree programs.

8.3.5 Drivers of International Activities

Why, then, are these international activities promoted through study abroad experiences? In the interviews, several faculty members pointed to their connections with their former supervisors as a factor that facilitated these international activities. For example, a faculty member in his 40s at the Faculty of Earth Science and Technology, who received his master's degree in Indonesia in 2002 and his Ph.D. in the UK in 2011, argued that,

As for Japan, we have already established a double degree program in the field of engineering related to groundwater with Kumamoto University. This was established based on the network of several colleague faculty members who did their Ph.D. at Kumamoto University. In addition, I have started to consider a double degree program with University of Durham and Newcastle University, where I obtained my Ph.D., based on the network I established when I was a Ph.D. student. These considerations are much easier to do when you have friends on the other side. Another faculty member in his 60s in the Faculty of Mathematics and Natural Sciences, who received his Ph.D. in 1992 in Germany, stated that,

My supervisor and I have been working together on international joint research projects and organizing international conferences; we even organized the "Indonesia-Germany Conference" together at ITB under the auspices of DAAD. I have also sent my own students to work with him as doctoral students. He also once wrote a letter to me and got equipment from the German government and installed it at ITB. I think it is because we are building a relationship not only as students but also as a family. For example, I went hiking with his own family on weekends. This kind of relationship-building is very important. I studied abroad on an Indonesian government scholarship, but the amount was not enough, so my supervisor even helped me find an additional scholarship.

Another faculty member in his 30s at the Faculty of Industrial Engineering, who received his Ph.D. in Australia in 2013, noted that,

I am connected with my supervisor from my time studying in Australia, and I invited him to an international conference I held at ITB in 2014, where he gave a lecture and had a meeting with members of my research group. Since then, he has been a visiting faculty member, giving two or three lectures each semester. In addition, I have appointed him as an adjunct professor this year, and he is also involved in the co-supervision of graduate students. I am also connected with fellow students in the same program from my study abroad days. They are students from Turkey, India, Bangladesh, Pakistan, etc. They are international researchers and have not returned to their home countries but have remained in Australian universities or gone to universities in Canada or Saudi Arabia to teach. We also have them lecture online.

An additional factor that several faculty members pointed to as a driver of their international activities was the international experience and confidence they gained while studying abroad. For example, a faculty member in his 50s at the Faculty of Mechanical and Aeronautical Engineering, who received his Ph.D. in 2005 in the UK, stated that,

After returning to ITB, I was engaged in various international teaching activities, but I feel ok to teach international students because of my study abroad experience. For example, after returning to Indonesia, I was in charge of a special program to accept and teach ten teachers from a vocational college in Malaysia who were studying aircraft maintenance and management as master students. Since they had entered the master's program while working, they stayed in Malaysia, so I visited Malaysia to teach them. In addition, ITB was the host university in Aeronautical Engineering for the JICA-supported AUN/SEED-Net project, so I accepted and supervised students from Cambodia and Vietnam in the master's and doctoral programs. In that case, I co-supervised with a professor from Toyohashi University of Technology.

Another faculty member in his 50s at the School of Architecture, Planning and Policy Development, who received his Ph.D. in 1996 in Australia, affirmed that,

In terms of international collaboration, in 2006, I applied for a research project at the International development study center (IDSC) in Canada, which was accepted, and I conducted joint research with researchers from the IDSC, and together we invited researchers from overseas and organized an international conference at ITB. I also hosted an international conference at ITB, inviting researchers from abroad. Originally, a colleague of mine knew a faculty member at the center and introduced me to him. The importance of interaction, which I learned while studying in Australia, has been useful in these international projects. Australian researchers have always held international conferences and other international collaborations based on the principles of interaction, and I have always taken this approach to international collaboration to heart.

As such, the study abroad experience has a positive impact on the performance of international educational and research activities in particular, as there are many cases in which international activities are promoted based on the relationships developed with former supervisors and colleagues at the host university and the international experience and confidence gained during the study abroad experience.

8.3.6 The Value of Studying Abroad

While ITB has been sending many of its staff to study abroad, ITB's education and research standards have improved due to the contributions of these faculty members with study abroad experience, and graduate education has also been enhanced in recent years. As a result, the number of faculty members who have obtained degrees at ITB in Indonesia at the master's level has been increasing since the late 1990s, and at the doctoral level since the late 2000s (Figs. 8.7 and 8.8). The number has been increasing, especially at the master's level. For example, in the five years from 1995 to 2000, the number of faculty members who received their master's degrees from ITB was about 120, while the number of faculty members who received their master's degrees abroad was 40.

On the other hand, many faculty members in the interviews and FGDs emphasized that the value of studying abroad continues to be not only gaining state-of-the-art knowledge but also being exposed to the culture of education and research and the personal network with foreign universities that can only be obtained by studying abroad. For example, as a faculty member in his 40s at the Faculty of Earth Science and Technology, who received his master's degree in Indonesia in 2002 and his Ph.D. in the UK in 2011, stated that,

Studying abroad is important not only for the acquisition of specialized knowledge but also for the cultural aspect. You can be exposed to the culture of education and research. It can also create strong partnerships. Today's challenges are no longer local issues but global issues, and international partnerships are necessary to solve them.

In addition, the following points were noted in the FGDs with key faculty members.

We send our most talented students abroad not only to acquire scientific knowledge but also to learn about the culture and make friends, which is the added value of study abroad. This is easier to obtain when studying abroad than when doing a Ph.D. domestically.

Compared to faculty who earned their degrees domestically, faculty who earned their degrees through study abroad are more confident about collaborating internationally. Faculty members who earn degrees domestically also need to be exposed to international activities and the research community through faculty and student exchanges with foreign universities.

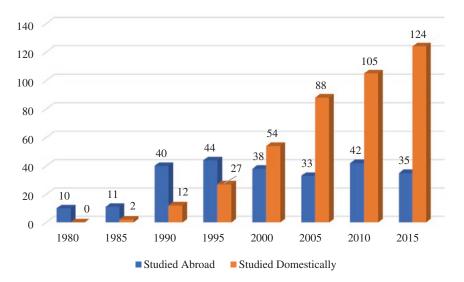


Fig. 8.7 Change in the number of faculty members with master's degrees from indonesia and abroad

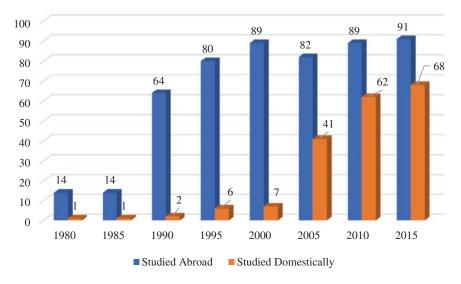


Fig. 8.8 Change in the number of faculty members with doctoral degrees from indonesian and abroad

As seen above, the value of studying abroad is not only for the acquisition of science and technology but also for learning about culture, a key aspect pointed out in several interviews and FGDs. In addition, in individual interviews, when asked about the impact of their study abroad experience, several faculty members emphasized the influence on their basic attitudes and standpoint toward teaching and research, as well as the effect on their specific activities. For example, as a faculty member in his 50s in the Faculty of Mathematics and Natural Sciences, who received his master's degree in 1992 and his doctorate in 1996 in Japan, stated,

First, as a general statement about what I gained from studying in Japan, the first point is the attitude of hard work. In Japan, working hard is important. Secondly, the attitude to cooperate with colleagues in Japan and other countries. These factors shaped my own behavior after returning to my home country and led me to keep the motivation to work hard.

Another faculty member in his 40s at the School of Business and Management, who received his master's degree in Indonesia in 2009 and his doctorate in the United States in 2015, noted that,

One of the things that has influenced me about the research supervision of graduate students is the perspective of ethics in conducting research. In this interview today, for example, the position of the study and the fact that participation is voluntary were explained properly at the beginning of the interview; but in Indonesia, there was no consideration of these points before. In the US, research is being conducted after informed consent has been firmly established, and it is significant to have learned the basics of this type of research. In the US, I also learned that the ultimate goal of university faculty is to conduct research and produce knowledge that is useful to society. In Indonesia, many universities are 'teaching' universities, and this idea is not common. I was greatly influenced by these basic ideas.

Furthermore, another faculty member in his 50s at the School of Electrical and Informatics Engineering, who received his master's degree in Canada in 1992 and his doctorate in the UK in 2005, stated that

The most important thing I brought back from my studies in the UK was mindset and philosophy. In Indonesia, a Ph.D. is a degree to enhance one's image and to be perceived as a smart person, and has little to do with science itself. There is a misinterpretation of the Ph.D., and administrators also tend to get a Ph.D. as a foil. In contrast, a Ph.D. in the UK is to become an independent researcher. They pursue a very narrow range of research topics. This has opened my mind.

As such, several faculty members pointed out the differences in education and research culture between Indonesia and their host countries, while emphasizing the impact on their basic attitudes and dispositions toward education and research as something they can enhance by studying abroad.

8.3.7 Importance of diversity in study abroad destinations

At the same time, the importance of diversity in destination countries is emphasized. For example, a faculty member in his fifties in the Faculty of Mining and Petroleum Engineering who received his master's degree in Japan in 1992 and his doctorate in Australia in 1998 emphasized that,

Each country has its own strengths and weaknesses. Japan, for example, offers doctoral programs by research, which provide a foundation for becoming a researcher. Australia and the US consist of both coursework and research. Students will take a lot of coursework and will have a lot of teaching materials to use in their education after returning to their home countries. [...] There are faculty members who have studied in various countries and returned. This diversity enhances the quality of each program. This diversity is important. There are six young members in my research group [...] I intentionally send them to universities in different countries based on their research fields. In doing so, I often send them using the international network I have created, including my own study abroad, and it is very much related to that.

In fact, the results of the questionnaire survey indicate that the study abroad experience varied by destination country. Figure 8.9 summarizes the percentage of responses in the questionnaire regarding the activities most accelerated by the doctoral study experience according to major doctoral destination countries and Indonesia. For example, nearly 50% of faculty who received their doctoral degrees in the US indicated that their domestic education-related activities were most accelerated, while only 17% of faculty indicated that their international research activities were accelerated. In contrast, only slightly less than 30% of faculty who studied in Japan said that their domestic education-related activities were most accelerated, while more than 30% said that their international research activities were most accelerated. When asked to comment on this figure by faculty members

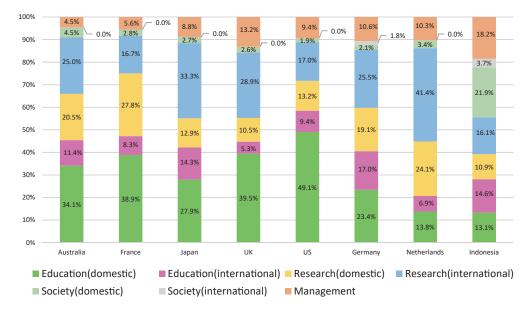


Fig. 8.9 Activities most accelerated by doctoral study experience

who studied in their respective countries during the interview sessions, most said they felt comfortable with it. As a reason for this, for example, a faculty member who earned his Ph.D. in the US noted, "I think it is because US doctoral programs are well-developed in terms of coursework, and I was able to bring back a lot of knowledge and experience that I can refer to in promoting educational activities in my country after returning home." A faculty member who earned his doctorate in Japan noted that "doctoral programs at Japanese universities are research-oriented, and as a result, there is probably a significant impact on research activities after returning from Japan."

The above quote from a faculty member in his 50s in the Faculty of Mining and Petroleum Engineering points out the importance of ITB faculty members who have gone to diverse study abroad programs, bringing back diverse knowledge and experience. The knowledge and experience gained there vary depending on the nature of the doctoral program at the study abroad destination. Meanwhile, several other faculty members made the same point. For example, a faculty member in his 50s at the School of Pharmacy, who received his master's degree in Indonesia in 1997 and his doctorate in the Netherlands in 2006, noted the following:

It is positive that what you get from each country you study in is different. We can enjoy it together as it enriches the quality of education. International networks can be built.

Faculty members who have not studied abroad also point out the value of studying abroad and the importance of diversity in study abroad programs. A faculty member in her 40s in the Faculty of Mathematics and Natural Sciences who received her master's degree in 2001 and her doctorate in 2008, both within Indonesia recommended that.

We should all go abroad. It is beneficial in the long run. Studying abroad allows you to see the world and to see ITB from the outside. Universities thrive on 'diversity'.

In this regard, several faculty members pointed out that ITB's educational and research activities have in fact been improved and built upon by integrating diverse systems brought back by faculty members who have studied in various countries. For example, a faculty member in her 40s in the School of Pharmaceutical Sciences, who received her master's degree in Indonesia in 1998 and her doctorate in the Netherlands in 2005, as well as post-doctoral experience in Singapore and Japan, noted that

Germany and the Netherlands, being in the same region of Europe, are almost identical. Characteristic is the relationship between faculty and students, who are like friends. They spend time together at lunch or in cafes and the atmosphere is relaxed. This is an important environment for writing papers. Singapore, on the other hand, is very different. There is a lot of pressure. At ITB, I have been able to adapt to the different environments, and I am trying to incorporate the best of both countries, while also finding ways to work in between, depending on the situation. [...] When making reforms in management, I do comparative studies of practices in different countries and incorporate the best of them. For example, as the head of the Research Center, I developed a management system for precision equipment and software to provide good service. In doing so, my colleagues who studied in Japan provided their knowledge from Japan and I shared my experiences from Singapore.

Another faculty member in his 50s at the Faculty of Mathematics and Natural Science, who received his master's degree in 1992 and Ph.D. in 1996 in Japan, observed that,

The members of the faculty are members who have returned with degrees from various countries, and we have used a mix of those experiences to revise the curriculum.

The collaboration of faculty members with different knowledge and experiences from various study countries has promoted the educational and research activities of ITB.

8.3.8 Internationalization Initiative for a New Era of ITB, Promoted by Faculty Members with Study Abroad Experience

This survey confirmed that faculty members with study abroad experience are not only engaged in education and research activities that we assumed would have been impacted by their study abroad experience and included in the questions in the questionnaire survey, but they have also developed new international initiatives based on their study abroad experience. We have already mentioned that they have launched several international joint educational programs—such as double degree programs—based on their study abroad experience and connections with their supervisors at their study abroad destinations.

The first such initiative is a curriculum revision to promote internationalization. As a faculty member in his 30s at the School of Architecture, Planning and Policy Development, who received his master's degree in 2006 and his doctorate in 2012 in Australia stated,

I am currently the Director of Undergraduate Education Programs and am in the process of revising the curriculum. I plan to revise this and increase the credits for each course to give students more focus in their studies. Currently, each course has only two or three credits, and as a result, each faculty member teaches five or six courses, but we will increase the number of credits to four or five credits per course and decrease the number of courses. The number of hours per credit will not change.

This reform is aimed at improving flexibility and compatibility for international collaboration and is based on the knowledge and expertise of study abroad groups who are familiar with education at European and US universities. This is an example of how study abroad experience has helped ITB promote international collaboration and build a foundation for internationalization.

Another faculty member in her 30s at Faculty of Industrial Engineering, who received her Ph.D. in 2013 in Australia, affirmed that,

"International Classes" is a program conducted in English that targets students who are the children of ITB alumni working abroad, who grew up abroad do not speak Indonesian well but speak English, and whose parents want them to study in their home country and at ITB. The program is not offered in all faculties but is offered in the Faculty of Mechanical and Aerospace Engineering, the School of Pharmacy, and the Faculty of Business and Management, in addition to my own Faculty of Industrial Engineering. International classes are conducted in English and are taught by faculty members who have experience studying abroad. Conversely, the presence of faculty members with study abroad experience makes these programs possible. At the moment, most of the students are Indonesians who grew up abroad, but we hope to eventually accept foreign students as well.

This program, conducted in English by faculty members with study abroad experience, is an example of preparing a receptive environment to eventually accept international students in the future and is creating a foundation for ITB to take a leap forward in the midst of globalization.

8.4 Conclusion

The following points can be drawn as conclusions from the analysis of data obtained from the quantitative and qualitative surveys at ITB.

The study abroad experience of ITB faculty has had a positive impact on the performance of many education, research, and society-related activities, contributing to the development of ITB. A comparison of responses to the questionnaire between those who had studied abroad and those who had not showed that, on average, those who had studied abroad reported that their study abroad experience had a greater impact on improving their skills and knowledge to carry out many of the activities they were involved in. The interviews also provided many specific examples of the impact of each activity. The new knowledge and skills gained from study abroad have led to the establishment of new educational programs, acquisition of research funds, contributions to academic societies, and collaboration with industry. In terms of society-related activities, faculty members who have studied abroad have used their experiences to launch new academic journals, serve as presidents of academic societies, and serve as rectors of other universities, and through these activities, have had an impact not only on ITB but also on the Indonesian education community as a whole.

The study abroad experience was also found to have had a positive impact, particularly on the performance of international education, research, and society-related activities. Faculty members with study abroad experience indicated that, on average, their study abroad experience had a greater impact on their pursuit of international activities than did their study at home counterparts, and many specific examples were provided in the interview sessions. In these cases, they cited their relationships with faculty advisors and colleagues at their host universities, as well as the international experience and confidence they gained while studying abroad, as facilitating factors in their international activities.

At the same time, the contributions of these faculty members with study abroad experience have improved the level of education and research at ITB and enhanced graduate education, resulting in an increase in the number of faculty members earning master's and doctoral degrees in Indonesia. While ITB is now highly capable of producing master's and PhD degrees on its own, it is likely to continue to send students abroad. There are still some things that can only be gained through study abroad, such as the culture of education and research and personal networks with overseas universities, as pointed out in the interview sessions and FGDs. It is also found that the experiences and knowledge gained differ depending on the destination country and that ITB's education and research activities are enriched by the collaboration of faculty members who bring back different experiences and knowledge from different study abroad destinations.

With these findings, we can conclude that the study abroad of ITB faculty members has had a tremendous impact on the development of ITB to date. Furthermore, in an era when the internationalization of universities is directly linked to the improvement of education and research standards, faculty members with study abroad experience are leading ITB's internationalization initiative in the new era. Faculty members with study abroad experience are, among other aspects, leading the establishment of double degree programs, the establishment of English-language programs, and the revision of flexible curricula to promote collaboration with overseas universities. As the study abroad experiences of faculty members affect subsequent internationalization at home and abroad through the integration of international, intercultural, and global dimensions in education, research and society-related activities (Asada, 2022), they are building the foundations for ITB to make further progress in the world of internationalization of higher education.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Naoki Umemiya Ph.D., is Professor at the Center for Global Education and Discovery, Sophia University, Japan. Prior to his current position, he served as Deputy Director General, Human Development Department, JICA, in charge of JICA's cooperation projects in higher education, JICA expert for the Malaysia-Japan International Institute of Technology (MJIIT), and JICA expert for the ASEAN University Network/Southeast Asian Engineering Education Development Network (AUN/SEED-Net) in Thailand. He holds an M.Ed. from Harvard Graduate School of Education and a Ph.D. from Tokyo Institute of Technology. He specializes in comparative and international education. He is Visiting Professor at Tokyo Institute of Technology.

Yudi Soeharyadi Ph.D., is an Assistant Professor of Mathematics at the Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung, Indonesia. He holds a bachelor's degree from ITB (1988), an MA from The University of Texas at Austin (1995), and a Ph.D. from The University of Memphis, Tennessee (2000). He specializes in the analysis of partial differential equations. Apart from carrying out his professional duties as a mathematician, teaching undergraduate and graduate courses, and supervising theses and dissertation research, he has fulfilled several administrative roles, such as chair of programs, research and cooperation manager, various committees and boards on quality assurance and research. He is currently a member of the Quality Assurance Commission of the Institute Teknologi Bandung.

Nobuko Kayashima Ph.D., is Senior Research Advisor at the JICA Ogata Sadako Research Institute for Peace and Development. She joined JICA in 1982 and has played a leading role in the planning and implementation of JICA's education cooperation over the past four decades. Prior to her current assignment, she served as Senior Vice President, Director/Deputy Director of the JICA Ogata Research Institute, and Director General of the Human Development Department. While holding management positions at JICA, she has been actively involved in academic research activities and received her Ph.D. from Nagoya University for her research on the internationalization of Japanese universities. **Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits any noncommercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if you modified the licensed material. You do not have permission under this license to share adapted material derived from this chapter or parts of it.

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9

The Impact of Studying Abroad on the Three Pillars of Higher Education at Universitas Gadjah Mada, Indonesia: Challenges and Breakthroughs

Wahyu Supartono, Hermin Indah Wahyuni, Vissia Ita Yulianto and Naoki Umemiya

Abstract

This study takes education, research, and community service-collectively known as the three pillars of higher education-as its point of departure in analyzing the impact of study abroad on academic staff at Universitas Gadjah Mada (UGM). Applying a mixed method approach through a quantitative survey and qualitative interviews, this study reports on and assesses how studying abroad impacts the trajectory and performance of education, research, and community service at UGM. In 2020 and 2021, quantitative data were collected from 833 respondents using two survey instruments; qualitative data were also collected through interviews with 22 academic staff. The study found that faculty members' study abroad

W. Supartono (🖂)

H. I. Wahyuni

Departement of Communication Science, Faculty of Social & Political Sciences, Universitas Gadjah Mada, Yogyakarta, Indonesia

V. I. Yulianto Center for Southeast Asian Social Studies, Universitas Gadjah Mada, Yogyakarta, Indonesia

N. Umemiya Center for Global Education and Discovery, Sophia University, Tokyo, Japan experiences positively impacted their diverse teaching, research, and community servicerelated activities in a variety of ways after returning to UGM. This study also shows that the network of faculty members who studied abroad plays a significant role in the process of promoting internationalization, which is no longer treated as a goal but as a means of raising the level of education and research.

Keywords

Higher education · Study abroad · Internationalization · Academics · Community service · UGM

9.1 Introduction

Around the world, internationalization has become inevitable for institutions of higher education. As the title suggests, this chapter assesses the impact of studying abroad on the Tri Dharma Perguruan Tinggi, the three pillars of higher education—namely education and teaching, research, and community service—at Universitas Gadjah Mada (UGM). To provide broader insights, this chapter opens with an introduction to UGM, followed by an overview of the research methods, presentation of the key findings, and discussion of the results.

Graduate School Universitas Gadjah Mada, Higher Education Management, Yogyakarta, Indonesia e-mail: wstono@ugm.ac.id

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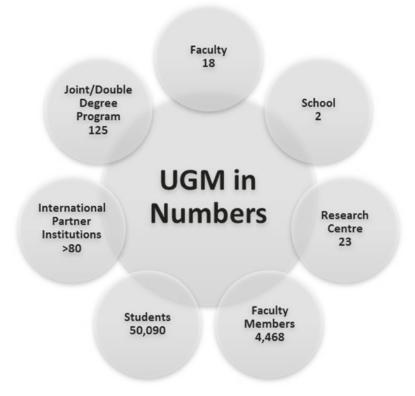


Fig. 9.1 UGM in numbers. Source Created by authors based on UGM Home Page (https://ugm.ac.id/en/node/3681-ugm-in-number)

UGM is an autonomous public research university (PTN-BH). In total, it administers 287 study programs across 18 faculties, as well as one vocational school, one graduate school, 125 double or joint-degree programs, and 23 research centers, as shown in Fig. 9.1.

As of September 2022, UGM hosts more than 50,090 students from across Indonesia, including 2,000 international students in various programs. These demographics show that UGM's institutional setting has both an Indonesian and international atmosphere. The demographic data also shows that UGM employs 4,468 faculty members, of whom 833 participated in this study.

For the purposes of this study, higher education refers to all post-secondary education, including vocational, academic, and professional education. The term university is likewise used in this document to represent all higher education institutions, including universities, institutes, polytechnics, colleges, and academies (Moeliodihardjo, 2014, 1).

Today, Indonesia's higher education system is heavily influenced by the American (Anglo-Saxon) model, except in areas such as medical and vocational education, where elements of the continental European model are maintained. Before adopting the American model in the late 1970s, Indonesia relied on the Dutch system. In colonial Indonesia (then known as the Dutch East Indies), most Indonesian students who studied abroad came from the upper strata of society. They were mostly sent to the Netherlands so they could speak better Dutch, expand their knowledge, and acquire a comprehensive understanding of the Netherlands.

After Indonesia's independence, students were first sent abroad under President Sukarno in the 1950s. Assistance came from Western agencies, primarily American agencies such as the Ford and Rockefeller Foundations, and later the United States Agency for International Development (USAID) in the 1960s. Collaboration, which included funding, scholarships, and university-to-university cooperation, gave students from various backgrounds greater opportunities to study abroad than in the colonial era and the first years of Indonesian independence. Such international studies were intended to provide the nascent nation with much-needed knowledge and skills, particularly the ability to manage its abundant natural resources.

Indonesian higher education began to grow following the enactment of the first Higher Education Law in 1961. At least twenty-three universities and other institutions were established during subsequent years (Moeliodihardjo, 2023, 2). The law also defines the mission of higher education as well as the "Tri Dharma Perguruan Tinggi," i.e., Three Pillars of National Higher Education—education and teaching, research, and community service. However, until 1995, Indonesian higher education relied primarily on foreign loans, and the move to self-sufficiency only came after the economic crisis of 1997–1998 (Moeliodihardjo, 2023, 2).

Established on 19 December 1949, as a national university, UGM is one of the oldest universities in Indonesia. For many of the years since its foundation, UGM has had the remarkable distinction of being recognized by the Indonesian National Accreditation Agency (BAN-PT) as one of the country's leading universities. It has long been competitive with betterestablished regional neighbors in Southeast Asia and is currently striving to improve its standing in the world rankings and develop a competitive higher education system to become a world-class research university (see Sukoco et al., 2021; Srirahayu, 2019). To meet these goals, internationalization has proved to be a crucial factor.

9.2 Literature Review and Conceptual Framework

As a concept and strategy for and in higher education, internationalization has evolved rapidly over the past four decades. In both developed and developing countries, study abroad is typically seen as a primary vehicle for building "global competence" (Jones & de Wit, 2012, 50). In Southeast Asia, higher education systems face problems and challenges-including balancing budgets, maintaining standards, and restructuring-in the face of global trends in funding, resources, governance, and curriculum development (Lee, 2006, 543). While there is no single model that drives internationalization, it is nonetheless still largely considered to be a process of Westernization, predominantly based on an Anglo-Saxon and English-speaking paradigm (Jones & de Wit, 2012). Not surprisingly, internationalization often involves simply mimicking Anglo-Western forms by joining the "game of global rankings" (de Wit, 2019, 10-11), emphasizing quantitative achievements, prestige, and reputation. Rather than promoting educational quality and student achievement, the focus is more on intensifying social stratification and achieving reputational differentiation as the dominant drivers (Altbach & Hazelkorn, 2017, 10).

In line with internationalization, institutions of higher education-most prominently universities-fulfill the three previously mentioned functions of education and teaching, research and publication, and social contribution. The research and education functions are two sides of the same coin: research makes a higher level of education possible, while education develops the human resources necessary for research. Recently, higher education institutions have faced increasing demands to make social contributions. Institutions must undertake social activities to ensure that accumulated knowledge is directly circulated back to society. Education, research, and community engagement are therefore interrelated missions and integral to the pursuit and provision of higher education (Nicolescu & Dominici, 2021, 16). However, while the processes and structures associated with education, teaching, and research are relatively well-defined and analyzed, this is not the case with community engagement, the third pillar of higher education (Papadimitriou, 2020, 1).

Drawing on the innovative vision of the internationalization of higher education provided by de Wit and Jones (2022), which views internationalization not as a competitive paradigm but as a global cooperative strategy, this study reports and analyzes the impact of studying abroad not only on the educational activities of UGM but also its research and community service activities. While these three functions are by no means new, there is a need to document and assess their dynamics today.

9.3 Research Method

This study employed a mix of quantitative and qualitative methods for data collection with members of faculty at UGM. Quantitative surveys were conducted twice, in 2020 and 2021. The first survey was conducted online using the SIMASTER platform, an intra-university integrated system, between 13 January and 16 February 2020. A semi-offline survey was conducted on 12 February of the same year to meet the targeted number of respondents. Between 2020 and 2021, 833 responses to the survey were received. The number of respondents by rank is shown in Table 9.1.

As Table 9.1 indicates, 47.7% of the 833 respondents were lecturers, 9.4% were full professors, 20.2% were associate professors, and

Table 9.1 Numbers of respondents at UGM by rank

Respondents	Number	Percentage
Lecturer	398	47.8
Associate professor	168	20.2
Assistant professor	82	9.8
Professor	78	9.4
Research assistant	10	1.2
Other	8	1.0
N/A	89	10.7

Table 9.2 Number of interviewees at UGM by academic cluster

Cluster	Number
Social-humanities	5
Engineering	5
Agrocomplex	5
Medicine	4
Mathematics and natural science	3

9.8% were assistant professors. Of the respondents, 695 (78.7%) had graduated from foreign institutions for their master's and/or doctoral programs. To obtain a broader understanding of the research subject and objects, data on the impact of studying abroad on the three pillars of higher education were also collected from the university's human resources unit as well as qualitative interviews with 22 scholars in four clusters, namely Science and Engineering, Health, Agriculture, and Social-Humanities. These interviews were conducted in groups, using the Zoom online platform, between 24 November and 17 December 2021. The number of interviewees by academic category is shown in Table 9.2.

A focus group discussion was conducted with 22 interviewees, which included eight female and fourteen male academic staff. By academic rank, twelve of these interviewees were professors, nine were Ph.D. graduates, and one was still pursuing her doctoral degree. Other qualitative sources from websites and observations were also analyzed to develop our findings.

9.4 Findings and Discussion

This study shows that studying abroad has both immediate and long-term impacts on UGM's three pillars of higher education, as discussed below.

9.4.1 Impact on Education-Related Activities

The questionnaire included questions on the impact of studying abroad/studying at home in relation to a range of specified academic

Questionnaire (see Note 1)	Study abroad		Study at home		t-Test (see note 2)
	n	Mean value	n	Mean value	-
Developing/revising education pro- grams	571	1.364	164	1.640	-5.660**
Developing/revising courses	571	1.387	164	1.678	-5.873**
Developing/revising teaching mate- rials	571	1.363	164	1.701	-6.790**
Adopting new teaching methods for undergraduate students	571	1.420	164	1.707	-5.449**
Conducting courses in foreign languages	571	1.651	164	2.037	-6.260**
Teaching at overseas universities	571	2.009	164	2.244	-3.050**
Initiating/implementing student exchange programs with foreign universities	571	1.732	164	2.037	-4.398**
Inviting international researchers to your university for educational activities	571	1.585	164	1.915	-5.214**
Organizing international joint educati- onal programs	571	1.790	164	2.049	-3.625**

Table 9.3 Responses to questions regarding impact on education-related activities

Note 1 * *p*<0.05, ** *p*<0.01

activities. The questionnaire asked "Do you think your study experience enhanced your skills and knowledge in dealing with the following activities?" on a 4-point Likert scale (with 1 being "very much" and 4 being "not at all").

The results of the t-test comparison between the study abroad group and the study at home group are presented in Table 9.3.

The results of the analysis show that the study abroad groups had lower means and statistically significant differences for all the questions. On average, the study abroad group reported that their study abroad experience had a more significant impact on improving their skills and knowledge to perform each of the specified activities.

Further interviews indicated that improving education programs is seen as a strategic means of undertaking internationalization at home, as discussed by Almeida et al. (2019). Interviewees gave specific examples of the impact they gained on different education and teaching activities. For example, an academic staff member in the field of International Relations (IR) who graduated from Japan stated that he had adopted his advisor's scientific tradition of multidisciplinary socio-legal analysis when teaching his UGM students. In practice, he has given his students the freedom to explore diverse theories and frameworks. This is an example of the impact of study abroad on adopting new teaching methods for undergraduate students.

Moreover, this same academic stated that being part of joint research projects with foreign partners at his Japanese university with support from the Japan Society for the Promotion of Science (JSPS) and Graduate School of International Development (GSID) of Nagoya University has helped him to gain broader knowledge and multidisciplinary perspectives for understanding the social conditions of different countries. This has helped him understand not only international relations in Western contexts but also non-Western ones, encouraging him to improve programs and courses at UGM. Such experience illustrates the entanglement between his international collaborative research experience and his teaching-related activities.

The invitation of foreign researchers to UGM was one of the most commonly mentioned activities on which they had achieved impacts as a result of studying abroad, with the establishment of cooperation with foreign universities following closely behind. For example, the Faculty of Philosophy received research grants from the German Academic Exchange Service (DAAD)-an initiative of an academic staff member who studied in Germany-to conduct cross-border collaborations with Germany, Morocco, and Tunisia. Another interviewee explained that her faculty signs memoranda of understanding with its foreign partners, thereby ensuring that lecturers with no foreign experience can be involved. Through this program, she also has taken lecturers and students overseas to provide them with new perspectives. Reflecting on the importance of studying abroad, she noted that one of her colleagues had felt offended when noticing the different views of her German partners, which she described as showing how scholars without international experience are less open to new ideas and viewpoints. In other words, she stressed that studying abroad is fundamental for helping students become more global and open.

Also at UGM, the Anthropology Department cooperated very closely with European universities, such as the University of Freiburg, with funding for various collaborations coming from diverse parties (Hidayah & Rohrer, 2023; Li & Semedi, 2021; Schlehe & Yulianto, 2020). Within this context, internationalization becomes possible for both students and lecturers.

Another of the frequently cited activities that yielded a substantial impact from studying abroad was teaching at foreign universities. For example, several lecturers at the Faculty of Law have taught at universities in Malaysia and Australia. One respondent stated that, based on his study abroad experiences, he co-teaches and co-supervises several doctoral programs in the Netherlands, Geneva, Australia, and the United States. This has created opportunities for UGM to gain global recognition. He added that trust, resources, and reliability are vital to sustainable collaboration.

Studying abroad was highly valued by the Head of the Department of Economics, Faculty of Economics and Business, Universitas Gadjah Mada. Having earned his master's and doctorate degrees from the University of York, the United Kingdom, he highlighted that studying abroad is paramount, as it is an important step toward enriching students with global perspectives.

9.4.2 Impact on Research-Related Activities

The three missions of higher education are deeply interlinked and intertwined with research and publication, as illustrated by the results on the impact on research-related activities from our questionnaire. The questionnaire survey asked about the extent to which their study experience enhanced their skills and knowledge in carrying out each activity related to research on a 4-point Likert scale (1 being "very much" and 4 being "not at all"). Table 9.4 summarizes the results of the t-test comparison of the means of the responses to the research-related activities between the study abroad and study at home groups.

The results of the analysis show that the study abroad groups had lower means and statistically significant differences for all the questions except for applying for patents. As a whole, the study abroad group reported that their study abroad experience had a more significant impact on improving their skills and knowledge to perform each of the activities. The study at home group had lower means and statistically significant differences for the question on applying for patents. This means, on average that the study at home group reported their experience had a more significant impact on improving their skills and knowledge to perform each of the question on applying for patents. This means, on average that the study at home group reported their experience had a more significant impact on improving their skills and knowledge in terms of applying for patents.

Research and publication have been key indicators for scholars' individual performance as well as institutional visibility and reputation.

Questionnaire	Study abroad		Study at home		<i>t</i> -Test (see Note 1)
	n	Mean value	n	Mean value	
Making presentations at academic conferences in Indonesia	564	1.312	159	1.522	-4.063**
Making presentations at aca- demic conferences overseas	564	1.314	159	1.717	-7.132**
Publishing articles in academic journals/books in Indonesia	564	1.427	159	1.585	-2.683**
Publishing articles in acade- mic journals/books overseas	564	1.335	159	1.767	-7.180**
Participating in international collaborative research projects with international researchers (excluding the host country where you studied)	564	1.668	159	1.956	-3.910**
Hosting international resear- chers	564	1.661	159	2.031	-5.165**
Organizing international conferences at your home university/country	564	1.640	159	1.881	-3.321**
Launching new research projects	564	1.599	159	1.811	-3.171**
Obtaining competitive rese- arch funds	564	1.684	159	1.881	-2.853**
Applying for patents	564	2.468	159	2.214	2.884**
Adopting new research super- vision methods or laboratory management systems for graduate students	564	1.741	159	1.956	-2.993**

Table 9.4 Responses to questions regarding impact on research-related activities

Note 1 * p<0.05, ** p<0.01

Table 9.5 shows the top four research-related activities with low mean scores, indicating a high impact for study abroad respondents.

In line with the results presented in Table 9.5, publications, academic presentations, workshops, and other academic activities were the most frequently mentioned in the interviews. This finding reflects the upward trends in the quantity and quality of academic papers published by UGM scholars. Such publications are central to the construction of knowledge and expected of all academics and scholars. As **Table 9.5** Top four research-related activities with low mean scores for study abroad respondents

Response	Mean score
Making presentations at academic conferences in Indonesia	1.312
Making presentations at academic conferences overseas	1.314
Publishing articles in academic journals/books overseas	1.335
Publishing articles in academic journals/books in Indonesia	1.427

4000

3500

3000

2500

mentioned previously, UGM is a public research university. As such, its drive to achieve "global excellence" means that it must achieve its goal of improving its international visibility and competitiveness. For this reason, UGM has adopted policies that reward scholars for increasing its national, regional, and international visibility. Apart from providing funding for many different research schemes, facilities such as free proofreading and post-publication rewards are potent forces that motivate individual scholars to be productive, as quantified through their publications in international indices (such as Scopus and Scimago). All of these programs have been intended to improve UGM's international standing, as shown in Fig. 9.2.

As the maxim "publish or perish" remains prominent in most universities, the importance of Fig. 9.2 is not difficult to understand. In the five years ending in May 2021, scholars at UGM published more than 10,000 articles in journals indexed by Scopus, Microsoft Academic (MA), ProQuest, EBSCO, and PubMed, including the publication of book chapters. According to the head of the Board of Publishers and Publication, the above figures only include the publications

1964

of permanent lecturers, i.e., those with employee ID numbers; in other words, they exclude the publications of other affiliated lecturers and researchers. Such publishing efforts are part of a broader attempt for the university to achieve its vision and mission of becoming a world-class university, or WCU (see WCU UGM 2023). These figures demonstrate that UGM is extending its reach to becoming a global enterprise and improving its international recognition. Academic staff with study abroad experiences have been contributing to UGM in this aspect by accelerating their research activities based on their experience.

However, as publication is a long and challenging process, the success of UGM in this aspect has also led to some expressions of cynicism, with some professors questioning the real purpose of academia. Many scholars are also aware of the publish-or-perish trap. The implementation of the 2023 National Education System Law by the Ministry of Education, Culture, Research, and Technology Ministry, with the intention of modernizing the higher education system to advance the pursuit of global excellence at the regional and national

2957

2870

2782

2000 1414 1375 1290 1500 1233 1197 1120 962 1000 283 500 189 214158 164 0 2021* 2017 2018 2019 2020 Scopus(+WoS) MA Book+Book Chapter ProQuest, EBSCO, & PubMed

2424

1922

UGM Publication Trends

Fig. 9.2. Publication trends in Scopus, Microsoft academic, ProQuest, EBSCO, & PubMed, from 2017–2021 (as of May 2021). *Source* BPP UGM 2022



3447

3317

levels, has been hotly debated. Although crucial, this topic is beyond the scope of this chapter.

Another issue concerns academic activities such as research collaboration and fundraising. As overseas graduates have broadened their horizons, they are likely to have greater opportunities to conduct innovative and collaborative research with national and international partners. For example, an academic staff member who graduated from a Japanese university continues to cooperate with the Japanese Society for Mechanical Engineers and the Japanese Society for Multifaceted Law, organizations in which his supervisor and co-supervisor had previously served as president and vice president. He mentioned that UGM's lack of essential technology was a major concern in the Faculty of Engineering. Consequently, his previous supervisors and networks in Japan were motivated to donate laboratory equipment. Another academic staff member, who did postdoctoral studies in Germany, also managed to promote innovative

research involving not only universities but also industry actors.

9.4.3 Impact on Community Service-Related Activities

Equally important is the third mission of higher education: community service. The same question asked about the extent to which respondents' study experience enhanced their skills and knowledge in carrying out community servicerelated activities on a 4-point Likert scale (1 being "very much" and 4 being "not at all").

Table 9.6 presents the results of the t-test comparison of the means of the responses to the society-related activities between the study abroad and study at home groups. The results of the analysis show that there are no statistically significant differences between the means of the two groups, except for "Contributing to international academic societies," "Contributing to joint

Questionnaire	Study abroad		Study at home		<i>t</i> -Test (see Note 1)
	n	Mean value	n	Mean value	-
Contributing to domestic academic societies	555	1.506	151	1.503	0.052
Contributing to international academic societies	555	1.706	151	1.960	-3.622**
Contributing to policy plan- ning/formulation/implementa- tion as a member of advisory committees, etc. for your government	555	2.052	151	2.073	-0.253
Contributing to policy plan- ning/formulation/implementa- tion as a member of advisory committee, etc. for internatio- nal organizations	555	2.357	151	2.305	0.576
Contributing to joint activities with domestic industrial sector		2.274	151	2.079	2.292*
Contributing to joint activities with international industrial sector	555	2.670	151	2.503	1.779*
Contributing to community development activities	555	1.823	151	1.768	0.767

Table 9.6 Responses to questions regarding impact on society-related activities

Note 1 * p<0.05, ** p<0.01

activities with the domestic industrial sector," and "Contributing to community development activities."

The study abroad groups had lower means and statistically significant differences to the item "Contributing to international academic societies," which means, on average, the study abroad group reported that their study abroad experience had a more significant impact on improving their skills and knowledge to perform this activity. On the other hand, the study at home groups had lower means and statistically significant differences to the items "Contributing to joint activities with domestic industrial sector" and "Contributing to community development activities." This means, on average, the study at home groups reported that their experience had a more significant impact on improving their skills and knowledge to perform these activities.

While the t-test analysis found statistically significant differences in the responses between the two groups on a few items, academic staff with study abroad experiences contribute to society in many ways, as indicated by the low mean values of the responses to many items. This demonstrates the significant impact of study abroad experiences on various societyrelated activities. For example, the interviews found many examples of research activities undertaken by academic staff with study abroad experiences that have been applied to provide solutions to social problems or concerns.

In Indonesia's higher education institutions, research is increasingly geared towards technological innovation and economic development. Academics are focusing more on finding "magical formulae" that will enable technology to be used for financial gain. This is true even in the social sciences and humanities, where there seems to be a desire for academics to "produce" concrete outcomes, which the STEM field can then deliver through technological innovations identified as drivers of economic growth (Udasmoro, 2020; Wahyuni and Yulianto, 2020, xv). Although the Indonesian government has prioritized STEM under the administration of President Joko Widodo, funding for university research remains limited. Nevertheless, university research-especially in STEM fields-is being prompted to better accommodate the needs of society. For instance, a year after the beginning of the COVID-19 pandemic, an associate professor of physics at UGM invented an AI-powered, breath-based COVID-19 detection device named GeNose C19 (Nurputra et al., 2022). This device provided an Indonesian-made COVID-19 breathalyzer that, while comparable to RT-PCR in terms of sensitivity, was affordable and produced results within three minutes. As the professor, who graduated from Kyushu University, Japan, explained in several public talks and interviews, these tests cost only US\$0.70-US\$1.70 each. As such, they were between 11 and 140 times cheaper than other available tests (see Fig. 9.3).

Gaining his bachelor's at UGM (1986-1991), master's at ITB (1995-1997) and Ph.D. from Kyushu University, Japan (2001-2004), Professor Kuwat has been interested in the physics of materials in chemical sensor development based on quartz crystal microbalanceessentially, an electronic nose and electronic tongue. His overseas training and support from Kyusyu University have guided him in completing his dissertation titled "Heterojunction Organic Photovoltaic Based on Phthalocyanine and Perylene." After graduation, he continued his work, including the development of a bioceramic ring, a subset of biomaterials important for patient treatment. In our interview, he conveyed how relieved and fulfilled he felt when he witnessed a patient coming out of surgery, receiving the necessary rehabilitation, and finally being able to return home from Sardjito Hospital by public bus even though the patient had arrived by ambulance. This remarkable experience demonstrates that academics should balance the three pillars of higher education and contribute meaningfully to society. There is a greater call for academics to not simply remain in their ivory tower but apply their critical thinking and production of knowledge to fulfill their social responsibility, provide community service, and define a conceptual framework for the internationalization of higher education (Jones et al., 2021).



Fig. 9.3 GeNose C19. Source UGM HP (https://ditpui.ugm.ac.id/genose/)

Another example is eLOK, a Moodle-based learning management system (LMS) developed at UGM by a female graduate of a Japanese university before the COVID-19 pandemic. In the interview, she stated that, although her studies in Japan were demanding, she appreciated that learning overseas readied her to do the "unthinkable." When she had no choice but to stay at her Japanese university without her family, she decided on an ad hoc basis to pass her time learning as much as she could in her laboratory. After graduating, among other activities, she codeveloped a local-based learning management system for UGM.

The Head of the Department of Economics, Faculty of Economics and Business, Universitas Gadjah Mada, who graduated from master's and doctorate programs at the University of York in the UK, emphasized that academics/researchers must be able to make policy recommendations that can be understood by bureaucrats and members of the broader community (i.e., mainstreaming findings), equipped with critical thinking skills and literary traditions gained through their study abroad experiences. Likewise, academics and researchers must be able to make politically correct policy recommendations.

9.5 Challenges and Breakthroughs

There are many obstacles and challenges to studying abroad for UGM lecturers that may require policymakers to rethink current practices and administration of the process. An example of this is the link between studying abroad and career performance.

Figure 9.4 shows the career performance of UGM academic staff who graduated from foreign universities compared to those who graduated from Indonesian universities. More than 50% of those who studied abroad have taken on managerial positions, compared to 34.5% of those who studied at home. According to the human resource unit of UGM, as of 25 October 2021, among the 1,559 of UGM's lecturers who graduated from foreign universities, at least 60% (942 lecturers) have served in managerial positions within the university, including the 22 interview partners in this study. Such an empirical basis strongly suggests that study abroad provides significant personal and professional benefits. However, although occupying a managerial position can be seen as an achievement as well as a strategic means of shaping policies at the university level, it is also seen as

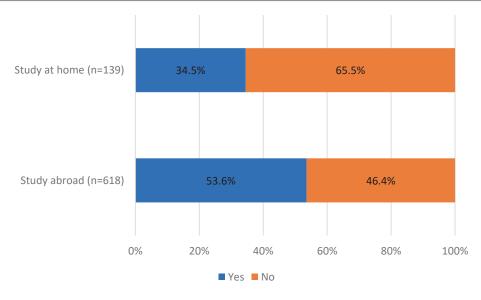


Fig. 9.4 Response to the question "Have you ever been in university managerial positions?"

a significant challenge to the sustainability of critical skills. The analytical and critical thinking skills gained by studying abroad may be eroded as staff focus on administrative tasks rather than continue to employ their cognitive capacities within the social sciences and humanities-or develop technological innovations in STEM. This alone creates a dilemma over whether overseas graduates have gained a solid return on their academic investment alongside other obstacles, including the lack of laboratory equipment and limited schemes for funding for strategic research in STEM, challenges in landing academic values from overseas in UGM's undifferentiated clusters, and the overwhelming task for each individual lecturer in managing the three Tri Dharma at once, as well as challenges for internationalization of higher education.

To address these complex issues, UGM has continued to promote progress through talent management (*manajemen talenta*), a key process for strengthening academic institutions, accelerating scientific productivity, and accelerating growth toward academic leadership. This process is aligned and synergized with the scenario of reaching the top 100 universities in the world. The objectives of the Human Resource Quality Improvement Programs are: (1) to develop a special human resource recruitment system; (2) to increase the ratio of lecturers/students; (3) to improve the quality of human resources as a whole by increasing the proportion of top scientists working at UGM; (4) to improve the quality of research.¹

9.5.1 Internationalization at Home and Overseas

In line with the above discussion, UGM also promotes internationalization through various international programs (IP) at home and abroad. IP can take the form of international exposure, international degree programs, such as programs with English-language curricula and compulsory international exposure, collaborative research projects, visiting scholarships, and independent international classes/lectures (de Wit and Jones 2023). The ongoing internationalization of UGM appears to have been primarily conducted overseas, with students and scholars being sent abroad. However, based on our qualitative interviews, internationalization has also occurred at

¹https://wcu.ugm.ac.id/faculty-member-development/.

home through international programs such as double/joint-degree programs and adopting and adapting international curricula.

As mentioned earlier, UGM offers 125 joint degrees in various disciplines, led by academic staff with study abroad experiences. An example of this is the Sociology Department at the Faculty of Social and Political Sciences. It has been partnering with the University of Melbourne in the Double Degree program on Sociology and Social Policy, offered at the master's level. Since its establishment in 2017, the program has produced 45 graduates.² As the name suggests, this double degree program is designed for students whose interests include social protection, employment, and social security, as well as social service provision or social policy/program analysis and social policy planning. After spending the first year studying at home at Universitas Gadjah Mada, students are sent abroad to gain international exposure in Melbourne for the second year of their studies.

Internationalization is also evident in UGM's participation in international accreditation programs. Accordingly, the Faculty of Economics and Business, Universitas Gadjah Mada, has been awarded and accredited by the United States Association to Advance Collegiate Schools of Business (AACSB). As proudly mentioned by the dean of the faculty, of the 15,727 business schools that are members, only 711 have received accreditation; in other words, only 4.52% of business schools under AACSB are accredited by that organization. The Faculty of Economic and Business (FEB) UGM is the eighth tertiary institution to receive AACSB international accreditation in Southeast Asia, as well as the first in Indonesia.³

9.5.2 Grounding Management and Changing Funding Scenarios for Human Capital

As internationalization continues to both reflect and exacerbate the inequalities of global society (de Wit & Jones, 2022, 142), the push-pull factors influencing the choice of destination are being shaped by the availability of funding from foreign donors (see MoECRT, 2022, in Moeliodihardjo, 2023, 9). However, as participation in foreign programs is expected to be as diverse as possible, one informant-a graduate of a Swiss university who previously served as the Dean of the Faculty of Cultural Science (FCS) and has served as Vice-Rector of Education and Learning since 2022-has made dramatic changes to sending and providing financial support to young lecturers in diverse host countries. As she put it,

Social capital is fundamental. I supported 25 FCS lecturers in doing their doctoral degrees overseas and domestically. It was fully funded [...]. I was influenced by my education in Geneva, as they use social capital to advance people. The total number of doctoral students is 57 now, and within 1.5 years they will all graduate. If there is a shortage of lecturers from other faculties, they can borrow them from FCS. If you want to study abroad at the age of 50, it's impossible to get a scholarship to Japan, that's why we paid for them to study abroad and promote social capital.

Internationalization, aimed at optimally enhancing the quality and welfare of faculty members—as seen in the above quote—is used by the Faculty of Cultural Science as both a pitfall and an exit strategy. Apart from providing fairer opportunities to potential senior lecturers who have fewer or even no opportunities to receive funding from foreign donors to pursue doctoral degrees in foreign countries, such a policy (as our informant argued) aims to broaden lecturers' international networks and diversify their foreign experiences in diverse host countries. Host countries are not only conventional Western destinations but also non-Western countries, allowing for a more balanced interplay of internationalization in higher education (Umemiya et al., 2014). Another interesting finding is that initial

²See https://sosiologi.fisipol.ugm.ac.id/program-magisterdd/.

³See https://wcu.ugm.ac.id/.

discussions have begun on the development of a new department in the Faculty of Cultural Science, Department of Asian–African Studies.

Such breakthroughs are also in line with the current Indonesian government's policy of partnership with developing countries (Kemitraan Negara Berkembang, KNB). Managed by the Directorate General of Higher Education, Research, and Technology at the Ministry of Education, Culture, Research, and Technology, this scholarship has been disbursed to 1,608 recipients from 97 countries since 2006 (Ministry of Education & Culture, 2023). Also worth mentioning is the Education Fund Management Institution (LPDP), established in 2012 as an Indonesian government scholarship. Based on data obtained from the LPDP Alumni Division, of a total of 6,435 alumni (as of the first semester of 2019), 5,942 are currently employed. An Indonesian government priority, the LPDP program is focused on developing the quality of human resources in various fields to support the acceleration of Indonesian development (Nugraha & Ardiyanti, 2020).

The Faculty of Law has likewise diversified its host countries-as well as broadening its networks and obtaining funding-for its academic staff to study abroad.⁴ Given that the Indonesian civil law system is heavily based on the Roman-Dutch model, studying other countries' legal systems is necessary to provide important references for contemporary dynamics. The current dean graduated from Nottingham University of England and has held visiting academic positions at the University of South Carolina in Columbia, the Australian National University in Canberra, Hankuk University of South Korea, and Maastricht University in the Netherlands. Emphasizing critical thinking and global openness, the dean added that 90% of newly recruited lecturers in this faculty were graduates of foreign universities. As he put it, "We have

a very strategic contribution by setting up new generations of Indonesian lawyers who are globally competitive. Now, several graduates of the Faculty of Law (not only from UGM) have filled positions or jobs in corporations and institutions in Indonesia, Malaysia, Singapore, England, and America." This provides empirical evidence of how studying abroad has been a cornerstone of efforts to internationalize or globalize higher education.

9.6 Conclusion

In summary, the above findings indicate that faculty members' study abroad experiences have positively impacted their diverse teaching, research, and community service-related activities in a variety of ways after returning to UGM. With regard to education and research-related activities, faculty members who studied abroad reported that their study abroad experience had a greater impact in promoting all the activities presented except for one activity compared to faculty members who had studied at home. UGM has seen a significant increase in the promotion of research activities and the number of research papers published in recent years. While these activities are essential for UGM to enhance its status as a research university, faculty members who studied abroad have made a significant contribution to UGM's development in this aspect by promoting international joint research and taking advantage of their connections with their host universities and academic advisors.

Community service-related activities have also been impacted in various ways. The Indonesian government and UGM have a policy for promoting the idea that faculty members' research activities should not be limited to the university but are useful in solving issues that Indonesian society faces. Several faculty members with study abroad experiences have applied the results of their research to solve issues in Indonesian society, as discussed in this chapter.

There are also challenges. The percentage of faculty members with study abroad experience

⁴For further reading, see Simarmata (2020, 19–48), who critically argues that European legal tradition, with its doctrinal approach, has dominated legal scholarship in Indonesia.

who hold administrative positions is higher than those who earned their degrees domestically. While this can be seen as a result of the high evaluation of their study abroad experience, it is also a factor that prevents them from having sufficient time to continue their research activities after returning to their home university. The challenge is how to strike a balance between the two, and UGM is trying to address this issue by developing various human resource management strategies.

In addition, like other universities, UGM must promote internationalization to raise the level of its education and research. The network of faculty members who studied abroad plays a significant role in this process. Finding ways to utilize this network to promote internationalization and the development of the university presents both a major challenge and opportunity for UGM. In terms of UGM's strategy to realize the challenges of internationalization, attempts to diversify host countries as well as optimize the immediate and long-term effects of internationalization suggest that there is a growing awareness that internationalization must no longer remain limited to Western paradigms but promote a global cooperative strategy.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Wahyu Supartono has been the Head of the Master Program of Higher Education Management, Graduate School of Universitas Gadjah Mada, since 2017. He obtained a bachelor's degree in Food Sciences at the Faculty of Agricultural Technology at Universitas Gadjah Mada, then went on to complete a doctoral degree in Food Quality Analysis at the University of Hohenheim, Stuttgart, Germany. His work on higher education management began after attending the University Staff Development Course, organized by the Institute of Social Sciences, University of Kassel, in 2002. He served as an Indonesian Representative at the Asia-Europe Meeting (ASEM) Higher Education in Bonn in 2008.

Hermin Indah Wahyuni is a Professor in the Communication Science Department at the University of Gadjah Mada. She is a Former Director of the Center for Southeast Asian Social Studies (CESASS) at Universitas Gadjah Mada (2015–April 2023). She completed her bachelor's and master's degrees at the University of Gadjah Mada in Communication Science and Political Science, respectively. She continued her studies at Leipzig University and obtained her doctorate in 2006. Her research interests lie in communication from a cybernetics perspective, systemic approaches, ecological-environmental communication, and public communication. She has been serving as the Indonesia country representative for the Asia Media Information and Communication Center (AMIC) since 2014 until the present.

Vissia Ita Yulianto is, by training, a socio-cultural anthropologist. She is a researcher at the Center for Southeast Asian Social Studies (CESASS), teaches at the Double Degree Program of Sociology and Social Policy, as well as the Magister Management of Higher Education, Universitas Gadjah Mada. She is currently an exchange Associate Professor at National Chengchi University, Taiwan (2022–2024). Her main areas of expertise are postcoloniality, cultural studies, and Southeast Asian studies. She gained her Ph.D. from Albert-Ludwigs-Universität, Freiburg, Germany.

Naoki Umemiya, Ph.D., is a Professor at the Center for Global Education and Discovery, Sophia University, Japan. Prior to his current position, he served as Deputy Director General, Human Development Department, JICA, overseeing JICA cooperation projects in higher education, JICA expert for the Malaysia-Japan International Institute of Technology (MJIIT), and JICA expert for the ASEAN University Network/Southeast Asian Engineering Education Development Network (AUN/SEED-Net) in Thailand. He holds an M.Ed from Harvard Graduate School of Education and a Ph.D. from Tokyo Institute of Technology. He specializes in comparative and international education. He is a Visiting Professor at Tokyo Institute of Technology.

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Part IV Impacts of Faculty Study Abroad on Higher Education in Vietnam



10

The Internationalization of Higher Education in Vietnam: Impacts of Study Abroad Programs

Thuy Anh Nguyen

Abstract

This chapter focuses on the internationalization of higher education in Vietnam, specifically examining the impacts of study abroad programs at the national and institutional levels. It is divided into three main parts. The first part provides an overview of Vietnam's higher education system, highlighting its historical transitions and current status. The second part explores higher education internationalization at the national level, discussing key events, policies, and legal documents that have shaped the internationalization process in Vietnam. It analyzes the rapid growth of outbound and inbound staff and student mobility, examining the impacts of study abroad on international publications, university rankings, and the development of international programs and universities. The third part focuses on the institutional factors, using Vietnam National University, Hanoi (VNU), and Hanoi University of Science and Technology (HUST) as case studies. Each case study follows a similar structure,

starting with an overview of the university and its development strategy, followed by a discussion of staff and student mobility and its effects on international publications, rankings, and international joint programs. The chapter concludes with the main findings from interviews conducted with leaders and managers of the respective universities. Finally, Part 4 presents a summary of the main findings from the chapter.

Keywords

Internationalization · Higher education · Impact of study abroad · Education policies · Vietnam

10.1 The Development and Current Status of Vietnam's Higher Education

10.1.1 The Development of Vietnam's Higher Education

Vietnamese higher education has undergone significant transitions throughout its history. These transitions can be divided into four periods: the feudal period (1076–1885), the French colonial

T. A. Nguyen (🖂)

Faculty of Political Economy, VNU University of Economics and Business, Hanoi, Vietnam e-mail: thuyanh@vnu.edu.vn; maichithuyanh@gmail.com

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period (1885-1945), the 1945-1986 period, and the Doi Moi period (1986-present). The Van Mieu Quoc Tu Giam, established in 1076, served as Vietnam's first national university focusing on Confucianism. During the French colonial period, the education system followed the French model, training a small elite class. Modern higher education was introduced in 1906 with the establishment of Indochina University. Following the revolutionary struggle and liberation war, North Vietnam adopted the Soviet model, while the South followed the American model for higher education. After the end of the war in 1975, all colleges and universities were merged into one system. The Doi Moi policy, implemented in 1986, brought significant reforms to the higher education system, especially in 1993 and 1994 (Central Committee of Party, 1993). Table 10.1 illustrates the national education policies before and after Doi Moi in Vietnam.

As outlined in the 2018 Higher Education Law, Vietnam's higher education system consists of public and private institutions offering bachelor's, master's, and doctoral programs. These institutions can be categorized as either researchoriented or application-oriented based on their capacity and socio-economic needs (National Assembly, 2018). In 1993, the government-initiated reforms to transform the monodisciplinary higher education system into a multidisciplinary one by merging existing institutions. Also in 1993, the establishment of private educational institutions was permitted, resulting in a significant increase in the number of private universities. As of 2020, there were 65 non-public universities compared to 30 in 2000 (Table 10.2).

Table 10.1 National policies on education before and after Doi Moi in Vietnam

Before Doi Moi	After Doi Moi
 Education was a part of the cultural and ideological revolution Education was to meet the needs of the state, especially for manpower training 	 Education and training are the top-priorities nationally Education development is to meet the needs of a multi-sector market economy and the process of industrialization and modernization
 Investment in education was not an investment in development 	 Investment in education is one of the principal direc- tions of investment for development
 All forms of education were state-owned No private education institutions 	 Diversification of educational types Diverse development of semi-public, private, international institutions alongside public ones
 Implementation of the "closed door" policy in education Integration of traditional values and socialist values 	 Implementation of the "open door" policy in education in accordance with: +Globalization + Common international values + Traditional cultural values
 Monodisciplinary and theoretical academic higher education 	 Expanding the scale and diversity of higher education Higher education must meet social and labor market needs
- The education system followed the model of the Soviet Union	 Rebuilding the education system according to the international model
 Education management was based on the centralized bureaucratic model 	 Innovating education management with modern concepts: decentralization, democratization, and modernization Increasing autonomy and accountability of education institutions

Source Adapted from Tran (2012)

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Univer- sity/Year	2000	2005	2017	2020
Public	148	243	170	172
Non-pu- blic	30	34	65	65
Total	178	277	235	237
Number of stu- dents	899,500	1,387,000	1,772,137	1,672,881

Table 10.2 Number of higher education institutions in Vietnam

Source Data of 2001, 2006 collected from General Statistics Office's website; data of 2017, 2020 collected from MOET's website

10.1.2 The Current Status of Vietnam's Higher Education

Over the past two decades, higher education reform in Vietnam has been considered crucial for achieving the country's development objectives. Recognizing the role of higher education as an incubator for innovation and human resource development, the government has implemented various plans, projects, and policies to reform the system (ADB, 2008). The Strategy for Educational Development 2001-2010 outlined specific goals, such as meeting the demand for high-quality human resources, enhancing competitiveness, expanding higher education, and empowering the workforce (Prime Minister of Vietnam, 2001). In 2004, Decision No. 1269/CP-KG designated a group of 14 institutions as "key universities," aiming to transform them into larger comprehensive universities (Government of Vietnam, 2004). This departure from the Soviet-influenced model of specialized institutes and colleges allowed for greater diversity and provided a way to meet the population's growing demands for higher education (Hayden and Lam, 2007).

Higher education in Vietnam has made significant advancements in recent years, with a considerable increase in students. In 2020, there were 1,672,881 higher education students, almost double the figure in 2000 (Table 10.2). The participation rate of the relevant age group (18–24 years old) has also risen from 2% in 1991 to 28.64% in 2021, with a target of 33% by 2030 (Hayden & Lam, 2010; MOET, 2021). The number of higher education institutions has grown from 178 in 2000 to 237 in 2020, comprising 172 public and 65 non-public institutions (Table 10.2). As of 2020, there were 73,132 teaching staff members in higher education institutions, resulting in a student/teacher ratio slightly higher than the targeted ratio of 20:1. However, the number of teaching staff has significantly increased compared to previous years, reflecting the growth of the sector (Tables 10.2, 10.3, 10.4).

More than fifteen years ago, the most common qualifications possessed by teaching staff in Vietnam were master's and bachelor's degrees, with only 12.43% of staff members having a doctoral degree in 2005 (Table 10.4). However, in recent years, thanks to the government's policies to improve the quality of teaching staff and increase the number of doctorates through various scholarship schemes (discussed in the next section), the percentage of staff members with doctoral degrees has significantly increased to 30.05 percent in 2020, while only 8.95% of lecturers have college or bachelor degrees as their highest degree. This ratio is expected to reach at least 37% in 2030, as identified in the Education Development Strategy for the period of 2021-2030, with a Vision to 2045 (MOET, 2021).

10.2 Vietnam's Higher Education Internationalization: National Level

10.2.1 Strategies and Policies for Internationalization of Higher Education

As a strategy for the development of higher education, internationalization has been incorporated into several policy documents at both the national and institutional levels (MOET, 2021; VNU, 2014, 2021b), as well as a number of academic papers (Nguyen, 2009; Ryu & Nguyen, 2021; Welch, 2010). However, this has not led to a widespread understanding

	Criteria	2021	2025	2030
Access to education	Number of university stu- dents/10,000 people	185	200	230
	Percentage of students in the population aged 18–24	28.64%	30%	33%
	Percentage of employed workers with university degrees	10.82%	12%	14%
Quality assurance	dents/10,000 people28.64%Percentage of students in the population aged 18–2428.64%Percentage of employed workers with university degrees10.82%Percentage of university faculty with PhD degrees28.8%Number of domestically accredi- ted academic programs388Number of academic programs 	28.8%	32%	37%
	5	388	1,000	2,000
	accredited under international	212	500	1,000
Quality	with university degreesPercentage of university faculty with PhD degrees28Number of domestically accredi- ted academic programs38Number of academic programs21accredited under international standards (ABET, AUN-QA)80Percentage of university graduates with jobs that match qualifications80Scientific publications Publishing rate of scientific articles/lecturerScientific 0.0Ratio of intellectual property/0.0	80%	90%	90%
	Publishing rate of scientific	Scopus 19888ISI 7502 (WEB)/73,132 lecturers = 0.375 articles	0.85 articles	1.7 articles
		0.04	0.1	0.37
	International students studying in Vietnam's education programs	0.94%	1.2%	1.7%

Table 10.3 Current and future benchmarks in Vietnam's higher education

Source Adapted from MOET (2021)

Year	1987	2000		2005	2005		2017		2020	
	No	No	%	No	%	No	%	No	%	
Faculty members	19,800	30,309		47,646		75,762		73,132		
Doctorate	-	4,400	14.17	6,200	12.43	16,634	21.96	21,977	30.05	
Master	-		25,04		32.26	45,386	59.90	44,119	60.32	
College, Bachelor			59.32		54.24	13,628	17.99	6,543	8.95	
Other			1.47		1.07	114	0.15	493	0.67	

Table 10.4 Number and highest qualification of Vietnamese faculty members at higher education institutions

Source Compiled by author from MOET (2008), Tran (2012) and MOET (2021)

of the internationalization concept within the Vietnamese educational context. Generally, the internationalization of higher education in Vietnam is interpreted as an enhancement of international and regional cooperation and integration in the field of higher education. In some policy documents, however, internationalization is understood and referred to as the integration of international dimensions into the curricula or the establishment of international education programs, the striving for international standards, rankings and recognition, the enhancement of international cooperation, and the promotion of staff/student mobility, among other activities (Nguyen, 2009; Ryu & Nguyen, 2021).

Table 10.5 lists the milestone policies and legal documents for Vietnam's internationalization of higher education. Among the most important policy frameworks for the country's tertiary education improvement in general and its internationalization in particular are the Vietnam Higher Education Renovation Agenda Period 2006–2020 (HERA), the Pilot Renovation of the Operation Mechanism of Public Tertiary Education Institutions during 2014–2017, the Strategy for Education Development in the Period of 2021–2030, and Vision 2045. The Vietnam Higher Education Renovation Agenda (HERA), implemented from 2006 to 2020, aimed to bring about fundamental changes in quality and scale within the higher education system. The agenda sought to meet human resource requirements for socio-economic development, enhance international competitiveness, upgrade universities to international standards, and contribute to the country's economy (MOET, 2005). Proposed solutions included developing an international integration strategy,

Table 10.5Important events, strategies, and policies with impacts on the internationalization of higher education inVietnam since 1986

Year	Events
1986	Introduction of market economy Implementation of Open-door policy Third Education Reform
1991	Multilateralization and diversification of international relations
1992	Board of Minister's Instruction on sending Vietnamese citizens abroad for training in new circumstances
1999	MOET's regulations on foreigners studying in Vietnam
2000	Project 322: "Training Scientific and Technical Cadres in Institutions Overseas with the State Budget"
2001	Strategy for Educational Development 2001–2010
2005	Education Law Vietnam Higher Education Renovation Agenda Period 2006–2020 (HERA)
2007	Vietnam becomes the 150th WTO member
2008	Project 165: "Training, Fostering Leaders and Managers using the State Budget"
2009	Project 911: "Training lecturers with doctoral degrees for universities and colleges for the period of 2010–2020"
2011	Socio-economic Development Strategy (2011–2020) (SEDS) Socio-economic Development Plan (2011–2015) (SEDP) Human Resource Development Strategy 2011–2020
2012	Higher Education Law 2012 Strategy for Education Development in the period of 2011–2020
2013	Project 599: "Training Cadres Overseas by the State Budget Period of 2013-2020"
2014	Pilot Renovation of the Operation Mechanism of Public Tertiary Education Institutions during 2014–2017
2018	Higher Education Law (86/2018/ND-CP) Decree on International Cooperation, Investment in the field of education
2019	Education Law 2019 Project 89: "Enhancing Competencies of Lecturers and Administrators of Higher Education Insti- tutions Meeting Requirements for Radical Changes in Education and Training During the Period of 2019–2030"
2022	Strategy for Education Development in the period of 2021–2030, Vision 2045 Building "Strategic Framework for Higher Education Development in the Period of 2021–2030, Vision 2045"

Source Compiled by author

promoting student and faculty exchange programs, ratifying regional conventions on education recognition, and establishing overseas training centers (MOET, 2005).

In 2014, the Government of Vietnam (2014) introduced Resolution No. 77/NQ-CP for the Pilot Renovation of Public Tertiary Education Institutions. Twelve universities were chosen to implement financial autonomy mechanisms, and by the end of the academic year 2016–2017, 23 public higher education institutions were participating in pilot autonomy schemes. While the pilot autonomy mechanism reduced state management and introduced market mechanisms, there were challenges in terms of its legal basis, implementation consistency, conflicts of interest, and support for universities (MOET, 2022a). Nonetheless, autonomy facilitated the internationalization of higher education by diversifying financial sources and enabling cooperation with foreign institutions.

The forthcoming Strategy for Educational Development 2021–2030 emphasizes the expansion and acceleration of collaborative relations in training and research with prestigious international institutions. The strategy aims to exchange best practices, enhance educational resources, and promote international cooperation at all levels, particularly in higher education (MOET, 2021).

10.2.2 Staff and Student Mobility

10.2.2.1 Outbound Staff and Student Mobility

Since the implementation of the Open-door policy in 1986—especially from 1991, when the Vietnam Communist Party Central Committee decided on the policy of multilateralization and diversification of international relations—there has been significant growth in the number of outbound mobile Vietnamese students. Between 1990 and 2005, this number increased by 22.4 times from 1,139 to 25,505 (MOET, 2005). Statistical data on the number of Vietnamese students studying abroad at the undergraduate level from 1999 to 2021 show a similar picture of the flows, in which this number increased sharply from nearly 10,000 students in 1999 to more than 137,000 students in 2021, as shown in Fig. 10.1.

Table 10.6 shows the variety of destination countries for Vietnamese students studying abroad. Accordingly, Japan has hosted the highest number of Vietnamese students, with 49,469 in 2021, followed by Australia, the USA, Canada, Korea, and China. Besides these destinations, countries such as Singapore, the UK, France, Russia, Taiwan, Germany, and New Zealand have been among the most favored countries for the overseas study of Vietnamese students in recent years.

The increase in Vietnamese students studying overseas and the range of destination options can be attributed to several factors:

Firstly, Vietnam has expanded its educational cooperation with over 100 countries and territories in the past two decades. The Ministry of Education and Training (MOET) regularly signs agreements and treaties related to degree recognition, scholarship programs, and educational cooperation frameworks, including with the European Union (EU), Asia-Europe Meeting (ASEM), and Asia–Pacific Economic Cooperation (APEC) (MOET, 2021). Foreign governments and organizations, including those from nearly 20 countries, offer scholarships to Vietnamese students, with the number increasing from about 400 per year in 2013 to 1,400 per year in 2019 (MOET, 2021).

Secondly, recognizing the need for qualified human resources, in 1992, the Vietnamese government issued Instruction No. 270/CT, which emphasized the importance of sending citizens abroad for studies to nurture human capital and meet national development needs (Board of Ministers, 1992). This instruction laid the foundation for subsequent policies on student mobility, promoting diversification in destination countries, types of training, and financial resources. As family incomes have risen and private funding options have become available,

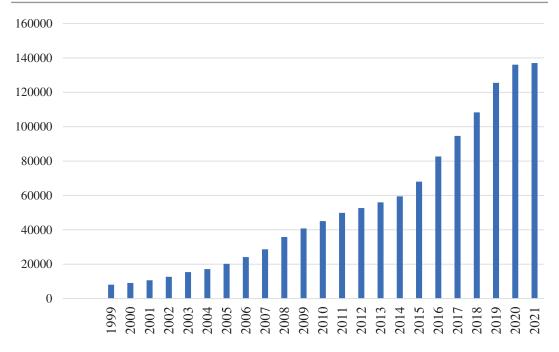


Fig. 10.1 Number of Vietnamese students studying abroad at the tertiary level from 1999 to 2021. *Source* Compiled by author using data from UNESCO Institute for Statistics UIS

more Vietnamese students are pursuing overseas studies without relying on official financial assistance.

Thirdly, the Vietnamese government has implemented various projects to train lecturers and government officers at both the national and provincial levels, contributing to increased outbound mobility. These projects, such as Projects 322, 599, 165, 911, 89, Mekong 1000, Ho Chi Minh 500, Danang 100, and Haiphong 100, have played a significant role in supporting staff and student mobility (MOET, 2021). Table 10.7 provides an overview of the most popular Vietnamese government scholarship programs. These factors have collectively driven the growth in Vietnamese students studying abroad, offering them a wider range of opportunities and destinations for their educational pursuits.

The Ministry of Education and Training (MOET) project, known as Project 322, aimed to train science and technology cadres at various academic levels in foreign institutions or in collaboration with overseas organizations. It utilized the Vietnamese Government's budget to support the country's industrialization and modernization needs. Priority sectors included telecommunications, information technology, biological technology, and new materials. Over the course of ten years, the project spent more than VND 2,500 billion and sent 4,590 individuals abroad for study (MOET, 2011).

After its expiration, Project 322 was succeeded by Project 599, which ran from 2013 to 2020. With a state budget of approximately VND 2,070 billion, this program focused on providing high-quality master's level training for lecturers, officials, and young talent in the fields of basic sciences, key sciences, technology, and special aptitude areas. Unlike its predecessor, Project 599 included a commitment requirement and financial guarantee terms. Graduates who did not return to work for the dispatching organizations or fulfill their obligations upon return were obligated to repay the funds provided from the budget (Prime Minister of Vietnam, 2013). An overview of significant programs is provided in Table 10.8.

Project 911 was a state-funded scholarship program in Vietnam initiated in 2010 to provide

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No	Destination	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	Japan	3,000	3,000	3,597	4,033	4,373	13,000	26,439	38,882	53,807	61,671	72,354	73,389	62,233	49,469
5	USA	12,823	13,112	14,888	15,572	16,098	16,579	18,722	21,403	22,438	24,325	24,392	23,777	21,631	20,713
e	Australia	15,844	23,755	25,788	23,738	22,551	26,015	28,652	28,524	31,000	19,708	29,989	24,270	25,570	21,260
4	China	9,702	10,396	12,247	13,549	13,038	13,328	13,000	13,000			11,299			
5	UK	5,000	6,000	6,000	6,000	ı	5,118	6,000	11,000	3,153	2,889	2,818			
9	Singapore	6,200	7,500	7,300	10,000	10,000	10,000	10,000	10,000						
Г	France	5,000	5,000	6,000	6,664	6,700	6,235	6,500	6,500						
×	Russia	6,000	5,000	5,000	5,000	5,000	5,000	6,000	6,000						
6	Germany	2,500	3,671	3,700	3,870	4,189	4,600	5,000	5,000						
10	Taiwan	1,200	2,000	2,000	4,000	3,706	6,000	6,000	3,715	4,086	4,774				
11	Canada	2,000	3,200	3,300	3,500	3,000	3,990	4,500	4,850	7,450	13,960	20,330	18,910		
12	New Zealand	1,124	1,527	1,910	2,157	2,158	2,150	2,200	2,500	1,505	1,695				
13	Republic of South Korea	1,817	1,787	1,914	2,325	2,447	1,800	2,000	2,000	8,293	14,614	27,061			
14	Ukraine	1,027	1,027	1,000	1,000	1,000	1,000	1,000	1,000						
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 Table 10.6
 Destination countries with over 1,000 Vietnamese students studying abroad

Source Compiled by author based on data from various sources

Level	Title	Implementing agency	Implementation period	Aims
Central	Project 322	MOET	2000–2010	To train scientific and techni- cal staff at doctoral, master, and bachelor levels
	Project 911	MOET	2010–2025	To produce 20,000 PhDs for tertiary institutions
	Project 599 (Previously MOET 322)	MOET	2013–2020	To provide overseas training and postgraduate education for government officers and talented graduates
	Program 165	Central Committee of the Communist Party	2008–2015	To provide postgraduate level overseas education for gover- nment officers and talented graduates
	Project 89	MOET	2019–2030	To provide 10% of univer- sity teaching staff with PhD degrees; ensure that 80% of lecturers at cultural, arts, and sports educational institutions have master's degrees or higher
Provincial	Mekong 1,000	Mekong Delta Region Provincial Governments	2005–2015	To provide overseas training at the postgraduate level to foster the industrialization and modernization of the Mekong Delta
	HCMC Project 500	Ho Chi Minh City	2001–2020 (Phase I, II, III)	To foster cadres with post- graduate degrees who can contribute to the development of Ho Chi Minh City
	Project 922 (Previously Danang 100)	Danang City	2004	To provide overseas training at the postgraduate level for government officers and talen- ted graduates to strengthen human resources
	Haiphong 100	Hai Phong City	2008	To provide postgraduate-level overseas education to gover- nment officers and talented students of Hai Phong City

 Table 10.7
 Summary of Vietnamese government scholarship programs

Source Compiled by author based on http://www.austrade.gov.au/ArticleDocuments/3507/Summary-table-of-VN-Govt-scholarship-programs-Oct202013.pdf.aspx

opportunities for 23,000 lecturers to pursue doctoral degrees by 2020 (Prime Minister of Vietnam, 2010). However, the project was abandoned in 2017 due to inefficiency and failure to meet targets. Only 4,024 doctoral students were successfully enrolled by 2016, accounting for a small percentage of the targets set. The lack of success was attributed to setting overly ambitious

targets without proper research, poor coordination among ministries, low funding levels, and the difficulty of recruiting suitable candidates.

Announcement No.165-TB/TW, issued by the Central Committee of the Vietnamese Party in 2008, introduced Project 165. This project aimed to enhance human resources capacity by providing overseas study opportunities for

Project 322			
Number of people sent	4,500	PhD	49.41%
		Masters	25.75%
		Interns and university bachelors	24.84%
Educational institutions	822 institutions, from 34 countries		
Expenditure	Total: Over VND 2,500 billion ≈ USD 152 million USD 33,000/student		
Project 911	1		
Types of education	Study abroad	Collaborative training	Domestic training
Number of recipients (expected)	10,000	3,000	10,000
Number of candidates selected/ year (expected)	2010–2013: 800–1,200 2014 onwards: 1,300–1,500	2010–2013: 300–350 2014 onwards: 450	2010–2015: 1,200–1,500 2016 onwards: 1500
Number of actual recipients between 2012–2016	2,926 (34% total target)	4/1,300 (0.3% total target)	2,062 (36% total target)
Total estimated cost	VND 14,000 billion		
Actual expenditure	VND 1,400 billion		
Project 89			
Number of people sent	10% of university teaching staff	Study abroad	7%
		Collaborative training	3%
Total (expected)	7,600	PhD	7,300
		Master's degree in culture, arts, and physical training and sports	300

Table 10.8 Significant Vietnamese government scholarship programs

Source Compiled by author based on data from various sources

government officials and talented graduates. By 2014, the project had facilitated the training of 621 cadres, with a significant number studying abroad and others completing programs domestically or participating in short-term courses (Central Committee of Party, 2008).

The most recent state-funded scholarship scheme, Project 89, was established in 2019 to train doctoral degrees for around 10% of university lecturers and improve the quality and structure of education. The project also aimed to attract scientists and PhDs to work in Vietnamese higher education institutions, enhance the skills of university administrators, and improve the overall capabilities of lecturers. It introduced several new aspects, including institutional autonomy in selecting participants and managing funds, as well as collaboration with prestigious foreign partners (Prime Minister of Vietnam, 2019).

At the provincial level, projects like Mekong 1000, Ho Chi Minh City Project 500, Danang 100, and Hai Phong 100 were implemented to train local officers and scientific and technical cadres abroad. These projects aimed to promote industrialization and modernization in specific regions of Vietnam by offering opportunities for staff to study at the master's and doctoral levels in various disciplines. Overall, these state-funded scholarship programs in Vietnam have been initiated to strengthen the country's human resources capacity, enhance education and skills, and promote regional development.

10.2.2.2 Inbound Staff and Student Mobility

Besides sending students abroad, Vietnam has also been hosting international students. Especially in the last few years, the number of foreign students has significantly increased in Vietnamese higher education institutions, both in exchange and degree programs, as shown in Fig. 10.2. In 2008, MOET set a target number of 15,000 foreign students by 2020. In order to reach this target, MOET and Vietnamese higher education institutions have made substantial efforts to increase the attractiveness of the system generally and each individual institution particularly.

Vietnam ranks first in ASEAN for sending students abroad to study, but the number of international students in Vietnam is relatively low at 0.3% (Nguyen, 2021). From 2016 to 2021, over 45,000 foreign students from 102 countries studied in 155 Vietnamese educational institutions. Most joined university-level short courses, with a modest number pursuing master's and doctoral degrees. The majority of international students come from Laos and Cambodia, followed by students from countries like China, Korea, France, and Japan. Staff and student mobility have positively impacted Vietnam's academic and socio-economic development, leading to increased international publications and university rankings. Studying abroad has also contributed to the growth of Vietnam's education sector and its competitiveness on a regional level. It is projected that the ratio of international students in Vietnamese academic programs will reach 1.7% by 2030 (Table 10.3).

10.2.3 International Publications and Rankings

In recent years, Vietnam has made great efforts to boost its contributions to international publications and rankings, considered essential to

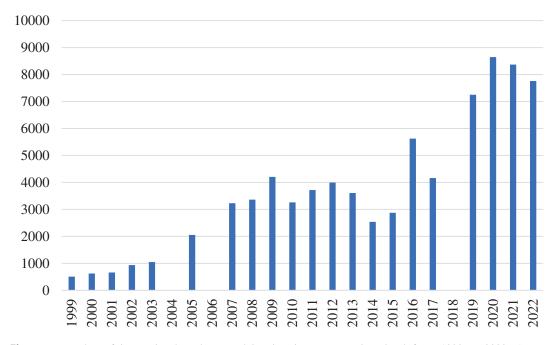


Fig. 10.2 Number of international students studying in Vietnam at tertiary level from 1999 to 2022. Source UNESCO Institute for Statistics UIS

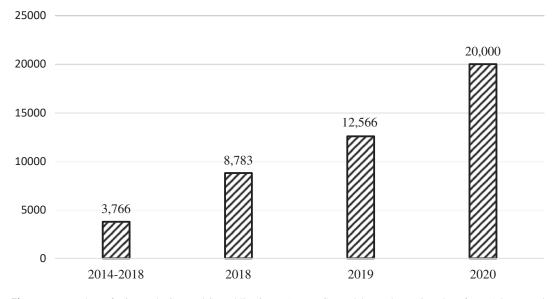


Fig. 10.3 Number of Vietnam's Scopus/ISI publications. *Source* Created by author using data from Adams et al. (2019), MOET (2021)

internationalizing the country's higher education (Prime Minister of Vietnam, 2012; MOET, 2021). Before 2010, Vietnam's international publications were limited, far behind other countries and universities in the region. However, as Fig. 10.3 shows, over the past ten years, the number of Vietnamese scientific articles published internationally has increased by an average of 20% per year, reaching the rank of 49th in the world in 2020. The country is now in the high-middle group of Asian countries (Nguyen, 2021; Nguyen et al., 2020).

Therefore, in terms of quantity, Vietnam has made significant achievements, and according to Adams et al. (2019), the country has increased its indexed publication volume more than five-fold since 2009. However, the quality of international publications has not improved as impressively. Between 2009 and 2019, the citation index of Vietnam's ISI publications has remained stationary compared to other Asian countries (Nguyen, 2021). Vietnam is therefore aiming to realize a dramatic improvement in the quality of scientific research in higher education institutions, focusing on the connection between training and scientific research, especially at graduate levels. It is expected that scientific publications, especially publications in prestigious international journals, will reach the ratio of 0.85 articles per lecturer and 1.7 articles per lecturer by 2025 and 2030, respectively, compared with the current ratio of 0.375 articles per lecturer in 2021 (MOET, 2021).

Improvements in international rankings are another important aspect of internationalization that Vietnam's higher education has been aiming at. In 2018, for the first time, Vietnam had two universities, Vietnam National University (VNU) and VNUHCM, ranked in the top 1000 best universities in the world, according to the 2019 QS World University Rankings. In 2021, five Vietnamese universities entered the list of the world's top universities, according to various prestigious university rankings. These higher education institutions include: VNU, VNUHCM, and Hanoi University of Science and Technology (HUST), ranked in QS2021 and Times Higher Education (THE); Ton Duc Thang University in both THE and the Academic Ranking of World Universities (ARWU); Duy Tan University in THE and ARWU. Vietnam has established the goal of having at least ten higher

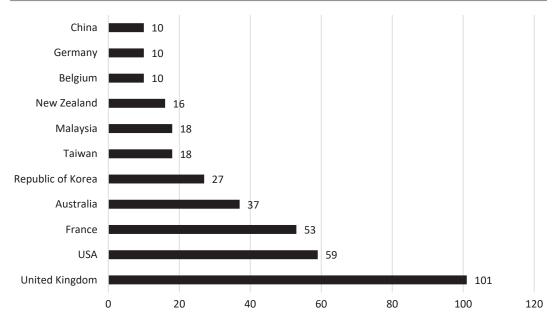


Fig. 10.4 Distribution of international programs (by Country). Source MOET (2022b)

education institutions ranked among the top 500 Asian universities by 2030, and that Vietnam will boast one of the four best university systems in the ASEAN region (Le, 2022).

10.2.4 International Programs and Universities

In recent years, Vietnam has developed international programs and universities that are supposed to significantly boost academic quality, broaden options for language of instruction, diversify its fields of study, and attract more international students.

As of December 31, 2021, there were 408 joint training programs, of which 186 programs were approved by autonomous universities, and 222 programs were approved by MOET (2022b). These programs were implemented by 85 Vietnamese higher education institutions in partnership with universities from 26 countries, among which the United Kingdom was the top country with 101 programs (Fig. 10.4). With regard to the levels of education, out of 408 international programs, 282

were undergraduate (69.1%), 106 were masters (26%) and 20 were doctoral programs (4.9%) (Fig. 10.5). Economics and business, and science and engineering are the most popular fields of study, accounting for 64% and 25% of the total international programs, respectively. The other program majors were social sciences and humanities (Fig. 10.6).

Between the years 1988 and 2022, there were 605 foreign direct investment projects in education from 33 countries, with registered investment capital amounting to over USD 4.5 billion (MOET, 2022b). According to MOET, 13,008 students are now studying at five universities that have received foreign investments, accounting for 0.68% of the total number of students in Vietnam (MOET, 2022b). Besides the classical international programs and universities (Ryu & Nguyen, 2021), in recent years, Vietnam has developed a new type of international higher educational institution, known as the "binational" university. So far, three universities of this type have been established and implemented through agreements between two national governments: Vietnamese German University (VGU), University of

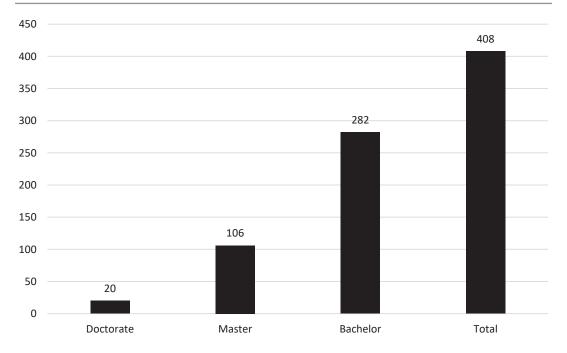


Fig. 10.5 Training levels of international programs. Source MOET (2022b)

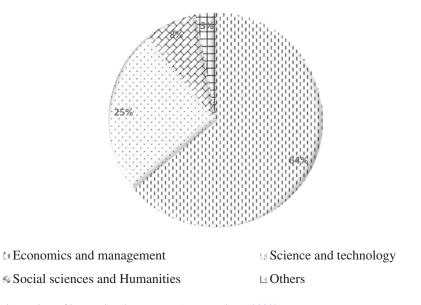


Fig. 10.6 Training majors of international programs. Source MOET (2022b)

Science and Technology of Hanoi (USTH or Vietnam France University), and Vietnam Japan University (VJU). Although these binational universities are expected to advance the quality and recognition of Vietnam's higher education, there have been questions and problems regarding the management model, as well as the efficiency and sustainability of this university model during the implementation and operation process.

10.3 Vietnam's Higher Education Internationalization: Institutional Level

10.3.1 The Case of Vietnam National University, Hanoi (VNU)

10.3.1.1 Overview of VNU

Vietnam National University, Hanoi (VNU) is the first modern university in Vietnam, with a history dating back to the University of Indochina in 1906. It was formed through the merger of three major universities in Hanoi in 1993. As a leading national university, VNU holds a special position in Vietnam's higher education system and enjoys high autonomy in various areas. VNU consists of 37 affiliated members, including universities, schools, research institutes, and service units, all working together to enhance education, technology, and services (Government of Vietnam, 1993; VNU, 2009, 2022).

According to VNU's statistical data, the university has 5,190 staff members, including 2,739 academic staff. Among the total staff members, 1,691 are Doctors of Philosophy and Doctors of Science (Table 10.9).

Currently, VNU offers 506 training programs of all levels, including 190 undergraduate programs, 198 master's programs, and 118 doctoral programs (Table 10.10). At the present time, VNU has 64,864 students, among whom 51,012 are undergraduate and 6,773 are graduate students. Notably, VNU is now hosting 994 international students from different countries (Table 10.9).

10.3.1.2 VNU'S Development Strategy

VNU's mission, according to the Development Strategy up to 2030, Vision 2045, is to produce high-quality human resources, promote science and technology, and pioneer the reform of Vietnam's higher education system. With core values of innovation, national responsibility, and sustainable development, VNU aims to become a leading interdisciplinary research university in Asia and the world by 2045 (Table 10.11).

2,739 Academic staff Professors 66 Associate Professors 490 Doctors of Philosophy and 1,691 Doctors of Science Students Students 64,864 Secondary and High School 6,085 Students Undergraduate Students 51,012 Graduate students 6,773

Table 10.9 VNU statistics on staff and students

Staff

Source VNU (2023)

Staff

Note The total in the staff row represents the sum of the academic staff and the administrative staff. Because some academic staff also hold administrative positions, they are counted twice in the sub-totals but not in the staff row total

International students

Table 10.10 VNU training programs

190
198
118

Source VNU (2023)

Internationalization is a key focus for VNU, with the aim of achieving international recognition and higher university rankings. The university's objective is to be ranked among the top 300 universities globally by 2030, focusing on human resources, science and technology, and international reputation.

Previously, VNU did not explicitly define or use the term "internationalization" in official documents. Instead, terms like "international cooperation" and "international integration" were commonly used to describe activities involving foreign elements. These activities included establishing international relationships, implementing joint training programs, striving for international standards and rankings, promoting international publications, and facilitating student and staff mobility (Nguyen, 2010). While VNU lacked a specific

5,190

994

Mission	Producing high-quality human resources and cultivating talents
	Promoting advanced science, technology, renovation and knowledge transfer
	Playing the role of a pioneer in the reforming of Vietnam's higher education system
Vision 2045	To be one of the leading interdisciplinary, multidisciplinary research and innovative universities in Asia and the world
Core value	Innovation—National Responsibility—Sustainable Development
Motto	Excellence through Knowledge

Table 10.11 VNU's mission, vision, core values and motto

SourceVNU (2021b)

Table 10.12 VNU's current and targeted internationalization indicators

Criteria	Current index (%)	Target 2025 (%)	Target 2030 (%)
International Students Percentage of international students (certificate level, short-term exchange, full-time study) divided by total number of students	2	10	15
International Lecturers Percentage of international lecturers (teaching at least 1 subject or have teaching/research time at the university for at least 3 consecutive months) divided by total number of lecturers	7	10	15
International Cooperation on Research ISI/SCOPUS publication rate with international cooperation	67	70	75

Source VNU (2021b)

internationalization strategy, it actively promoted various aspects of internationalization through different strategies, plans, and activities. In 2014, VNU introduced criteria to measure internationalization based on the number of incoming and outgoing students and staff involved in exchanges and academic activities (VNU 2014).

In the past, VNU used the term "internationalization" within the context of "international integration" to increase the level of internationalization in specific training programs (VNU 2014). This indicates a limited understanding and application of the term in official documents. However, in the 2021 Development Strategy, VNU sets concrete targets for international student and teaching staff recruitment, as well as the promotion of international publications. By 2030, VNU aims to have 15 percent of international students and lecturers, compared to the current 2%. Additionally, VNU seeks to increase the ISI/SCOPUS publication rate with international cooperation from 67 to 75 percent by 2030 (Table 10.12).

10.3.1.3 Staff and Student Mobility

VNU recognizes the importance of upgrading the skills, knowledge, and qualifications of its staff and faculty to improve teaching, learning, and research quality. Various policies have been implemented to facilitate this. For instance, VNU offers favorable conditions for faculty members and staff to study abroad through statefunded scholarship schemes like Projects 322, 911, and 165, as well as through other sources of financial support. Lecturers can take a leave of absence to pursue further studies overseas while retaining their tenure. Over the years, opportunities for studying abroad have increased for VNU staff and students. Between 2013 and 2018, 4,242 VNU teaching and administrative staff went abroad for research, teaching, or advanced programs, with 603 individuals in 2017 alone (Table 10.13). Additionally, VNU hosts an average of 500 foreign lecturers, researchers, and staff members each year who come to the university for teaching, research, or collaborative work.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
VNU academic staff going abroad to lecture, study, or do research	1,320	973	995	351	603	-	-	-	-	-
Foreign academic staff coming to VNU to do research, work or study	702	439	481	414	465	-	-	-	-	-
Outgoing VNU students (study & exchange)		144	440	374	577	-	-	-	124	10
Incoming foreign students (study & exchange)	978	1,079	1,273	1,050	1,163	-	1,163	819	994	994

Table 10.13 Statistical data on VNU staff and student mobility

Source Compiled by author based on data provided by VNU's cooperation and development department 2018; VNU (2021a), (2022)

VNU has shifted its focus from staff mobility to student mobility in recent years as part of its internationalization efforts. The number of VNU students studying abroad, particularly through exchange programs with foreign institutions, has been steadily increasing since 2014. VNU has signed numerous Memorandums of Understanding (MOUs) with partner universities, primarily in Asia and Europe, which include provisions for student exchange activities. These activities are seen as crucial for enhancing international rankings and driving the development of training programs in foreign languages, innovative teaching methodologies, and digitized training management. Despite travel restrictions during the COVID-19 pandemic, VNU accommodated 802 international students and 157 staff and lecturers in face-to-face and online exchange programs in 2021–2022 (VNU, 2021a).

10.3.1.4 International Publications and Rankings

VNU prioritizes international publications as a key strategy for advancing internationalization and enhancing its reputation as a leading national university. Each affiliated university within VNU focuses on improving the research capabilities of its faculty members. By the end of 2023, VNU had achieved 11,585 science and technology products, of which 11,477 are scientific articles published in ISI and Scopus-indexed journals, and the other 108 are inventions and utility solutions (VNU, 2023). In recent years, VNU has seen a significant increase in international publications in the fields of economics, business, and social sciences, in addition to the traditional dominance of natural sciences. Among the VNU member universities, Hanoi University of Science, an established institution, had the highest number of international publications, followed by the active and relatively new member university, the International School (Fig. 10.7).

This is the result of strategic investments in laboratories, the establishment of research groups, and policies that incentivize faculty to publish internationally. VNU provided financial support for 141 international publications in 2021, rewarding authors who published in prestigious journals or ISI/Scopus-indexed journals (VNU, 2021a) (Table 10.14).

VNU has implemented various policies to support faculty members' research and teaching activities. Lecturers exceeding the research productivity norm can reduce their mandatory teaching hours by up to 50%. Special financial support is available for non-funded projects, and remote work options have been introduced. Furthermore, researchers who exceed the research hours norm receive additional financial support (VNU, 2021a).

The university has also prioritized the support and recognition of young scientists. Financial assistance is provided for young scientists' nonfunded articles published in Q1 or Q2 journals. Basic science researchers employed by VNU

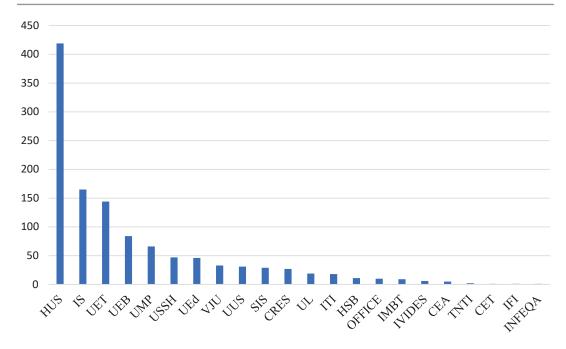


Fig. 10.7 Number of VNU Publications as shown on ISI/SCOPUS by Member Units in 2023 (by September 2023). *Source* Created by author using data from VNULIC website: https://lic.vnu.edu.vn/news/cong-bo-quoc-te-dhqghn-thang-92023

for less than five years are ensured a minimum monthly income of 15 million VND (VNU, 2022).

As noted above, VNU's objective is to be listed among the top 300 universities globally by 2030. The university has made significant progress in international rankings. In 2022, VNU received the Recognition of Improvement Award from QS World University Rankings, and it ranked 162nd overall, placing in the top 21.3% of Asian institutions and 36th in Southeast Asia. Several disciplines, including Mathematics, Physics and Astronomy, and Business and Management Studies, were ranked No. 1 in Vietnam (VNU, 2022). In Times Higher Education (THE) rankings, VNU maintained its position in four subjects and added two more subjects to its ranking (VNU, 2022).

10.3.1.5 International Joint Programs

VNU has actively promoted international joint training programs since the 2000s. As of 2021, there were 26 such programs, comprising ten bachelor's and 16 master's programs, which

Table 10.14 VNU's science and technology activities

34 Strong research groups
211 laboratories
1 National Key laboratory
8 VNU Key laboratories
02 VNU Key research centers
200 Target laboratories/Specialized laboratories/Genera practice laboratories

Source VNU (2023)

accounted for 15% of the total programs offered (VNU, 2021a). These joint degree programs are granted by either VNU alone or jointly by VNU and partner institutions. The university has been selective in partnering with accredited and highly ranked universities based on international rankings. Implementing these joint programs gives students access to advanced curricula, digital libraries, and modern study environments. Faculty and professionals at VNU can enhance their qualifications through curriculum exchange, technology transfer, and access to international teaching materials and knowledge. Additionally, these programs serve as a means to attract more international students, foster academic exchange, and promote scientific research.

10.3.1.6 Impacts of Study Abroad

In August 2018, interviews were conducted with leaders and managers of VNU and its member universities to explore the impact of study abroad programs on personal and institutional development. The interviewees included individuals from VNU Headquarters, University of Engineering and Technology (UET), University of Social Sciences and Humanities (USSH), and University of Foreign Languages and Studies (ULIS).

The interviews revealed that evaluating the impacts of study abroad programs on faculty and staff members remains challenging. One interviewee from VNU emphasized the need for concrete criteria, such as increased international publications and involvement in international activities and networks upon their return. Overall, the interviewees believed that most faculty and staff members who studied abroad had positively contributed to the development of their institutions, with an increase in international publications attributed to the growing number of faculty members with overseas training.

Concerns were raised about the reintegration of faculty members into the university culture and academic environment after studying abroad. Some experienced smooth transitions, while others faced difficulties in developing relationships and being accepted, especially when proposing new ideas or differing opinions.

The positive aspects of studying abroad highlighted by the interviewees included faculty members' active role in building strong research teams and their contributions to international publications. They also emphasized the benefits of academic networks, fostering a multicultural environment, and approaching international standards.

However, brain drain was identified as a negative impact, with a low percentage of faculty members returning to their home institutions after studying abroad. Some interviewees viewed this as brain circulation, as their universities attracted lecturers and researchers from other Vietnamese institutions who had completed their studies abroad.

10.3.2 Hanoi University of Science and Technology (HUST)

10.3.2.1 Overview of HUST

Hanoi University of Science and Technology (HUST), established in 1956, is Vietnam's first multidisciplinary technical university. Over the years, HUST has played a vital role as the country's industrial engineering training center, providing high-quality human resources for national modernization and industrialization. In alignment with global integration and development trends, HUST has implemented open cooperation policies to enhance research quality and technology transfer.

According to statistical data from HUST, as of 2021, there are 1,650 employees, of whom 1,200 are faculty members, including 23 professors and 217 associate professors (Table 10.15). The number of undergraduate students at HUST in January 2021 was 32,000, with a further 1500

Table 10.15 HUST statistics on staff and students in2021

Academic and administrative staff	Administrative staff	450
	Faculty members	1,078
	Professors	22
	Associate professors	246
	Doctor of Philosophy	813
Students	Undergraduate students	32,000
	Graduate students	1,500
	Full-time international students	150
Academics	Academic programs	160
	Master's programs	63
	Doctoral programs	32
	Bachelor/Engineer programs	65

Source HUST's official website https://www.hust.edu.vn/vi/ba-cong-khai/ba-cong-khai-313404.html

Mission	Commit to human development, high-quality education, scientific research, technological innova- tion, and knowledge transfer for the betterment of our nation and society
Vision 2045	Strive to become the leading research university in which engineering and technology are at the core of the university and to contribute to the development of the knowledge economy, peace and security, and Vietnam's higher education
Core values	 Constantly in pursuit of becoming a pioneer research university in Vietnam and Asia, a hub for scientific and technological intellectuals, and an attractive environment for nurturing talent. Core values: 1. Excellence & Effectiveness: Offer education programs that are committed to excellence and effectiveness through our education process 2. Dedication & Commitment: Promote dedication and honor commitment as our long-standing values 3. Integrity & Respect: Value integrity and respect dignity and diversity in all aspects of university life 4. Individual Talent & Collective Brainpower: Consider individual creativity and intellectual differences as key elements for success and innovation 5. Inheritance & Creativity: Inherit intellect and values from prior generations in promoting innovation and sustainable development

Table 10.16 HUST's mission, vision and core values

Source HUST's official website https://www.hust.edu.vn/en/about/mission-vision-core-values-550573.html

graduate students. HUST is also hosting 150 full-time international students.

Currently, HUST offers 160 academic programs, including 65 bachelor/engineer programs, 63 master's, and 32 doctoral courses (Table 10.15).

10.3.2.2 University Development Strategy

HUST is committed to human development, high-quality workforce training, scientific research, technological innovation, and knowledge transfer for the benefit of the country and global society. The university aims to become a leading research institution with engineering and technology at its core, contributing to the knowledge economy, peace, security, and Vietnam's higher education. HUST has identified five core values, as shown in Table 10.16.

Internationalization is one of the pillars of the development and institutional autonomy of HUST. The university has promoted this process in various ways, including widening networks and international cooperation, enhancing students and staff mobility, striving for international standards and rankings, and enhancing international publications.

10.3.2.3 Staff and Student Mobility

HUST has been sending its faculty members abroad for study since 1971. Initially, most lecturers went to Russia and other Eastern European countries. However, in recent years, the destinations have become more diverse, including Western Europe, North America, and Asia. Since 1998, HUST has sent 245 faculty members to study abroad, with most receiving scholarships from various sources (Table 10.17). However, since 2013, the number of staff studying abroad has significantly decreased due to a change in the university's recruitment policy, which prioritizes candidates with doctoral degrees to minimize the risk of brain drain.

Since 2013, the number of international students at HUST has been consistently increasing. These students participate in exchange programs, internships, research projects, or coursework, especially those from European countries who require a three-month abroad experience. Similarly, the number of outgoing students from HUST has also risen, primarily for exchange programs. HUST aims to have 2% of inbound exchange students and 1.5% of outbound exchange students by 2025 (Fig. 10.8).

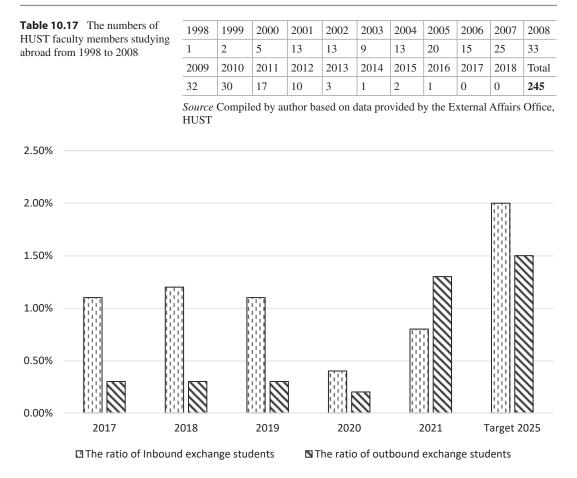


Fig. 10.8 The ratio of inbound and outbound exchange students. Source HUST (2021)

10.3.2.4 International Publications and Rankings

As a leading research university, HUST focuses on boosting international publications and patents. The university has paid attention not only to the quantity but also the high quality of its international publications. With more than 120 strong research groups, the university is implementing approximately 350 research projects, with USD 5 million in research funding. As a result, the number of ISI/Scopus-indexed articles has steadily increased since 2015, as shown in Fig. 10.9. Policies to encourage and reward research activities among students are also being applied in order to promote research and publications. In 2021, HUST was listed in the top 251–300 Asian Universities, according to the Times Higher Education University Rankings. Similarly, according to Quacquarelli Symonds (QS) Asia University Ranking, HUST was among the top 301–350 (HUST, 2021). This is a recognition of the university's efforts in striving for international standards and recognition.

10.3.2.5 International Programs and Universities

HUST has been a pioneer in Vietnam in implementing joint training programs with internationally accredited universities. These programs serve as a means to diversify financial resources, attract international students, and enhance the

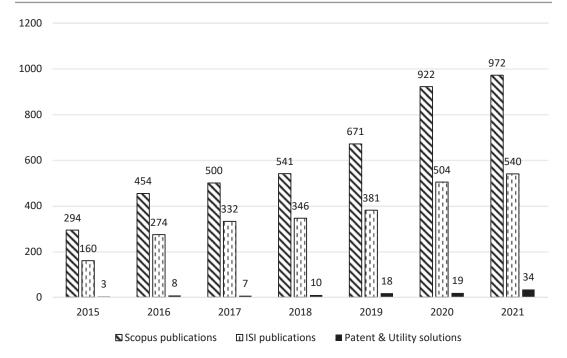


Fig. 10.9 HUST's scopus/ISI articles, patents and utility solutions. Source HUST (2021)

No	Programs	Partner institutions
1	Mechanical engineering	Griffith University (Australia)
2	Electronics and telecommunications	Leibniz Hannover University (Germany)
3	Mechatronics	Leibniz Hannover University (Germany)
4	Mechatronics	Nagaoka University of Technology (Japan)
5	Business administration	Troy University (USA)
6	Computer Science	Troy University (USA)

Table 10.18 Academic programs delivered in English at HUST

Source HUST's official website https://www.hust.edu.vn/en/academics/undergraduate-programs/joint-internatio-nal-training-programs-554813.html

capacity of faculty and staff members. Currently, HUST offers six academic programs in partnership with universities from Australia, Germany, Japan, and the USA (Table 10.18). These programs fall into two categories: those with a degree offered by HUST and those with a degree offered by a foreign university. Prior to 2014, the number of international students enrolling in coursework and local degree programs at HUST was low. However, since the implementation of these international programs, HUST has successfully attracted more foreign students.

10.3.2.6 Impacts of Study Abroad

In August 2018, an interview was conducted with an international cooperation manager from HUST to explore the impacts of study abroad programs on personal and institutional development. The interviewee, referred to here as HUST-F, stated that study abroad experiences have generally had positive effects at HUST. Faculty members' extensive academic networks are vital to the university's development and international cooperation activities. Most international joint research projects at HUST are initiated by faculty members who have studied abroad. HUST also offers sandwich doctoral programs, where candidates are co-supervised by both Vietnamese and foreign advisers, facilitated by faculty members' international networks.

Upon returning to the university after studying abroad, faculty members bring back new knowledge, advanced technologies, textbooks, and modern teaching and research methodologies, benefiting the university's lectures, particularly in international joint programs taught in English. However, HUST-F also raised some challenges. Faculty members may find it difficult to reintegrate into their faculties and the university due to the loss of domestic academic networks and unfamiliarity with the working environment and culture in Vietnam. It may take time for them to overcome feelings of reverse-cultural shock.

HUST-F discussed the decline in the number of faculty members from HUST studying abroad in recent years, attributing it to brain drain. About 50% of faculty members who studied abroad did not return to work at HUST, either staying in other countries or leaving to work for other institutions in Vietnam. Consequently, HUST has prioritized recruiting faculty members who already hold PhD degrees to mitigate brain drain. Faculty members who have gone abroad in recent years have mostly engaged in short-term research, teaching, or internship projects in other countries.

10.4 Conclusions

Internationalization has been a significant focus in Vietnam's efforts to develop its national education system. One crucial aspect of this process is sending staff and students abroad to study. Over the years, the country has implemented various policies and strategies, resulting in a rapid increase in student mobility and outbound staff since 2000, thanks to government projects at the national and provincial levels. The research findings highlight the substantial positive impacts of studying abroad on institutional development in universities. Faculty members who return from overseas play active roles in building and strengthening research teams, contributing to international publications and the universities' rankings. The universities benefit greatly from the faculty members' acquired knowledge, advanced technologies, modern teaching and research methodologies, as well as their academic networks. Additionally, the presence of faculty members with international experience fosters a multicultural environment and understanding.

However, it is essential to acknowledge the potential negative consequences of studying abroad, such as brain drain, cultural shock, and challenges in reintegrating into the working environment. To enhance the positive impacts of study abroad programs, the Vietnamese government must carefully and seriously consider the effectiveness and efficiency of each strategy, policy, and plan. Both the government and institutions should establish and implement appropriate policies to attract and effectively utilize individuals who return from abroad, thereby mitigating the risk of brain drain. Simultaneously, they should explore ways to facilitate brain circulation, encouraging those who choose to stay abroad to contribute to the nation's and institutions' development.

In summary, studying abroad has proven to be a vital aspect of internationalization in Vietnam's education system. While it brings significant benefits, careful attention should be given to addressing potential challenges and maximizing the positive outcomes, requiring effective government policies and institutional practices.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Thuy Anh Nguyen is currently Head of the Political Economy Department at the Faculty of Political Economy, VNU University of Economics and Business, and serves as Director of the Master's Program in Public Policy at VNU Vietnam Japan University, Vietnam National University, Hanoi. She completed her Bachelor's and Master's Degrees in Political Economy at VNU University of Economics and Business. She earned her PhD Degree from Waseda University in Japan. Her publications cover a range of topics related to education policies, with a specific focus on the internationalization of higher education, creating inclusive learning environments, and fostering sustainable universities. Additionally, she specializes in political economy, particularly in East Asian regionalization and the role of government in the market economy.

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11

Unpacking the Study Abroad Experiences of Faculty Members in Vietnam: Connections with Education, Research, and University Management Activities

JungHyun Ryu and Sarah R. Asada

Abstract

Vietnam as a nation has long viewed the study abroad experiences and its higher education system as crucial to building human capital and for national development, as evident in the post-Doi Moi higher education policy reforms in recent decades. Despite such national efforts, faculty members' study abroad outcomes are yet to be assessed in depth. The chapter reveals statistically significant differences between the study abroad (SA) and study at home (SH) groups in terms of impact on education, research, and management activities. The SA group made notable contributions, particularly in innovating education modules and expanding international education activities. In terms of research, the research skills and methodologies acquired while studying abroad enabled them to be more productive through research outputs. Moreover, university management was impacted by their SA experiences through the choices of strategies employed once they returned to Vietnamese universities.

Conversely, some participants experienced adverse impacts on career development once back in Vietnam, such as reverse culture shock. Overall, the chapter demonstrates the positive contribution of SA to knowledge, skills, and value development in cultivating human capital for national development, as intended by national policies and programs since the Doi Moi era.

Keywords

Study abroad experience · Education and research activities · Vietnamese faculty members · Internationalization · Higher education

11.1 Introduction

As Vietnamese higher education becomes more research-oriented and globally competitive, the roles of faculty members have continued to expand. In recent years, there has been an increasing number of overseas scholars returning to Vietnam, the majority of whom choose to work in the higher education sector (MOST, 2016, 2018). Accordingly, the number of "cosmopolitan researchers," who are "members of an elite group with a refined sense of academic identity within their international 'club' (Anh & Hayden, 2017, 86)," is on the rise

J. Ryu (🖂)

VNU Vietnam Japan University, Hanoi, Vietnam e-mail: jh.ryu06@gmail.com

S. R. Asada Faculty of International Studies, Kyoritsu Women's University, Tokyo, Japan

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among Vietnamese higher education institutes. These returning scholars bring back not only knowledge and skills but values and ideas that have significant impacts on institutional and societal development. To study these developments for this chapter, empirical research was conducted at major universities in selected ASEAN countries as part of the JICA Ogata Research Institutes' Emprical Research Project on Impacts of Study Abroad in Developing Countries. In Vietnam, two leading public universities are profiled as case universities based on the research design described in Chap. 1. The two institutions of focus in this chapter are Vietnam National University-Hanoi (VNU-Hanoi) and Hanoi University of Science and Technology (HUST).

VNU has been entrusted by the Government of Vietnam with the task of producing the highly qualified human resources required for national development and modernization (Ryu & Nguyen, 2021). There are two separate Vietnam National Universities, each located in Hanoi and Ho Chi Minh City. For this study, VNU-Hanoi was selected as the case university as it comprises the largest comprehensive higher education institution with eight member universities. To increase the number of survey responses from among these eight, three member universities were selected for futher follow up: the University of Social Sciences and Humanities (USSH), University of Economics and Business (UEB), and Vietnam Japan University (VJU). On the other hand, HUST is Vietnam's first multidisciplinary technical university. Like VNU, HUST is also entrusted with the major task of fostering high-quality human resources for the country's modernization and, more importantly, industrialization. HUST was established in 1956 with significant support from the Soviet Union. Further information on each university can be found in the previous chapter, which provides extensive information on the historical development and current trends of Vietnamese higher education with a specific focus on VNU-Hanoi and HUST.

11.2 Research Design and Methodology

Focusing specifically on Vietnam, this chapter explores the impact of returning scholars on university development and the underlying factors that enable these effects. To understand the impacts of study abroad on faculty members in depth, a concurrent mixed methodology was employed, which included a questionnaire and in-depth interviews. The data was collected at two case universities, VNU and HUST with institutional support. The questionnaires and in-depth interviews were structured based on the major activities of faculty members, which include (i) education and teaching, (ii) research, and (iii) university management.

The same survey questionnaires were used across all four case countries profiled in this volume with some modifications to fit the context of each country. Two sets of questionnaires were prepared specifically for study abroad (SA) groups and study at home (SH) groups. The questions included Likert scale questions on how their study abroad impacted their activities at the university and their actual engagement level over the past five years. Both online and paper questionnaires were distributed to VNU and HUST faculty members. The questionnaire was first deployed online between December of 2020 and August of 2021. However, the response rate remained low due to stringent COVID-19 measures during this period. In April of 2022, the lockdown and school closures in Vietnam finally came to an end, after which paper-based surveys were also distributed on campus for a two-month period (Fig. 11.1).

In total, 233 completed surveys were collected from VNU and 154 surveys from HUST, which is 8.8 and 12.8% of their faculty members, respectively. Of these, 63% of the respondents were faculty members with study abroad experience who had obtained their bachelor's, master's, or/and PhD overseas (Fig. 11.2). In terms of gender, more than half of the respondents were female at VNU (54%). In contrast, only 23% of the respondents were female at

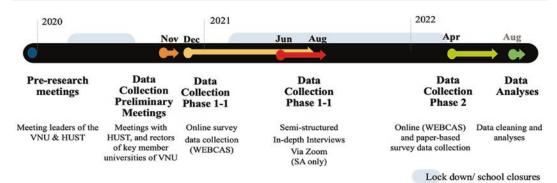


Fig. 11.1 Data collection timeline

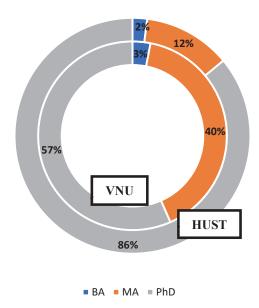
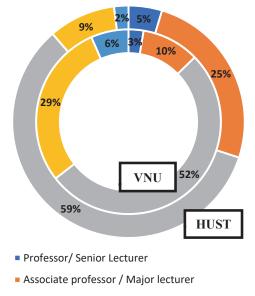


Fig. 11.2 Survey respondents' highest

HUST. Lastly, most respondents at both institutions were in the 31 to 40 age group, followed by those between 41 to 50. This indicates that they are mainly younger faculty members who are likely to have returned home from studying abroad recently. Lastly, in terms of the ranks, the largest share came from full-time lecturers/researchers with a PhD, with 52% from VNU and 59% from HUST in this category (Fig. 11.3). This would be equivalent to the rank of assistant professor in other higher education systems. Vietnamese universities are unique in that the position of assistant professor does not



- Full time lecturer / researcher with PhD
- Full time lecturer / researcher with MA or MSc
- Others

Fig. 11.3 Survey respondents' rank degree attainment

exist. Rather, most new faculty members remain in the full-time lecturer category until they satisfy several specific criteria set by the government to be promoted to associate professor.

During the survey collection, SA respondents were offered the opportunity to volunteer for a follow-up qualitative in-depth interview. Accordingly, in-depth interviews were conducted with the SA group concurrently with the survey collection. A total of 19 faculty members

	Theme	Category	Relevant codes	Percentage of all codes (%)
1	Teaching activities	Education	Teaching style, teaching, teaching collaboration	7.5
2	Societal contribution	Education and research	Policy recommendation, consultancy, human resource development	6.7
3	Mindset and Thinking style	Education, Research, and Management	Mindset, thinking style, attitude	10.2
4	Research	Research	Research experience, research colla- boration	9.3
5	Internationalization of higher education	Education, research and management	Exchange program, teaching colla- boration	3.8

Table 11.1 Thematic analysis: top five most frequently recurring themes

from VNU and 15 faculty members from HUST participated in the in-depth interviews, comprising 53% males and 47% females. Among the interviewees, the top study abroad destinations were Japan (12), Germany (5), and a tie between Australia (4), Korea (4), and the UK (4). Due to COVID-19 lockdowns, the interviews were conducted online in Vietnamese or English, depending on the interviewee's preference. The interviews were then transcribed verbatim, and interviews conducted in Vietnamese were also translated into English. The verbatim narratives were analyzed using thematic analysis. A total of 52 themes were identified and coded (Table 11.1). Based on these themes, interview excerpts were selected to include in this chapter to provide enriched understandings of the study abroad experience and the influence on participants' subsequent professional activities.

11.2.1 Profile of Study Abroad Survey Respondents

As a result of government-led study abroad programs, such as Project 911 and 322, combined with the rise of middle-income families in Vietnam, the number of outbound students has continued to grow over the past few decades. The number of Vietnamese students studying abroad has increased tenfold since the open-door policy was adopted in 1986 (Ryu & Nguyen, 2021). Unfortunately, comprehensive data on outbound students remain limited at the national level. The empirical data of the present study, however, offers insights into the profiles of those who choose to study overseas.

The survey revealed that, in terms of destination for study abroad, the top countries for an MA were Japan (6.4%), Australia (5.0%), UK (5.0%) and France (4.3%). For PhD level, Japan (21.4%) again remained at the top, followed by France (8.8%) and Korea (6.5%). The number of outbound students to Japan and Korea has increased sharply in recent years, reflected by the growing ties between the two countries and Vietnam, as well as the regionalization of higher education in Asia. Other popular destinations that saw significant increases between the 1990 and 2020s were Australia, France, and China. In contrast, Russia and Germany saw a decrease in the number. Russia was one of the top destinations until the 2000s, but its share has declined to less than 1%.

In terms of the discipline, the number of PhDs in engineering stands out. Nearly 40% of the study abroad survey respondents received their PhDs in engineering. Social science degrees followed, with 12% of the survey respondents (Fig. 11.4).

Lastly, the questionnaire inquired about the source of funding for studying abroad. The results indicated that the majority of the survey respondents received scholarships. For MAs and PhDs, 80% and 95%, respectively, received some form of scholarship. The sources of scholarships included foreign governments, the Vietnamese government, host universities,

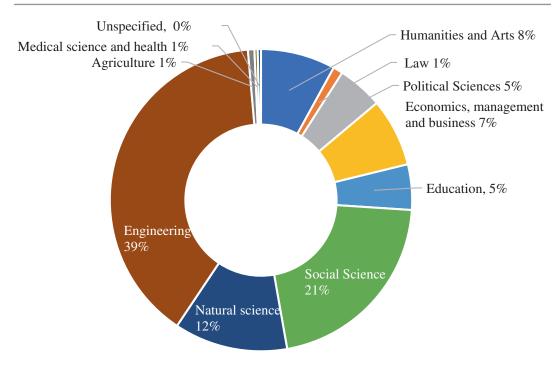


Fig. 11.4 SA respondents' PhD degrees by discipline

home universities, and others. It was also revealed that the availability of scholarships was the most important factor in deciding the destination for studying abroad. Scholarships from foreign country governments accounted for the largest share, followed by scholarships from the host university (Fig. 11.5). Vietnamese government scholarships, such as Projects 911 and 322, were the third most significant source of scholarships.

11.2.2 Impacts of Study Abroad on University Development

This section explores the impacts of study abroad on university development based on the experiences of faculty members at VNU-Hanoi and HUST. In particular, the findings presented here focus on how the study abroad experience influenced the subsequent education, research, and university management activities of the

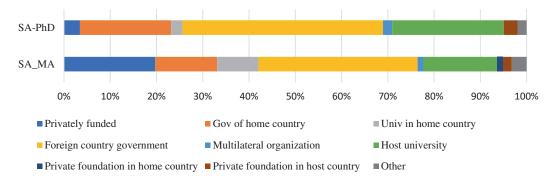


Fig. 11.5. Source of study abroad funding

study participants. The survey findings are presented to provide a baseline understanding of the impacts of study abroad on these activities. Meanwhile, themes and narratives from the qualitative in-depth interviews are presented to provide an enriched understanding of how these impacts manifest in their academic pathways.

11.2.3 Education

After receiving her bachelor's degree in Vietnam, Dr. Le began looking for opportunities to study abroad. She received scholarship offers from the Japanese and Australian governments as well as the US Fulbright Foundation. The first scholarship letter arrived from Japan, so she chose Japan as her SA destination. She enrolled at a national university in Japan for an MA in area studies, a field in which the academic community is very diverse. She took classes with not only Japanese professors but also German, Canadian, and French academics, and the classrooms were filled with international students like Dr. Le. She learned that the pedagogy at her Japanese university differed greatly from what she was used to in Vietnam. In particular, she noticed that the courses in Japan were largely constructed around discussion and presentations rather than lectures. In addition, assessment was very different, as the students were required to submit essays and reports, and give presentations, while examinations were more common in Vietnam.

After receiving her PhD in Japan, she returned to Vietnam and found a job as a lecturer at VNU. She attempted to apply the teaching practices of Japan and actively participated in developing innovative educational programs. For instance, she suggested seminar-style classes on special topics that incorporated interdisciplinary approaches. She also actively participated in organizing extracurricular activities and social initiatives, which shaped the way she interacted with her students.

As Dr. Le's story illustrates, the SA experience has had a significant impact on educational activities, an experience common to faculty members who have also studied abroad. It is important to note that education activities are one of the primary tasks of faculty members, yet most have never taken classes on pedagogical approaches. Hence, faculty members often rely on their own experience as students to inform their practice as teachers. Naturally, SA faculty members' experiences as students overseas are expected to have a major impact on their teaching activities.

Table 11.2 summarizes the survey results regarding the impact on educational activities. All nine education-related activities show significant differences between the two groups, SA and SH, at P>0.01 (Table 11.2). Level of engagement in these activities is also found to be a significant difference between the two groups.

A department head at HUST emphasized that the contribution of faculty members with SA experience has been fundamental for the institutional development, particularly in the field of innovation and education activities. He noted that.

Most colleagues who returned from studying overseas play critical roles in the process of rebuilding the educational programs by giving references from the overseas programs. For example, they bring and share their experiences on how training and deployment are done in their host countries that are suitable for us (HUST, Male, Indonesia/Japan).

An institutional leader at VNU (Male, Germany) shared a similar perspective. He pointed out that faculty members with SA experience contribute by introducing new pedagogy and materials to students, and also serving as "a bridge between Vietnam and other universities by introducing scholarship opportunities, research supervisors and universities to students."

Innovating Classrooms

Among the nine academic activities that were surveyed, "Developing and revising teaching materials" and "Adopting new teaching methods" saw the highest impact rating, with an average of 1.43 and 1.49, respectively (Table 11.2). Both

SA (n=234)	SH (n=133)	T-Test	
1.69	2.03	-4.76**	
1.64	2.00	-5.24**	
1.43	1.77	-4.86**	
1.49	1.73	-3.52**	
1.73	2.57	-9.63**	
2.31	2.91	-5.96**	
2.09	2.68	-5.94**	
2.00	2.51	-5.26**	
2.38	2.72	-3.31**	
	1.69 1.64 1.43 1.49 1.73 2.31 2.09 2.00	1.69 2.03 1.64 2.00 1.43 1.77 1.49 1.73 1.73 2.57 2.31 2.91 2.09 2.68 2.00 2.51	

Table 11.2 Impact of study abroad (SA) on educational activities compared to studying at home (SH)

Note 1 Scale: 4-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all *Note 2* * p < 0.05, ** p < 0.01

items are very closely linked to how lectures are delivered and managed. Many SA participants contended that they attempted to recreate the class environments and teaching styles of their host countries, which they thought were more favorable to students in achieving learning outcomes. For example, one interviewee shared a new perspective on education he gained during his SA. He explained that.

Education is [intended] to create better people with curiosity of knowledge, I would say. Europe did very well. They didn't do fancy technology [...] but they can teach people very well. And then people start to love to learn. That keeps them learning for the whole life, not just for the grades. That's why they keep pace with lifelong learning; while Vietnamese, when [those] people drop out of learning, they will totally stop learning and start to earn more money (VNU, Male, Spain/ Italy/Germany).

These changes in perspectives toward education were the biggest factor leading to a change in their teaching style. One of the recurring themes was the shift from the lecturebased class to one that was discussion-based. Vietnamese classes were predominantly lecture-based owing to the insufficient number of faculty members, resulting in large class sizes. The SA faculty members often highlighted that, during SA, they learned that discussion-based classes were more effective, and hence, they tried to implement this themselves when they began to teach.

Studying in Japan helped me with my teaching practice by learning from the lecturers at [my] host University. [...] I could learn the practice of teaching from them, especially my main advisor, a Canadian [...]. The practice of teaching was very different from the way of teaching in Vietnam, [where] lecturers were just instructing and students would listen. In Japan, the course was mostly constructed with discussion or presentation (VNU, Female, Japan).

Another interviewee who had teaching experience prior to her SA described how her teaching style was transformed.

[After SA] I've transformed from being a teacher who tried to stuff my students with a lot of surface-level activities into someone who focuses on the depth of the discussion. Now I reduce the number of activities and I added depth to each activity. There are lots of discussions going on now [in my classroom]. So, I kind of imitate the teaching style [of] the Western countries now in my class (HUST, Male, New Zealand).

The process of developing/revising education programs and courses was also frequently discussed by the interviewees. Many had noticed the problems with the programs and course structures at their university, which led them to revise courses and activities based on their SA experience. A clear example is illustrated in the following account: Coming back from the US, I was involved with curriculum development programs at my university. I contributed to the program designs. I had ideas and even subjects that I proposed, which I think led to many changes. My rector at that time was very supportive and accepted the new contents into the curriculum, and therefore, we had a lot of new subjects (VNU, Female, US).

However, there were also tensions. Regarding the changes in educational activities, there were conflicts among faculty members. An interviewee shared the following experience, during which he was confronted by a senior:

Honestly, when I come back, I had exciting new ideas about setting up and building a new educational program. But it was very difficult to apply. [...] I still remember there was a professor who gave me very sincere advice. He said I am too Westernized. [...] Western ideas are not always good. When I had a proposal about a reform of a program, it is very difficult because of this kind of resistance, which still exists in the whole system (VNU, Female, Germany).

International Education Activities

The faculty members with SA experience played major roles in internationalizing the classrooms. In the survey, the differences between SA and SH groups were much more conspicuous in the international education activities. SA group saw a greater positive impact, particularly for "teaching at foreign universities" and in the "initiating/ implementing student exchange programs with foreign universities."

Vietnamese universities now have more and more lecturers educated from more advanced countries. [...] So, we will have more internalization in the Vietnamese education system. That is a good thing that we are gradually offering more highquality education services and competing more with international markets. And that will help us improve the quality of our education system (VNU, Male, UK).

Meanwhile, according to the survey, there was a significant difference between SA and SH groups regarding the survey item "inviting international researchers to your university for educational activities." In the in-depth interviews, many respondents addressed it as a significant part of their lectures. They contended that during their SA, they learned the benefits of guest lectures and special seminars, which provided opportunities not only to learn and expand their knowledge but also to network. Hence, they are more enthusiastic about organizing these events more actively, as explained by the following faculty.

I proposed a lot of initiatives and activities for students, for example, besides teaching knowledge, I always invited guest speakers to my lecturers so students can emerge in the practical world. And they can also have practical knowledge besides textbook knowledge (VNU, Female, US).

In addition, many stressed that the network they built during their SA experience proved useful in organizing these activities. This includes the academics of their host countries as well as fellow Vietnamese students who also studied abroad—they became acquainted while studying overseas.

11.2.4 Research Activities

Vietnamese academic staff at public universities see their roles as being more concerned with undergraduate teaching than with research (Anh & Hayden, 2017; Thiep & Anh, 2012). However, VNU and HUST clearly indicate their goal of becoming research-intensive universities, and thus, research activities have become an imperative part of the faculty members' workloads. A HUST faculty member shared that: "Now, for teachers at our university, doing research is a required task. Our university policy states that being a teacher is being able to teach and being able to do research" (HUST, Male, New Zealand).

Many previous studies have concluded that overseas-trained faculty have experienced difficulties in transferring acquired skills due to the differences in research cultures (Gill, 2010; Haines, 2013; Shin et al., 2014; Wen & Shen, 2016). The findings of the current study, however, revealed that in the case of Vietnam, the faculty members' performance in research is relatively high, and they were well received by the home institution. Dr. Vinh, who received his master's in Belgium and PhD in the UK, describes his study abroad experience positively. He said, With a PhD from the UK, I get more respect and people trust [the quality of] my work. People invited me to be their advisor, researchers, and I think that's an important impact on my career and my life as well (VNU, Male, UK)

Dr. Vinh, a VNU lecturer and a researcher in public policy, asserted that he gained not only basics but advanced knowledge during his time studying abroad. He believed that this opened many doors for him when he returned to Vietnam. He had opportunities to work with government projects, where he proposed reforms and made policy recommendations.

Like Dr. Vinh, many respondents felt that the impacts of study abroad on their research activities were very positive. The questionnaire also indicated that SA had higher impact scores for research activities (Table 11.3). The t-score indicated that the scores were significantly different at P < 0.01 in all activities except for publishing articles in academic journals and books in Vietnamese language.

Research Skills and Experience

Many faculty members pointed out that they did not have a chance to gain research skills until they began their graduate studies overseas. Hence, their research skills were largely acquired overseas, and it put them ahead in research compared to their SH colleagues.

I continued to use the [research methodology and skills] that I learned from my PhD program. I think the skills I got from the PhD program gave me advantages and gave me strength in doing research compared to Vietnamese researchers (VNU, Male, UK).

Other interviewees also elaborated that their research skills acquired during SA gave them many advantages in carrying out their research activities.

In terms of research technique, I would say the time I studied in Germany helped me a lot. [...] The lecturers, the tutors taught a lot about how to write a research and steps to construct the research topic, which helps me quite a lot to find a technique to do the research (VNU, Male, Germany/ Spain/ Italy)

The foremost impact is that I could build extensive knowledge much about the research methodology which I applied to my research in PhD; and now, when I came back to Vietnam, [...] I apply the research method that I studied in the UK, help me to improve my publication [to

	SA (n=235)	SH (n=133)	T-Test
Making presentations at academic conferences in VN	1.37	1.56	-2.75**
Making presentations at academic conferences overseas	1.45	2.18	-8.67**
Publishing articles in academic journals and books in VN	1.52	1.60	-1.07
Publishing articles in academic journals and books overseas	1.44	2.32	-10.36**
Participating in international collaborative research projects with international researchers	1.91	2.41	-4.78**
Hosting international researchers	1.96	2.47	-5.00**
Organizing international conferences at your home university	1.90	2.29	-3.78**
Launching new research projects	2.08	2.52	-4.24**
Obtaining competitive research funds	2.19	2.80	-5.71**
Applying for patents	2.97	3.29	-2.91**
Adopting new research supervision methods or labora- tory management systems for graduate students	2.17	2.85	-5.96**

 Table 11.3
 Impact on research activities

Note 1 Scale: 4-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all *Note 2* * p < 0.05, ** p < 0.01

match the] international level (VNU, Female, UK, Australia).

In addition to the research skills and methodologies that were often taught meticulously at host universities, many attested that they gained vast research experience. Many had generous opportunities to join various research projects in their supervisors' labs—or even sometimes R&D centers of local firms, as shown below.

Our side [of research] is mainly about cars, and [the] auto industry in Japan is very developed. Therefore, the positive impact on me is many, both professionally, in terms of orientation, and youthfulness. I'm very happy that all five years I studied in Japan, I worked with businesses, many projects with businesses, mainly in the R&D field. Up to now, after ten years of returning home [...] not only in foreign companies, but also in Vietnamese companies today, they are very interested [in my work]. (HUST, Male, Japan)

Research Collaboration

One of the obvious advantages the SA faculty members have is the research network they formed while studying abroad. Jonkers and Tijssen (2008, 329) observed a positive correlation between SA experience in a particular host region/country and the number of international co-publications with researchers from this region. A study by Jonkers and Cruz-Castro (2013, 1366) also confirms that having foreign work experience helps to explain the propensity to co-publish internationally, and it also shows that researchers collaborate to a higher degree with their former host system. This study supports their findings, as the survey indicates that over 80% of the SA respondents remained in close touch (i.e., communicated very often or often) with researchers from their host university, including their supervisors.

Consequently, more than half of the SA respondents (54%) have engaged in international research projects in the past five years, and nearly two-thirds have organized an international conference at their home universities. The thematic analysis of the in-depth interviews also reveals that research collaboration is one of the major impacts of SA and was ranked the sixth most common recurring theme.

I think I built research habits, and I built a lot of connections for the current and future research activities and all of that is what I learned from my supervisors and colleagues. The important impacts were not only how I got my degree but also how to develop my research, solve problems, thinking critically but having many connections (HUST, Male, Australia)

I'm writing [an] article with my supervisor in the UK; I'm the principal author and she supports me. She helps me to put more input in the article and helps me to improve. She has much more experience in publishing, so I'm trying to invite her to join me in the first article (VNU, Female, UK/ Australia)

However, given the international nature of higher education institutions, many respondents reported that they had chances to work not only with supervisors but with colleagues from various countries. Hence, research collaboration is not limited to the host countries.

I am fortunate to still keep a lot of contact with my instructor and with friends in Japan, including Vietnamese friends and international friends in the previous research lab. In fact, it has created a network of its own, its current cooperation (HUST, Female, Japan).

Another interviewee, who studied in the US, added that:

At the university in the US, where I did my research, I had colleagues, who were Fulbright recipients from many other countries. Yes, we have a network there [...] When I worked with them, they introduced me to their teachers [in their home country], so that's how I have a big connection with international researchers (VNU, Female, US).

Publish or Perish

Vietnam has seen a huge increase in the volume of scientific research in recent years. For instance, in social science alone, the number of SCOPUS publications increased 95-fold between 2000 and 2019 (Pham-Duc et al. 2022). This is partially due to the spread of the "publish or perish" culture among major universities, to which VNU and HUST are no exception. Both universities impose strenuous requirements on the expected number of publications as they aim to become research-intensive universities. To achieve this, the universities now prescribe that every faculty member should publish a certain number of papers every year. A lecturer at HUST shared that "each lecturer is required to publish at least one paper per year. So, everyone needs to do research. HUST now has a new rule that every three years, we need to have an international publication (VNU, Female, Australia/UK)."

The survey results indicate that the SA group has been more productive in terms of publications than SH. The survey asked participants to indicate how many articles and books were published in the past five years in Vietnamese and English (Fig. 11.6). The SH group was more productive in Vietnamese publications, but SA had a significantly larger number of English publications, hence outnumbering the SH group in total.

Both institutions recognize the value of SA faculty members in improving research output. A faculty member at HUST asserted that it is not only about the number of publications, but it leads to more opportunities to engage in research collaboration:

[...] people coming back from abroad have an important role. The first thing is about publications—with good publications, we have more opportunities to discuss with professors from other countries (HUST, Male, Germany).

Moreover, the growing count of international publications by SA faculty members holds a significant role in the endeavors of Vietnamese universities to increase their presence in global university rankings.

The thing is that they [SA] can apply their research to practice but do research with the purpose of getting published in international highquality journals. So, the university can have good benefit from that to improve their ranking (VNU, Female, UK/Australia).

Research Cultures

Ackers (2005) argued that, while the returnee adjustment process requires changes in the researchers themselves, they also modify the research environments in which they work. Of the SA respondents, 53% answered that they have adopted new research supervision methods or laboratory management systems for graduate students in the past five years, indicating that they play the role of change agents in improving research cultures:

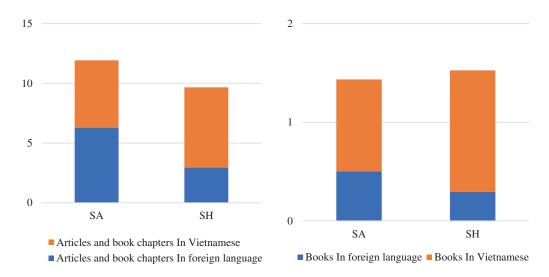


Fig. 11.6 Average number of publications in the past five years per academic (self-reported). *Note* Those who reported 5+are calculated as 5; hence, actual numbers may be higher

Recently, in our faculty, we have [...] research series seminar, in which we invited researchers from all over the world to share their research experience and their view. This is something I liked when I was at UC–Berkeley (so I implemented it here). Also, we have the "working lunch seminar" because I followed that model in the US (VNU, Female, US).

When I come back to my university, normally, the teachers don't have their own lab. But I tried to create my own lab: I trained the students the same as I did [abroad]. I think that in my department, I'm the only one who did that. Even at the beginning, it was difficult to get support, so I run my own lab with my own pocket money. I have to buy the facilities and everything [on] my own for the students. Normally the students [are] without a lab (VNU, Male, Japan).

Highlighting the international nature of higher education, a few interviewees shared the idea that their research culture was influenced not only by their host country but also by the diverse colleagues and supervisors from around the world. For example, an interviewee who received a PhD in Korea shared that he received only limited influence from Korean academia. His supervisor was trained in the US and most of the literature and resources he used were from the US; and hence, he related more with the American academia. He stated that.

I also learn [about research culture] from my professor. He is Korean, but his thinking and research style is very Western. [...] I use references, books from America [...] and international references mostly from the UK or the US (VNU, Male, Korea).

11.2.5 University Management

In terms of university management, SA also had a higher impact than SH (Table 11.4). However, in general, the overall average was lower than the impacts on education and research activities. This may be explained by the low level of engagement in the university management, given the profile of the survey respondents, who were mostly lecturers. Only about half (49.8%) of the SA respondents have engaged in university management as administrative members (Fig. 11.7), and consequently the observed impact was limited.

Dr. Van, who received her degrees from the US, has been teaching and serving as an institutional leader. During her study abroad, she found the US university model's focus on the practical components of the education valuable and has been integrating key elements of it into her university.

I observed that the (teaching) models in the US include practical modules. [...] So, at my faculty, we embed practical experience in the subject, not only for research activities but also for the training. We tried to get more practical experience for students. [...] We have worked with various companies for our students to gain practical experiences like doing an internship or having some activities that support their future employment. (VNU, Female, US).

Dr. Minh, also an institutional leader, received his degree from Germany and has been

Table 11.4 Impact on university manager	ement
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	SA (n=235)	SH (n=133)	T-Test
Contributing to reforms in regulations or systems at your university	2.2	2.46	-2.68**
Contributing to reforms in regulations management as an administrative member	2.51	2.8	-2.67**
Contributing to concluding agreements with over- seas universities	2.40	2.98	-5.58**
Contributing to your university's joining internatio- nal inter–university networks	2.31	2.95	-6.14**

Note 1 Scale: 4-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all *Note 2* * p < 0.05, ** p < 0.01

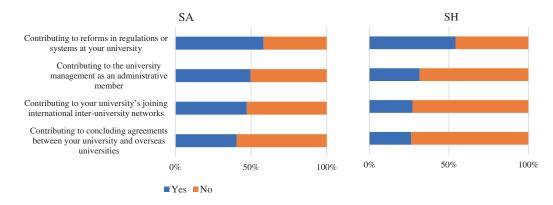


Fig. 11.7 Engagement in the university management

working at VNU for over twenty years. When he stepped up as an institutional leader, Dr. Minh was determined to internationalize his faculty. He explained that when he was studying in Germany, its national priority was EU integration, and consequently, there was a sharp increase in the number of international students in his classroom.

In Germany, students are from different countries around the world. I realized the importance of [the] international environment and exchange and cooperation. Vietnam was very isolated for a long time [and there was] not much contact with other countries because of the ideology, history, condition of study, living standards etc. [...] It is hard to send our professors and students abroad, so we should bring international students to Vietnam. So, I had two keywords when I became an administrator: internationalization and student service (VNU, Male, Germany).

He also contested the idea that the internationalization of the classrooms is crucial for the enhancement of university capacity. To implement international standards to the university, it is important to engage in internationalization activities. He explains that,

When Vietnamese education has a lot of contact with other countries, they can promote the quality of teaching, learning and even international publications will be improved. [...] comparing is very important. [...] That's why the environment and quality will be improved (VNU, Male, Russia/ Germany).

11.2.6 Negative Impacts

While SA experience has immense positive impacts on professional life, there can also be negative impacts. According to the thematic analyses of the in-depth interviews, 2.5% of the accounts were identified as having "negative impacts." Although this is small compared to the benefits that are discussed, it is important to address them. The most frequently discussed negative impact was the experience of reverse culture shock, followed by the lack of human networks and challenges in applying the knowledge they gained overseas to Vietnamese contexts.

There is already a significant amount of research exploring reverse culture shock among returning academics (Gama & Pedersen, 1977; Kidder, 1992, Gaw, 2000; Ackers, 2001; Hellemans, 2001; Hao et. al. 2017; Gu & Schweisfurth, 2015) and the negative impacts it has on their performance at work. Gama and Pedersen (1977) conducted a study of 31 Brazilian students who were in the US for study abroad programs and concluded that on their return, they suffered from conflicts of values with social and interpersonal relationships, which also had impacts on their professional roles. Kidder (1992) conducted a study on Japanese returnees who shared their experiences of reverse culture shock, with their struggles leading to physical and behavioral changes.

Dr. Giang spent eight years in Japan undertaking her graduate studies, and upon returning to Vietnam, she began teaching at VNU. During her years in Japan, she learned to speak the language fluently. She came to understand how Japanese people think and work, which she thought was the biggest benefit of her SA experience. However, it created issues when integrating back into Vietnam. She said,

Now Vietnamese ways are more difficult for me, and to integrate [back] to work here is a challenge because when I went to Japan, I was still very young. [My] thoughts and personality were formed in Japan, which affected me so much that it was difficult for me to come home and fit in (VNU, Female, Japan).

She felt that when developing a career as a faculty member at a Vietnamese university, it can be more disadvantageous for those who have studied abroad. She elaborated that,

When I returned to my country, it was very difficult for me to get used to the educational environment in Vietnam. For me to develop in Vietnam professionally, in general, studying in Vietnam would have had more advantages. If I go to school abroad, it's like I'm starting from scratch, while if I studied [at] home, I would have spent the 7–8 years to get used to everything with the system, which will help me integrate quickly (VNU, Female, Japan).

These difficulties with reintegration can be a major cause of brain drain and loss of talent. A faculty member shared the view that,

There must have been two to three friends who found it very difficult and uncomfortable to reintegrate to [the] Vietnamese environment after coming back. Some people, they don't work anymore, they move out of work. Some people find it difficult after returning to Vietnam, so they continue to stay abroad. (HUST, Female Japan).

This is an issue that Vietnamese academics and policymakers need to address. Project 911 and 322 have invested large sums in increasing the number of foreign-trained faculty members, yet this effort is likely being undermined due to the lack of support for returnees. Pham (2013) reported around 4,590 students received Project 322 scholarships to study abroad, but only 66% returned to Vietnam. Those who did return also did not stay long in the Vietnamese academic sector due to unfavorable work environments or have moved to the private sector (Ryu & Nguyen, 2021).

Secondly, the loss of networks had a major negative impact. Previous research concluded that those who SA are often excluded from academic networks as, during their time overseas, they have missed opportunities to develop relationships within their academic circles (Chen, 2017; Singh, 2020; Pham 2021). The limited academic networks in Vietnam hinder their involvement in education, research, career growth as well as local collaborations, and funding applications.

Studying overseas makes me lose my network in Vietnam. [As a] result, it's more difficult for me to integrate with the way people work here. As a result of SA, interaction with people is reduced and social integration is impaired (VNU, Female, Japan).

The loss of networks was observed not only among academics but socially as well:

Even when I come back, there are many things that I have to build again. With my friends such as my undergrad classmates, I had tried to rekindle our friendship (HUST, Male, Australia).

Lastly, applying the knowledge they acquired while studying abroad to Vietnamese contexts was seen as a major challenge. Dr. Thanh, who received his PhD in economic development in Germany, faced difficulties conducting research for policy recommendations in Vietnam:

What I am researching is related to Vietnam, obviously. But if I had some sort of education, like the PhD or master's education in Vietnam, I may have more Vietnam-specific experience and knowledge. But in fact, I have more knowledge [on] Germany, and it is mostly in the specific contents [...] There's also some experience I gained during SA, but it's country-specific (VNU, Male, Germany).

Another VNU faculty member specialized in public policy also contended that the knowledge and experience he gained in Europe were challenging to apply in Vietnam due to system differences, which occasionally discouraged him. He explained that. I should put it like this, it gave me problems in applying the knowledge and the understanding to the Vietnamese reality. In some cases, according to my knowledge, policies should be certain ways. But then, because of the Vietnamese contexts, it is impossible to implement the policy, especially due to the economic-political situation in Vietnam (VNU, Male, UK).

11.3 Discussion

In higher education, study abroad can be a transformative, high-impact experience for individuals (Asada, 2020). This transformation of study abroad participants' academic and personal knowledge, skills, and values is reflected in the individual outcomes of the study abroad experience on their education, research, and university management activities, as shown in the findings section. The study abroad participants interacted firsthand with another culture through their study abroad experience. This allowed them to build their knowledge and challenge their perceptions about themselves and the host society, leading to new ideas and abilities (Bringle & Hatcher, 2011). This chapter particularly focuses on individuals seeking graduate-level degrees, requiring extensive time abroad. The extended immersion in the host country during their studies allows for more opportunities for the participants to deeply engage in the study abroad experience and understand the host country's society and culture, resulting in more opportunities for developing intercultural and linguistic skills, expansion of their worldviews, and understandings of cultural differences (Enns, 2016). Indeed, faculty at VNU and HUST with study abroad experiences are more likely to be engaged with the international dimensions of their home universities compared to colleagues who received their advanced degrees at home in Vietnam.

The diffusion of knowledge, skills, and values acquired abroad into the faculty's teaching, research, and university management highlights the potential of individual outcomes to contribute to a kind of multiplier effect (Asada, 2020), which further increases the integration of international, global, and intercultural dimensions into a university. In educational activities, participants went beyond promoting study abroad within the university. Their pedagogical practices, such as teaching materials and methods, expanded access to advanced educational methods for all students at VNU and HUST. Participants noted their teaching approach was innovative due to the transfer of educational concepts and practices experienced at their university abroad.

This pedagogical outcome is concerning, considering its implications regarding academic hegemony and Westernization (Yang, 2013; Zajda, 2022). However, the interview participants' narratives illustrate how, as individuals, they felt their teaching approaches were seen as a way to improve teaching quality for the university. Indeed, the internationalization of teaching practices is often linked to improving education quality. Overall, the multiplier effect is evident, as these universities provide internationalized experiences to their students in the classroom. The participants' diverse destinations, including non-English speaking countries like Japan, France, and South Korea, suggest a potential trend toward Asian regionalization and decreasing US hegemony among study abroad destinations from Vietnam. It is also important to note their interactions in the classroom abroad were not limited to host nations but included professors trained in other countries and students from Vietnam and around the world.

The study abroad experiences of members of faculty at VNU and HUST shed empirical light on the processes of how individual outcomes of studying abroad contribute to the wider social good of institutional and national development. By internationalizing their classrooms and promoting study abroad, the participants contribute to the foundation of knowledge and skills for Vietnam's human capital as a means of promoting economic growth and national development. Vietnam, a country with a rapidly growing economy, can draw upon the expansion of such at-home internationalized educational experiences to provide students with the hard and soft skills needed for future global and regional economic cooperation. These experiences will also help Vietnam to deal with the challenges of globalization, the emerging industries of the 4th Industrial Revolution, and Asian regional integration (Asada, 2023; Boni & Calabuig, 2017).

Second, the increased research capacity resulting from the study abroad experience plays an important role for Vietnam as the country seeks global recognition of its higher education system by producing and publishing research in international academic publications (e.g., Lynch, 2017; Mok, 2015; Nixon et al., 2018). Moreover, the resulting knowledge transfer to domestic industries through collaboration allows for new streams of income generation and entrepreneurial activities for universities. Lastly, the study abroad experience has provided Vietnamese academics with improved capital to enhance their research and advance their careers while collaborating with researchers in their host country and around the world (Haupt, 2022). Accordingly, the participants profiled in this chapter find themselves acting as gateways to their host country and the wider world through their teaching and research activities, resulting in the promotion of enduring diplomatic relations through knowledge creation and sharing (Asada, 2021, 2022).

While academic studies show that academics trained overseas can face difficulties in reintegration into the domestic research culture and securing research and teaching resources (e.g., Pham 2021; Yonezawa et al., 2016), participants' qualitative narratives did not identify significant research or teaching barriers. This might be related to the scope of the study, which focused on flagship universities that are often targeted with special funding by the national government to increase national development and global prestige. Importantly, Vietnam's emergence as a middle-income country demonstrates how national-level policies place importance on higher education system funding to contribute to national development by creating human capital capable of engaging in the global knowledge economy, which requires highly skilled workers.

However, a holistic approach to understanding participants' experiences in Vietnam reveals the difficulties of reintegrating into an institutional culture centered around Vietnamese expectations of communication style, career values, and day-to-day work life. Indeed, these struggles of merging work behaviors, attitudes, and values acquired abroad into Vietnamese institutional culture have led to Vietnamese academics going abroad to pursue other academic opportunities or leaving for the private sector (Pham, 2013; Ryu & Nguyen, 2021). Considering the national government's financing of Project 911 and 322 to train its next generation of academics for national development, this brain drain is of concern.

Conversely, the movement of academics to the private sector and universities abroad is also a positive by-product of national development. For example, the transition to the private sector may instead be seen as brain circulation. In various industries, they contribute the knowledge, skills, and values acquired abroad to improving the private sector and various industries, having significant ripple effects on innovation and economic development (Perna et al., 2015). Meanwhile, individuals working abroad in either the private or academic sector continue to contribute to Vietnam's national development through the concept of "giving back" by maintaining contact with Vietnam in various ways (Campbell, 2020). For instance, they might financially support family members back home. Individuals remaining in their academic field abroad may become a bridge between Vietnamese academics and international academics. As university faculty members, they may find themselves promoting teaching and research about Vietnam abroad and spearheading institutional agreements with Vietnamese universities. In essence, Vietnamese academics abroad promote pathways for knowledge creation and sharing between Vietnam and the world, thereby contributing to Vietnam's national development and higher education system. Meanwhile, individuals entering the private sector abroad may act as intermediaries between their companies abroad and companies in Vietnam, resulting in national development through increased entry into the global economy in various industries. Thus, such unintended outcomes are positive by-products for national development, going beyond the deficit approach of brain drain to a holistic understanding of the movement of academics across sectors and national borders.

11.4 Conclusion

As Vietnam turns to its higher education sector for national development, study abroad programs to train academics for its flagship universities-most notably VNU and HUST-have proved important in promoting the development of education, research, and management. Although some unintended consequences were observed in this study, the empirical findings challenge current academic discourses on the influences of study abroad on developing countries. These too often focus on a deficit approach, focusing on academic hegemony, spread of Western ideals, and brain drain. Overall, the findings here demonstrate that the infusion of knowledge, skills, and values into academics' professional activities can be seen as a positive by improving their education activities and providing access to advanced specialization for research. Granted, in certain research fields, some participants did encounter difficulties in adapting what they learned abroad to the local Vietnamese context. While the empirical data identified trends in management activities, future research is needed due to the limited number of survey responses from participants beyond the lecturer level. In particular, understanding the experiences of academics later in their career and how their study abroad experiences have possibly influenced subsequent management activities are important given the global aspirations of VNU and HUST.

Ultimately, the intended outcome of national policies since the Doi Moi era and programs such as 322 and 911 is to substantively improve Vietnam's higher education system through the training of academics abroad. This should lead to

increased autonomy in the higher education system and promote the production of knowledge. It should also strengthen the education of its future generations of citizens and workers. Indeed, the influence of study abroad on academics takes place over time and across various spaces (Asada, 2022). As the examples of VNU and HUST show, universities benefit from academics' study abroad experiences. The future holds possibilities for Vietnam in moving away from a reliance on studying abroad for advanced knowledge and skills while eschewing entanglements with academic hegemony, diffusion of Western ideals, and, at times, misaligned acquired knowledge, skills, and values within the Vietnamese context. Certainly, this transition will take time. As national funding is redirected from study abroad scholarship schemes to the Vietnamese higher education system, Vietnam is making headway toward its ultimate goal: quality domestic higher education institutions to train the next generation of its citizens for society.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book. All interviewee names have been changed to protect the privacy of the respondents.

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Jung Hyun Ryu PhD, is affiliated with the Japan International Cooperation Agency (JICA) and an adjunct researcher at Waseda University, where she earned her doctorate focusing on policies and international cooperation in higher education. Dr. Ryu, as both researcher and practitioner of higher education, is currently based at Vietnam Japan University, Vietnam National University-Hanoi, where she has been working on the development and management of postgraduate degree programs. In addition to her role in educating graduate students and developing a new curriculum, Dr. Ryu is continuing her research into various aspects of international higher education.

Sarah R. Asada PhD, is an Associate Professor at Kyoritsu Women's University (Tokyo, Japan) and a visiting research fellow at Waseda University. She holds extensive leadership experience in curriculum development, internationalization, and study abroad programs. Dr. Asada's expertise lies in comparative and international education, focusing on higher education, internationalization, and international relations. As a comparativist, her projects span Asia, Europe, and North America. Her recent book, 50 Years of US Study Abroad Students: Japan as a Gateway to Asia and Beyond (Routledge 2020), is the recipient of the 2020 CIES Study Abroad and International Students SIG Best Book Award.

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Part V Impacts of Faculty Study Abroad on Higher Education in Cambodia



Higher Education Development and Study Abroad Experiences of Faculty in Cambodia

12

Say Sok and Rinna Bunry

Abstract

This chapter provides a snapshot of higher education development (HED) and study abroad experiences among faculty members in Cambodia. This research is based on case studies of four higher education institutions (HEIs), the Institute of Technology of Cambodia (ITC), Royal University of Agriculture (RUA), the Royal University of Phnom Penh (RUPP), and the Royal University of Law and Economics (RULE). The research draws from existing literature, the authors' direct knowledge and experience, a field survey, key informant interviews, and focal group discussions with HEI faculty members. It starts with an overview of the national higher education landscape, providing a historical overview of the sector and the development of the four HEIs. It also discusses higher education policies and their role in human resource development (HRD), followed by a more detailed assessment of mobility, international aid, and the impacts

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of study abroad. Cambodia's HED has progressed steadily in the past four decades, although many strategic policy decisions need to be made. The government has intervened into the sector more strategically, especially in the past decade. With inadequate budget for sector-wide intervention, however, the investment has been more targeted, and its positive impact on academic programs' quality improvement, university research development, and university governance is not yet clearly seen. The studying abroad of the faculty members at the national as well as at the four case universities has largely been funded by external agencies, and the overseas returnees often have a positive career growth and positive impacts on their institutional development. There is no national scholarship scheme for faculty mobility or to send Cambodians abroad strategically to serve HED or national development.

Keywords

Higher education development · Impacts of studying abroad · Higher education policy · International aid for higher education · Staff capacity development · Cambodia

S. Sok (🖂)

Department of Media and Communication, Royal University of Phnom Penh, Phnom Penh, Cambodia e-mail: saysok@gmail.com

R. Bunry

Department of Higher Education, Ministry of Education, Youth, and Sport, Phnom Penh, Cambodia

12.1 Introduction

Cambodia's higher education sector has expanded rapidly. This growth has led to increased opportunities for overseas education and experiences for faculty and staff. There are 132 higher education institutions (HEIs), of which 65% are concentrated in the capital, although almost every province has an HEI. Of these, fifty are public, while the remainder are private institutions. There are few branch campuses of overseas universities, and Nagoya University has established three satellite campuses at three public HEIs. All HEIs, including the private ones, are supervised by 17 national agencies. However, the ministries with the most HEIs under their purview are the Ministry of Education, Youth and Sport (MoEYS), which supervises 84 HEIs, and the Ministry of Labor and Technical and Vocational Training (MoLTVT), which oversees 25 HEIs.

As of 2022, there were 12,348 lecturers and 4,123 supporting staff. The number of foreign lecturers was 586 in 2016 (Un & Sok, 2018a). Some leading private HEIs have greater numbers of foreign lecturers than others. Public HEIs are dominated with native instructors, although some foreign lecturers use foreign languages for teaching purposes. Data on faculty members with overseas education is unavailable, but in many leading HEIs in Phnom Penh, the number is substantial. Although aggregate data is unavailable, the exchange of faculty members is limited (Sok & Bunry, 2021). Many lecturers, especially those with overseas degrees, work in more than one HEI, moonlight with second jobs, do personal consultancy work, or have established their own private firms.

There were 206,893 students in 2022, of whom 20,235 are enrolled in associate degrees, 175,962 in bachelor's, 9,483 in master's, and 1,213 in Ph.D. degree programs. At the bachelor's level, enrollment in social sciences and humanities was 69%, while it was 31% for STEM-related majors. The programs with the largest percentage of students are business-related and foreign languages, with 41 and 10% of all enrollments, respectively.

The number of foreign and foreign exchange students has remained small, with overall numbers not captured in the national database. The Royal University of Phnom Penh (RUPP) is likely to have the most foreign students, with 90 students reportedly enrolled in 2023. Most of them have come from Vietnam.

This chapter examines the recent higher education development (HED) in Cambodia, with a focus on the study abroad experience of faculty and staff. After this introduction, it provides an overview of national HED before examining capacity development and the study abroad experience of faculty members from the four case HEIs. It concludes with reflections on what is next for higher education in Cambodia, looking especially at ways the overseas experience of faculty members can be enriched.

12.2 National Higher Education Development

12.2.1 Four Decades of Higher Education in the Making

Cambodian higher education has a fairly long but roller-coaster history. Modern higher education in the country is a fairly new phenomenon, and it is only in the past four decades that its development has become more stable, albeit not consolidated. Gradual development started in 1979, with meager but increasing investment from the state and development partners (DPs). Based on regime change, modern HED can be divided into six periods. First, under French colonization (1864-1953), it was ignored. The French colonial administration invested little in secondary, let alone higher education. No tertiary institutions were established. Some professional training institutions (Mak et al., 2019a) were established in the latter years of colonization to train regime loyalists to execute their duties. Some children of elites also pursued higher education opportunities in France.

Second, remarkable development was observed during the post-independence period

(1953–1970), when the birth of the "modern" Cambodian state and "modern" higher education started. The first university was established in 1960 (Sam et al., 2012), with some postsecondary institutions established before then. Public universities surged rapidly after Prince Sihanouk's state visit to Indonesia in 1964. In 1966, 7,360 students were enrolled in tertiary education, and by 1970, more than a dozen HEIs had been established (Ayres, 2000, 50). The main destination for overseas education was still France, although some students went to Australia and Japan. This was the "Golden Era" of modern Cambodia. However, at this time, HED had its problems (Jacobsen, 2018), including the lack of qualified faculty members, the majority of students studying social sciences and humanities, and fewer in sciences and technology needed for its national development.

In the third period, higher education fell into disarray due to the intense conflicts that occurred during the Khmer Republic (1970– 1975). This led to the fourth period, in which higher education was annihilated by the Khmer Rouge in the period of Democratic Kampuchea (1975–1979), when all HEIs were closed and the "educated," including lecturers and overseas returnees, were targeted (Ayres, 2000). It was the most destructive regime in Cambodian history, and the repercussions for the development of higher education can still be felt decades later (Wan et al., 2018). Many surviving intellectuals left the country, further depleting the resources needed to rebuild higher education.

Over the past 44 years since the end of the Khmer Rouge government, higher education has developed with little disruption, although further transformation is needed. In the fifth period, under the People's Republic of Kampuchea (PRK) (1979–1989) and the State of Cambodia (1989–1991), the sub-sector was "revived" almost from scratch, despite embargoes from the West. This was done with huge support from Eastern Bloc countries, which provided scholarships for overseas study and dispatched educators to rebuild the HEIs. Programs were mainly run in Russian or Vietnamese. Higher education was elitist, fragmented, and state-sponsored.

Institutional management was top-down, granting power to rectors/directors, and HEIs were accountable to responsible line ministries. During this period, some 6,500 students studied abroad (Mak, 2016). They comprise the major force for rebuilding Cambodia, with many now holding senior technocratic and political positions.

Since 1993, the second Kingdom of Cambodia-the sixth period-development has been influenced by selected principles of neoliberal economics. This was done without adequate steering, strategic investment or guidance from the center (Sen & Ros, 2013). Support from the Eastern Bloc waned, and funding sources have become more diverse. Initially, funding came primarily from bilateral sources, including France, Australia, and the USA, and this was provided to selected HEIs. Since the late 2000s, funding has increased from multilateral institutions, mainly the World Bank, through MoEYS and Asian Development Bank (ADB) and is delivered through MoLVT, while direct support to respective institutions continues and has been increasing in some HEIs (Mak et al., 2019b). There are also numerous scholarship schemes available for overseas study.

Various transformations have been observed during this period. Higher education advancement has occurred amid a more stable Cambodia, with more sustained, albeit not inclusive, development and multiple transitions. The transformations include the adoption of "liberal" democracy and liberalization, an underregulated market economy, rising consumer sentiment amid inequality and poor safety nets, as well as Cambodia's integration into the global economy. Between 1993 and 1997, higher education was still sponsored by the state. There were only eight public HEIs and a total student population of around 10,000. There was a small pool of local staff, including some graduates from Eastern bloc countries. Graduates were guaranteed civil service employment, and higher education was elitist.

A watershed occurred in 1997 when higher education was privatized and the reform of public institutions that generate revenue began. Privatization meant two things: allowing private HEIs to be established and public ones to establish fee-paying programs. The first private university was established in 1997, and public HEIs began offering fee-paying programs from 1998. In part, the reform of public higher education was a response to the rise of private providers, which were poaching staff from public institutions. There was also limited government funding available for public institutions, which hindered their ability to prevent brain drain. In public HEIs, a dual personnel system (civil servants and on-contract staff) and dual financial management (public budget and institutional revenue) emerged.

In 1997, the government issued the Decree on Legal Statutes of Public Administrative Institutions (PAIs) to provide some degree of autonomy to public institutions generating and managing their revenues and to create some degree of accountability. It was rolled out to public HEIs in 1999, and the first university was transformed into a PAI HEI (Un & Sok, 2018a). As of 2023, 16 HEIs have been granted PAI status. The 2015 amended decree (and the subsequent 2018 supplemental decree) attempted to transform all of the public HEIs that were generating and managing revenue into PAIs and then public enterprises. So far, however, this has remained a mere policy intent (Sok et al., 2019).

Another development is the growing importance of internationalization, which has gained momentum since the late 2000s. There has been a sharp escalation of outbound students, a smaller growth in international providers, and the establishment of joint degree programs with international providers. This period has also seen a rise in the number of programs using English as a medium of instruction (EMI) and increases in international collaborative research. While the number of foreign students remains small, it is increasing. There have also been growing numbers of foreigners holding management positions, especially in leading private HEIs, with some institutions employing more foreigners than Cambodians. Coinciding with this, additional foreign support (Mak et al.,

2019b) has been provided through MoEYS as well as directly to the HEIs themselves.

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Besides these transformational developments, the facts and figures below are noteworthy. First, there has been increasing fragmentation in system governance, making it impossible to create a proactive system (let alone an ecosystem) to lay out a grand design for the sub-sector or systematic intervention for the sector as a means of driving national development. This is taxing for regulatory bodies, which have few genuinely committed, competent staff in strategic, transformative areas, amid the inadequacy of a capable bureaucracy and transformative leadership. In 1997, there were four technical supervising ministries, with the number increasing to 17 in 2024. There has never been a serious political discussion on how to scale the number of ministries down. Although MoEYS and MoLVT supervise some two-thirds of HEIs, permanent coordination mechanisms are absent, even though many of their HEIs are similar and have overlapping programs.

There has been a rapid increase in HEIs, climbing from eight in 1996 to 132 in 2022 (MoEYS, 2023). There is no "comprehensive" university with complementary institutions. Yet a few public HEIs in Phnom Penh could be merged to form a single comprehensive university to better unify Cambodia's university development and improve university governance. This rapid increase has proved taxing for regulatory bodies in fulfilling their quality assurance purposes. Quality monitoring, inspection, and institutional accreditation (let alone program accreditation) are running behind while the system continues to grow (Sen & Ros, 2013; Un & Sok, 2018b). This underregulated expansion is occurring amid limited state capacity to regulate and adequately fund the sector or to steer its development strategically. The bureaucracy has mainly focused on routine paperwork regulations, and few staff members are capable of and committed to playing strategic advisory/mentoring roles to help HEIs to advance their strategic direction and serve national development.

The number of students has soared quickly thanks to the increase in HEIs, low tuition fees, and flexible tuition fee arrangements, as well as increasing purchasing power. Tuition fees can be as low as a few hundred dollars, and at some HEIs, they can be paid on a quarterly basis. Compared to more advanced countries in the region, the enrollment rate is low. The gross enrollment rate is 12.43%. Some 90% of the students are fee-paying, and there are no national loan schemes or full-scale scholarships. While GDP per capita remains low, it increased to USD 1,787 in 2022. Access to higher education is primarily based on the purchasing power of individuals and not so much on merit, equity, or the needs of the country or its labor markets (Mak et al., 2019b; Un & Sok, 2018a).

Several important observations can be made about current academic programs. First, the fastest expansion has occurred among programs that are inexpensive, especially business and business-related majors, along with English language (51%). Conversely, enrollment in STEM-related majors stood at just 31% in 2021. Second, there has been a rapid expansion among bachelor-level programs. Graduate programs have expanded more slowly, especially at the master's level and in non-STEM majors. Third, there is no national record of curriculum mobility (e.g., joint degree programs, twinning arrangements), and overall numbers of such programs are small, although they are increasing and becoming more varied in arrangements. Some leading HEIs, which charge higher tuition fees, offer more such programs. As these programs are mainly designed by overseas graduates and do not incorporate rigorous stakeholder engagement in their design and implementation, the curriculum may reflect the contents of programs in other countries rather than being oriented toward Cambodia's more immediate development needs.

Khmer is the predominant language of instruction, although English has become the foreign language of highest interest and a de facto second language. Chinese is the other most commonly learned language but is seldom used in higher education. The number of programs offering instruction in English and English language is substantial. Likewise, the number of EMI programs, while small, has been increasing, especially at leading public and private HEIs. Some leading private HEIs provide programs mainly in English. Many leading programs across the HEIs—both public and private—produce their teaching materials, e.g., lecture notes and course readers in English. The use of English language textbooks and social media materials is also common.

While the growth in understanding the importance of the teaching role has been notable, community service and research development have been neglected. HEIs are teaching-oriented. The weak research function means that international research collaboration is scarce. Some public HEIs, including three focal institutions chosen for case studies in this chapter, are the most research intensive. However, because their projects are funded mainly by their overseas partners, they usually play the role of the recipient-a supporting role-in the global knowledge production while the research agenda is often determined or proposed by the funding agencies or other global agendas. In some instances, Cambodian researchers are employed as data collectors or data analysts. This has hindered the development of research programs that are whole-value-chain, for instance, which can produce research results toward innovation and commercialization to support institutional and national development. The situation can change with funding from the Higher Education Quality and Capacity Improvement Project (HEQCIP) and the Higher Education Improvement Project (HEIP), as well as other future research funding. While HEQCIP aimed to build an institutional research foundation, HEIP has enabled the HEIs to drive their own research agendas, lead projects in their entirety, and push for product and prototype development.

The increase in students and HEIs has led to a growth in demand for faculty and staff, as well as new opportunities for them to teach at multiple HEIs and/or for more hours. This situation has therefore encouraged moonlighting from full-time lecturers of public HEIs amid 236

the poor performance of the human resource management system. Hourly wages at many private HEIs are also higher than those of the public ones. According to data from DHE, in 2018, there were 16,167 local and foreign staff in the country. Of these, 1,309, 10,270, and 3,281 held bachelor's, master's, and doctoral degrees, respectively (Sok et al., 2023). There is no national data on faculty or staff with overseas degrees. This is likely to be substantial and increasing but varies between HEIs. There are also more of them in HEIs in the capital than in the provinces. In some leading HEIs in Phnom Penh, the number of staff with foreign degrees can account for 25–50% of the faculty. There is a small pool of foreign faculty, with most working at the private HEIs. A few of the leading private HEIs have a significant number of foreign faculty and staff.

Finally, higher education is not considered a priority sub-sector. Investment is significantly lower than the global average of 1.00% of GDP and 15-20% of education expenditure (Mak et al., 2019b; Ting, 2014). Despite the government's rhetoric of addressing the demand for a skilled workforce, investment has accounted for some 0.05% of GDP over the past decade (Mak et al., 2019b). The share of the education budget allocated to higher education stood at 5.02% in 2019.¹ Private HEIs mainly rely on tuition fees or use their surpluses to expand their businesses into other sectors of the economy. Public HEIs with large student populations likewise rely heavily on tuition fees, while smaller ones depend mostly on government subsidies (Mak et al., 2019b).

There is no project-type investment from the government. Instead, the biggest investments have come from the World Bank through the Cambodian Education Sector Support Project (CESSP) 2005–2010, amounting to USD3 million, the Higher Education Quality and Capacity Improvement Project (HEQCIP) 2010-2017 at USD23 million, and the Higher Education Improvement Project (HEIP) 2018-2024, which has invested USD92.5 million. Large-scale investment only started in 2010, and the government and the Bank are still learning to manage these funds. The few big bilateral development agencies that provide funding directly to public HEIs include the Japan International Cooperation Agency (JICA), Korea Cooperation International Agency (KOICA), Swedish International Development Cooperation Agency (SIDA), French Agency for Development (AFD), and the United States Agency for International Development (USAID). Initially, support from them was for program development, human resource development (HRD), and technical support. More recently, some have started to focus on research collaboration and institution-building. The Erasmus programs, another large investment, are managed by European HEIs and are more thematic. Local partners play the role of being mere recipients.

12.2.2 National Higher Education Policies

Long-term planning for higher education is a recent development in Cambodia. By comparison, medium-term, sector-wide planning dates back two decades. The five-year Education Strategic Plan (ESP) underpins MoEYS's development programs. The principles guiding its development have been adopted from the global agenda (i.e., United Nations) of equity and access, quality and efficiency/relevance, and institutional development and capacity building. This was manifested in the first four plans: 2001-2005, 2006-2010, 2009-2013 (update), and 2014–2018. The latest plan (2019–2023) embraces inclusive and equitable quality and lifelong learning, as well as effective leadership and management. The first two were arranged thematically, and higher education was not presented separately. Sub-sectors have been used to guide the development of the last three

¹According to the Department of Finance of MoEYS, in 2019, the share of the higher education budget to the MoEYS (inclusive of funding from DPs) budget was 5.02% (comprising 2.1% from the government's budget and 2.92% from DPs' budget) (MoEYS 2019).

plans, and higher education is being given more prominence. Upon his second re-appointment in 2018, the Minister issued the Reform Strategies for Education, Youth and Sport 2018–2023 (MoEYS, 2018). Only a small section (one page) is dedicated to higher education. After his third re-appointment in 2023, he issued the Strategic Priorities for Education, Youth, and Sport Reform 2023–2028, and higher education has gained more policy attention. MoEYS is now preparing the next ESP 2024–2029. In 2019, MoEYS issued the Education Roadmap 2030, which has a focus on higher education and is mainly drawn from the Higher Education Roadmap below.

Sub-sector long-term planning has been undertaken more recently, thanks mainly to HEQCIP. MoEYS issued the Policy on Higher Education Vision 2030 in 2014, and in 2017, the Cambodian Higher Education Roadmap 2030 and Beyond, which aimed to operationalize Vision 2030. Like ESP, the former covers quality and relevance, access and equity, and governance and management, while the higher education roadmap mandates four goals: quality and relevance, access and equity, internationalization, and governance and finance. Selected major elements of these policies informed the preparation of the ESP 2019-2023. In 2021, MoEYS prepared the Strategy for Higher *Education 2021–2030* to improve the quality of programs of selected HEIs toward national and international standards and to increase research productivity to support national development. These policies are insufficiently well implemented to meet the goal of driving comprehensive national development, given little national investment, institutional (in)capability to implement them in their entirety, technical complexities of the operation, and the need for comprehensive legal and political reforms to bring about many initiatives.

Cambodia has no policy on studying abroad or the development of faculty members and staff. ESPs make little mention of the matter, while the more recent plans contain some patchy initiatives on faculty development and mobility through mobilizing foreign support. *The Reform* Strategies for Education, Youth and Sport 2018– 2023 also did not cover internationalization or faculty development, but the Strategic Priorities for Education, Youth, and Sport Reform 2023-2028 commits to developing the qualification and capacity of the faculty and staff of MoEYS and HEIs to deliver quality programs, conduct and manage research, and reform institutional governance. Capacity building through longterm education and short-term training nationally and internationally is one of the seven policy priorities (MoEYS, 2023). Sub-sectoral plans provide more comprehensive coverage of such matters, with Vision 2030 and Roadmap 2030 and Beyond covering internationalization and faculty development extensively. One goal in the roadmap is internationalization: promoting student and faculty mobility, program mobility, and institutional mobility, programs using foreign languages as a medium of instruction, and organizing international and cultural events. Numerous objectives and strategies across the four goals also aim to promote capacity development. Currently, one practical constraint is translating the policy intent into concrete, sustained, systematic investment programs. With little strategic national investment and buy-in from senior politicians into comprehensive reform, these policies are yet to be meaningfully implemented to drive a comprehensive higher education development to drive economic development and social progress.

Informed by the roadmaps, ESP 2019–2023 has embedded many actions in its existing strategies and policy actions oriented toward internationalization and faculty mobility. Examples include promoting (international and national) partnership programs, curriculum revision with support from overseas HEIs, faculty qualifications upgrade with partner HEIs, research projects in collaboration with industry and partner HEIs, developing internationally accredited programs, and participating in the AIMS program.

Aside from the roadmap, ESP 2019–2023, and Strategic Priorities for Education, Youth and Sport 2023–2028, the other policies only make fleeting mentions of studying abroad in view of faculty development and internationalization.

One action in Vision 2030, for instance, calls for developing a detailed staff professional and career development scheme (MoEYS, 2014, 4). The education roadmap specifies several key activities related to overseas study and/or exposure, namely developing joint degree programs with foreign HEIs, increasing faculty with graduate degrees, improving qualifications of support staff, increasing faculty mobility, and funding for joint research with international partners (MoEYS, 2017, 32-57). The Strategy for Higher Education 2021-2030 makes no explicit mention of internationalization or faculty development or mobility; however, one of the goals focuses on establishing internationally recognized programs and CPD in the context of career development and performance management (MoEYS, 2021).

Policy statements aside, there is no permanent national scholarship scheme to send faculty and staff for overseas study. A review of all national policies also demonstrates the absence of such initiatives, although the government's rhetoric has focused on HRD (Sok et al., 2023). Nor have any feasibility studies been undertaken to assess its practicality and potential. Under HEIP, initially, there was a preliminary study into preparing an HRD master plan, yet it was aborted. Besides, some senior technocrats and politicians have been pondering overseas education for faculty and staff, but this remains an aspiration.

The first instance of outbound faculty mobility funded by the government-managed project occurred through HEQCIP when 79 lecturers and MoEYS staff went to study abroad (64 in Australia and 15 in Malaysia) (World Bank, 2018a). HEIP adopted a programmatic approach to HED. The outbound mobility component was designed to prepare the faculty to manage and teach in these programs; thus, mobility was conducted as joint degree programs or joint overseas supervision. Almost 200 faculty members, mainly from five public HEIs, have furthered their education through this approach (World Bank, 2018b). The two projects have sent hundreds of faculty members for short-term overseas training (World Bank, 2018a, 2018b, 2023).

The World Bank has been the sole DP that funds the government for outbound faculty mobility. There are other DPs: institutional (i.e., HEI to HEI), bilateral, and multilateral programs that support long-term overseas education and/or short-term training; however, they mainly work with their respective HEIs, and aggregated data on funding or activities such as the amount of budget, number of recipients and their fields of study, etc. is unavailable. Nevertheless, the number of faculty members joining the short-term outbound mobility can be substantial.

12.2.3 Study Abroad Programs

As the previous section showed, Cambodia has not paid adequate attention to faculty mobility. Thus, outbound mobility is reactive, random and dependent on the availability and amount of external funding. There is no national comprehensive, strategic plan for academic mobility (or HRD) to serve HED or the needs of the economy and society, as practiced in Japan during the Meiji period or South Korea after the Korean War, or more recently in Malaysia and Vietnam. This reactive, random, and dependent nature and lack of a designated plan exist at the institutional level too. Hence, the characteristics of the faculty mobility-e.g., majors of interest, or countries of destination-are mainly at the goodwill of the benefactors and dependent on the interests of the lecturers.

The destination countries for Cambodian outbound students have changed significantly since independence. During the colonial period, *Sangkum Reastr Niyum*, and the Khmer Republic, a small cadre of tertiary students were mainly sent to France (Ayres, 2000), and to a lesser extent, to a few other countries. Student and faculty outbound mobility resumed after the period of Democratic Kampuchea, yet the destination countries had changed by this time. During the PRK and State of Cambodia, the Eastern Bloc countries were the main destinations and funders, and 6,509 Cambodians pursued their studies there (Mak, 2016). The destination countries have become increasingly

Table 12.1 Outbound students from Cambodia,2016–2020

2016	2017	2018	2019	2020
5,498	6,039	6,401	7,012	7,562

Source http://data.uis.unesco.org/index.aspx?queryid= 3807. Accessed July 11, 2023

diversified since 1993. Fewer students go to the former Eastern Bloc, and the main destinations and funders are located in Asia, Oceania, Western Europe, and North America. Three recent trends of mobility are that: (1) more students have pursued their education through private funding, (2) the number of outbound exchange students has increased significantly, and (3) there is no proactive, systematic national policy for or investment in mobility.

Thanks to external funding and increasing purchasing power, the number of outbound students has increased significantly, although it still lags behind those from more advanced ASEAN countries. There were 7,562 outbound students in 2020, increasing from 5,498 in 2016 (see Table 12.1). Thailand, Australia, the USA, Vietnam, and France have remained the top five destination countries (Sok et al., 2023). Other popular destinations include Saudi Arabia, Japan, South Korea, Malaysia, New Zealand, the United Kingdom (UK), Canada, and Germany (Mak, 2016).

There is no national data on student and faculty exchange. Nevertheless, given the availability of external funding, outbound mobility is higher than inbound mobility and has been increasing. Student mobility is also higher than faculty mobility (see Sok & Bunry, 2021 for some figures). Since 2018, the government has allocated a small budget to participate in the AIMS program. However, given the bureaucratic capacity to handle it and the impact of COVID-19, it was not until 2023 that the first batch of five students was sent to Malaysia (4) and Thailand (1). In 2024, the government has continued to allocate the national budget to fund the mobility of 10 more students. This project is small, yet it represents the commitment to regional mobility.

Multilateral institutions, foreign not-for-profit foundations, and bilateral programs are the main funding sources for outbound mobility. Among these sources are Japan, South Korea, China, Thailand, Vietnam, Australia, New Zealand, France, Britain, Germany, and the European Union (EU). Popular and large-scale scholarship programs include the MEXT scholarship, Japanese Grant Aid for HRD Scholarship, Australia Awards Scholarship, Erasmus Scholarship Program; New Zealand Scholarships, French Government Scholarships, Korean Government Scholarship Program, Thai Royal Scholarships, and the Chinese Government Scholarship Program.

12.2.4 International Aid for Higher Education

The World Bank continues to be the sole major DP, with no other potential donors currently expressing significant interest. Attempts from the international community to engage in the sub-sector started in the 1990s. An extensive study on higher education was commissioned at that time, culminating in the draft (Higher Education) Action Plan 1997 and some unpublished reports (Sok, 2016). However, it was not until 2005 that the World Bank began its soft engagement through CESSP. This was followed by HEQCIP and HEIP.

In 2005, the World Bank allocated a small budget to the sub-sector by nesting a minor component in CESSP. Of this, USD 3 million was allocated to higher education: USD 1 million to RUPP for library expansion, and USD 1 million each to the Accreditation Committee of Cambodia (ACC) and the Directorate General of Higher Education (DGHE) for preparing regulatory frameworks and capacity building. The actual expenditure totaled USD 3.7 million.²

²For further information about the project, see World Bank (2005). *Project Appraisal Document [ESSP]*. Washington DC: World Bank; World Bank (2012). *Implementation Completion and Result Reports [ESSP]*. Washington DC: World Bank.

Internationalization and study abroad did not feature in CESSP, although there were shortterm capacity building activities with the goal of preparing ACC and DGHE to implement the next large-scale investment (World Bank, 2005).

Large-scale engagement started in 2010 with HEQCIP. This chapter does not intend to highlight all the achievements and challenges involved in its implementation or the criticism it received. However, it is important to underline some results in regard to studying abroad and international collaboration. Hundreds of faculty members and staff of HEIs and MoEYS attended 83 overseas training programs in such areas as university management, research management, and approaches to teaching and learning as well as curriculum development. Seventy-nine fellows pursued postgraduate education abroad. The research projects also promoted international collaboration. Some HEIs received grants from international research programs after implementing the project. Internationalization and individual mobility are featured prominently in HEQCIP.

As of 2024, HEIP has reached its final year of implementation. Its key milestone was to promote internationalization at home in terms of both academic programs and research. It has funded 79 programs to revise/develop themselves, achieved with the support of partner HEIs, mainly from abroad. The 53 funded research projects have had international partners. This collaboration has resulted in mobility to and from the partner HEIs, e.g., to conduct experiments or receive lab training. More than 200 faculty members have pursued postgraduate degrees, with the requirement of partial training/study at the partner universities. Besides this, HEIP funded a few hundred overseas training sessions on such topics as quality assurance, research management, curriculum development, instructional design, and assessment. As of early 2024, more than 100 joint articles have been published, mainly internationally. Some programs have been discussing or established joint degree programs and research collaboration with the overseas HEIs. Internationalization and overseas study focus on developing institutional partnerships with foreign HEIs for program development and research collaborations, as well as joint delivery of the degrees to faculty members.

By far, HEIP represents the government's first strenuous attempt to transform the role of the state way from "command and control" and laissez-faire approaches that focus on routine paperwork administration. Instead, the goal is to steer the comprehensive development of the sector by developing proactive legal and policy frameworks, and providing targeted financial support to develop academic and research programs and institutional organization alongside the provision of technical support to HEIs. The reform is overarching; however, there is an inadequate number of committed, competent staff and senior leaders to drive the reform agenda. While there are some signs of initial qualified success in some target institutions-especially ones with highly committed top university leadership-the pool of committed social agents at the HEIs and center is still inadequate, as many are more accustomed to traditional roles, moonlighting or indulgence, and/or not trainable to execute the new missions.

The reform also plays out in the context of legal constraints, which require senior political support and cross-ministerial collaboration to address issues that have not been forthcoming. Technical complexity has intertwined with political and legal complexities and slowed down the reform process. While in more advanced ASEAN countries like Singapore, one would likely see a more top-down political process to instruct for such large-scale reforms, the Cambodian reform is more bottom-up and initiated by technocrats amid little political dialogue and synergistic political drive and other external domination.

At the time of this writing, the government and World Bank are preparing the next project. Its nature is not yet clear, but it can aim to deepen international collaboration, especially toward program quality recognition, joint research for development, and strengthening sectoral governance towards national and regional quality recognition. Strong ownership by Cambodia in its design and implementation and mutual respect and free information flow among all stakeholders will be key to its success.

While these projects are managed centrally, many more are provided directly to HEIs. It is impossible to explore how they have contributed to HED and study abroad experience in this chapter. Such agencies as USAID, JICA, KOICA, ARES-Belgium, AFD, SIDA, and Erasmus programs have implemented collaborative projects with targeted HEIs to strengthen their programs and promote mobility, research collaboration, and institutional governance. Thousands of faculty members and staff have pursued degrees and short-term mobility abroad. Numerous programs and research projects have been established jointly or with support from overseas partners. A few have focused on institutional development, e.g., lab-based education (JICA with ITC), and establishing an information communication technology facility (SIDA with RUPP).

12.2.5 Impact of Studying Abroad

Little research has been conducted on the impact of studying abroad. The next chapter represents a first attempt to explore this topic in higher education. In contemporary Cambodia, which saw almost all educated people wiped out under the Khmer Rouge, studying abroad has been very important in the rebuilding of its human resources. Without overseas study opportunities in the 1980s, it would not have been possible to fill the bureaucratic positions in the 1980s and 1990s with educated individuals. The return of graduates since the 1990s has shaped the political system, market economy, and social reconstruction.

While the positive impacts of study abroad are indisputable, the extent of any negative impacts on Cambodian politics, economy, and society, and HED remain unknown. Has the education attained from the communist countries, for instance, hindered democratic consolidation? Has promoting a liberal market economy without building a strong social foundation and welfare state institutions, created and sustained more inequality and crony capitalism? Has the scholarship to pursue higher education in Islamic countries changed the landscape of Islamism and the Cham community? Have those overseas graduates pioneered a new participatory university management model, or have they simply gone with the flow and been caught up in the hierarchical, patrimonial political system? These are just some questions that need to be asked to shed light on negative impacts (if any), and these questions are beyond the scope of the chapter.

Historically, the impact has been mixed at best. During the colonial period, a small pool of Khmer elites pursued education in France and returned to hold prominent positions in order to pursue France's agenda. Key positions in the Sihanouk administration were still held by overseas graduates, who had opposing political and social viewpoints, leading to tension and confrontation, and finally a coup. The leaders of the Khmer Rouge machinery were mainly former graduates from France who were inclined toward ultra-communist and/or socialist ideologies and were indoctrinated while undertaking their studies there (Chandler, 2008; Edwards, 2007).

The PRK initially relied upon the few remaining educated survivors to rebuild its political and bureaucratic machinery. However, later it relied on local graduates and graduates from socialist countries. Many overseas graduates held and still hold key bureaucratic and political positions. Since 1993, Cambodian students have pursued higher education in many more countries. Many political and bureaucratic positions are now occupied by overseas graduates from more diverse countries, including Japan, Australia, the USA, and France. How this has affected the workplace culture and cohesion is never explored.

In higher education, many graduates have held (senior) managerial positions at HEIs, allowing them to drive institutional development. Nevertheless, whether they play more positive roles in HED than their peers who never study abroad is unknown. While their performance competence can be indisputable, how much they bring about positive changes needs to be explored. The availability of overseas graduates has brought rare human resources into the sector, and anecdotally, they are important in program design and delivery as well as institutional management. However, because they are familiar with Western models of university management, their engagement may have entrenched the Westernization of university management models rather than building a Cambodian model. Moreover, they may develop academic programs that mirror those of their alma maters or those of overseas HEIs, which may not reflect the immediate human resource needs of Cambodia, which requires backward design of the curriculum and adoption of a full-fledged outcome-based or competency-based education in the program design and delivery.

Efforts to locate literature on the impact of studying abroad in Cambodia have proved futile. The Department of Foreign Affairs and Trade of Australia is seemingly the only agency conducting regular tracer studies of Australian alumni and makes the results publicly available. Its fourth and latest study, released in 2014, indicates that they contribute significantly to developing their organization, community, and Cambodia.

Two-thirds of the graduates surveyed believed that their awards had been used "to a great extent" for Cambodia's development, as studying abroad has enhanced their attitudes, skills, and knowledge. They are used in multiple ways to improve their work performance and workplace: greater technical responsibilities (91%), greater roles in policy development (80%), greater financial responsibilities (66%), and/or supervising more staff (68%). Some three-fourths had been promoted since their graduation, with almost half (47%) holding managerial positions. One-fourth (26%) had produced academic publications. "There was strong evidence to indicate that the majority of the alumni have made significant contributions to their organization, to their community and toward national development" (Bryant, 2014, 7). While a majority of the alumni work in the public sector, many serve in the not-for-profit sector, development agencies, and the private sector.

The report also examines the "negative impact" of studying abroad. Brain drain to the

private sector, the not-for-profit sector, and development agencies is a key issue. Of the graduates surveyed, 14% were living overseas. Graduates reported challenges in utilizing their knowledge and skills to effect positive change. Forty-five percent raised "resistance to new ways of thinking and working" as a challenge. Many public sector employees raised similar and other "systemic barriers," e.g., entrenched bureaucracy, political interests, conservatism, and corruption that hinder their contribution to Cambodia's development. Other challenges included the lack of opportunities to further develop skills and knowledge (61%), lack of resources and equipment (46%), and lack of a professional network (43%) (Bryant, 2014).

12.3 Development and Study Abroad Experiences of Faculty Members

12.3.1 Overview of the Four Case Universities

Opening in 1964, the Institute of Technology of Cambodia (ITC) was supported by the Soviet Union until 1975. Closed during the Khmer Rouge, it was reopened in 1980, once again with support from the Soviet Union until 1991. It started its long-term engagement with France in 1993, giving the institute an impetus to improve its governance, administration, financial management, human resources, and educational services. Since then, it has been an important institution for teaching and research in engineering, sciences, and technologies (ITC, n.d.). Academically, it is separated into the Foundation Year Department, six faculties, one research center, plus two sections for teaching English and French. It is the most research-intensive university in Cambodia.

The Royal University of Agriculture (RUA) was established in 1964 as the Royal University of Agronomy Sciences, with support from France. It was reopened as the Institute of Agricultural Education in 1980 to offer short agriculture courses. In 1985, it was renamed

Chamkar Daung Institute of Agricultural Technology, receiving support from the Soviet Union, with courses offered in Russian. In 1990, Soviet support ended, and courses were offered in Khmer. It was transformed into a university in 1994 and given the new name of the Royal University of Agriculture. It has ten faculties, one graduate school, Foundation Year Division, and Division of Research and Extension.³ Although its main emphasis is teaching, it is also one of the most research-intensive tertiary institutions.⁴

The Royal University of Phnom Penh (RUPP) was inaugurated in 1960 as the University of Royal Khmer. Originally, it managed various schools, institutes, and faculties. In 1970, it was changed to the University of Phnom Penh, adding the École Normale Supérieure. It was reopened in 1980 to offer teacher training and foreign language education. In 1988, It was renamed the University of Phnom Penh. Later, three of its faculties expanded to become specialized universities and an institute (RUPP, 2018). In 1996, it adopted its current name. It has six faculties, one institute, and the Department of Foundation Year. Along with the Royal University of Law and Economics (RULE), it is the other university that is a full member of the ASEAN University Network (AUN).

The Royal University of Law and Economics (RULE) was established in 1949 as the National Institute of Law and Economics. After independence, it was integrated into the University of Phnom Penh. It was reopened as the Administrative and Judicial School in 1982, becoming the Faculty of Law a decade later. In 1994, the economics program of the Faculty of Management (now the National University of Management) was moved into the faculty, and it was renamed the Faculty of Law and Economics⁵ and re-integrated into RUPP. In 2003, it was divorced from RUPP and upgraded

to university status. It has four faculties and offers one graduate program. Other component entities include the Foundation Year Program, the English Language Institute, and international programs (in collaboration with universities in France and elsewhere that are run autonomously) (RULE, 2017, 2). It is a teaching university with little focus on research.

12.3.2 University Development Strategies and Staff Capacity Development

ITC has been making inroads into national and international collaborations in research, academic programs, and mobility. Its latest comprehensive 10-Year Strategy 2021-2030 has established twin missions and goals: producing graduates of high talent and applied research products leading to business development and technology transfer. Five strategies were devised to achieve this goal, with one of these specifically focused on building human resources. The specific steps involve the preparation and implementation of an HRD plan to increase the qualifications of academic and professional staff and train managers to implement a decentralized management system. Another strategy, "Creating an investment program and implementing applied research projects, business start-ups, and technology transfer," also requires improving the capacity and skills of its researchers to apply for and manage large research programs. The Strategy identifies the current staffing levels by department and by degree level and the required staffing needed by 2030. Two program indicators also focus on qualifications requirements for and performance management of the faculty and staff. The indicators can be achieved by incorporating them into result-based performance evaluations, which would include CPD and career pathways (ITC, 2021). The Strategy, however, has not been fully implemented.

Table 12.2 shows the figures for its total staff. In 2019, 409 local faculty and staff taught and worked at ITC. Of these, 299 were teaching

³Presentation by an RUA representative in a workshop organized by DGHE on February 18, 2019.

⁴ http://www.rua.edu.kh/de_aboutrua/22041992/about Accessed February 18, 2019.

⁵Interview with RULE senior manager, May 11, 2019.

Employment status	ITC					RUA					RUPP					RULE				
	AD/HD	В	M	D	Total	AD/HD	в	M	D	Total	AD/HD	В	M	D	Total	AD/HD	В	м	D	Total
Full-time lecturers (Female)	0	19	77	56 (11) 152 (11)		0	14 (3) 91 (25		27 1 (3) (132 (31)	0	114 (31)	366 (95)	55 (10)	535 (136)	0	7 (2)	45 (13)	4 (1)	56 (16)
Part-time lecturers (Female)	0	44	38	7	89	0	12 (3) 71 (12)		(0) ¹	96 (15)						0	40 (5)	284 (69)	67 (13)	391 (87)
Trainee lecturers (Female)	0	∞	37	13	58	NA					NA					NA				
Full-time support staff (Female)	42 (15)	42 (15) 40 (15) 16 (6)	16 (6)	12 (2)	110 (38)	41 (16)	61 (37)	13 (8) 5 (2)		120 (63)	90 (48)	111 (54)	34 (12)	3 (0)	238 (114)	51 (36)	51 (36) 48 (24) 55 (13)	_	8 (0) 162 (73)	162 (73)
Part-time support staff (Female)	NA	NA	NA	NA	NA	0	0	0	0		9 (5)	36 (11)	1(1)	1(1)	47 (18)	0	0	0	0	•
Foreign lecturers and 13 staff (Female)	13				13	0	0	3 (1)	10 1 (3)	10 13 (4) (3)	7 (2)	6 (2)	4 (1)	17 (5)	6 (2) 4 (1) 17 (5) 34 (10)	0	8 (4)	58 (21)	31 (8)	97 (33)
Total	42 (10.3%)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	167 (41.1%)	88 (21.5%)	422	41 (16)	87 (43)	178 : (46)	55 (8) (8)	361 (113)	106 (55) 267	267	405	76	854	51	103	442	110	706

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= Doctoral Degree; NA = NOt Available*Notes* AD/HD = Associate Degree/High Diploma or lower; B = Bachelor's; M = Master's; D: *Source* Compiled by authors from data provided by the four HEIs 2019 staff, which can be further divided into fulltime, trainees and part-time lecturers, lecturerresearchers, and full-time researchers (ITC, 2019a). The unique features of the institute are the employment of trainee lecturers (full-time non-civil servants), lecturer-researchers, and full-time researchers. These are positions not available at other HEIs. Of the local staff, 168 (41.1%) held master's degrees in 2019, while 88 (21.5%) held Ph.D.s, 56 (63.6%) of whom were full-time teaching staff. The 58 trainee lecturers made up 19.4% of all teaching staff. As expected, more non-teaching staff had lowerlevel degrees, with just 12 (10.9%) holding Ph.D.s and 16 (14.5%) master's degrees. ITC does not contract part-time non-teaching staff.

RUA has continuously developed its longterm strategic planning. Similar to ITC, its latest comprehensive 10-Year Strategy 2021-2030 presents two missions and goals: producing agriculture students of high capacity and basic and applied research linked to development. It devised five strategies, one of which focuses on developing and incentivizing human resources to fulfill the need of the programs. The specific steps are to implement a performance management system that incentivizes the faculty and staff linked to annual performance results and CPD and to prepare and implement an HRD plan to increase their qualifications. Two program indicators on human resources are similar to those of ITC (RUA, 2021). It does not have a human resource policy.⁶ Despite its comprehensiveness, the Strategy has not been fully implemented.

As Table 12.2 shows RUA had 348 local faculty and staff (31% female) in 2018. Of these, 132 were full-time teaching staff (23% female), and 96 were part-time teaching staff (16% female). The number of full-time non-teaching staff was 120, and there were no part-time nonteaching staff. A majority of the teaching staff held master's degrees, with 69% full-time (19% female) and 74% part-time (12.5% female). Few full-time non-teaching staff held doctoral or master's degrees. All foreign faculty members held Ph.D.s (82%) or master's degrees (18%). There were 19 inbound exchange staff and 13 outbound staff comprising three working as exchange staff, five pursuing master's degrees, and five completing Ph.D.s (Table 12.2).

The strategies developed by RUA and ITC do not detail activities to promote studying abroad, nor do they indicate any budget allocation for faculty or staff to study abroad or for capacity building. In practice, however, they have expanded partnerships with foreign HEIs and other international partners to enable faculty and staff to pursue opportunities for education and training abroad. Through external support, they have sent faculty and staff abroad through numerous scholarship schemes (i.e., as stand-alone programs or as components embedded in research projects/programs) and training programs.⁷

Through its patchy 2019–2023 Strategic Plan, RUPP has set an ambitious vision to become Cambodia's "flagship university," with regional standing in teaching and learning, research and innovation, and social engagement. The goal is to equip students with the knowledge, skills, values, and attitudes required by society, provide quality research and innovation, and actively engage with society. It has identified human resources as one of the four key drivers to achieving the goal. "Key" activities in the plan are aimed at enhancing the capacity of the faculty and staff through training inside and outside Cambodia, including faculty mobility (RUPP, 2019).

RUPP claims to prioritize research, innovation, and staff capacity building. However, in practice, approaches to realizing this goal are not systematic. According to a dean and a senior officer of the Personnel Management Office (PMO), for example, due to a lack of information flow from faculties, departments, and PMO, the system for managing the supporting documents related to sending staff abroad for short-term training is inadequate. Moreover, there is no system for developing or recording

⁶Interview with RUA senior manager, May 2, 2019.

⁷Interview with RUA senior manager, May 2, 2019.

professional development plans.⁸ Thus, the information provided by the International Relations Office (IRO), PMO, and Study Office regarding education and training outcomes documented here is indicative, and not conclusive.

Table 12.2 displays the number of faculty and staff at RUPP. There were 820 local teaching and non-teaching staff, 535 (65.2%) of whom were teaching and researching at RUPP in 2019. Of these, 399 (74.6%) were male, while 153 (53.7%) of the 285 non-teaching staff were male. Information about part-time teaching staff was unavailable. Of the teaching staff, 55 (10.3%) had doctoral/Ph.D. degrees, 366 (68.4%) held master's degrees, and 114 (21.3%) had received bachelor's degrees. In the case of non-teaching staff, four (1.4%) had Ph.D.s, 35 (12.3%) possessed master's degrees, 147 (51.6%) had bachelor's degrees, and another 99 (34.7%) held certificates.

The plan contains a policy statement on staff development. However, according to a senior manager, it is intended as a general guideline. No system has been established to implement it, and faculties are not required to design or implement a strategic plan to upgrade their staff. Staff are encouraged to seek training and study abroad opportunities themselves, and those offered directly by donors or partner institutions are not managed systematically.9 Another manager commented, "We have no system to help them. We do encourage them, though [...] There is a limited budget to support staff members in doing a Ph.D., but it's rather selective."¹⁰ The other hurdle is the absence of a baseline indicator or designated target. As the same faculty member stated, "Even with an intention toward staff development, we have not set a certain number/figure, for example, an increased

Table 12.3 Number of faculty members from RUA andRULE going abroad for exchange programs in 2018

	RUA	RULE
Inbound foreign exchange (female)	19 (9)	84 (26)
Outbound foreign exchange (female)	13 (5)	5 (0)

Source Compiled by authors from data provided by RUA and RULE (2019a)

percentage, and we have not had any baseline to compare with."¹¹

RULE issued its fleeting Strategic Plan 2019-2023 in 2019, which envisions that the institution will become a leading university renowned for quality education, research, publication, and innovation. Nevertheless, it provides inadequate details on how to achieve this. A few dozen activities are listed, with six of these focusing on faculty and staff development. They include conducting training on teaching methodology, improving the capacity of academic staff through pursuance of further study and training, and conducting training to promote specialized skills. Also included are organizing training on soft skills, promoting faculty exchange, arranging field trips, and coordinating social activities (RULE, 2019a). The plan gives no details on how these would be implemented. There is no separate policy for HRD.¹²

RULE had 609 local staff members (29% female) in 2018. Of these, 56 were full-time and 391 were part-time teaching staff. The university also employs a large pool of sessional teaching staff. The number of full-time non-teaching staff was 162, with no part-time staff. The majority of teaching staff held master's degrees: 80% among full-time (23% female) and 73% among part-time (18% female) staff. Few full-time non-teaching staff held Ph.D.s, while some one-third each held master's, bachelor's, or associate degrees or lower (Table 12.2). There were 84 inbound exchange staff (Table 12.3).

⁸Interview with RUPP mid-level manager, February 11, 2019.

⁹Interview with RUPP senior manager, April 5, 2019.

¹⁰Interview with RUPP mid-level manager, April 1,2019.

¹¹Interview with RUPP mid-level manager, April 1, 2019.

¹²Interview with RUPP senior manager, May 11, 2019.

The plan does not mention activities to promote studying abroad. In practice, there is no institutional budget to promote study abroad for degrees. Expansion of partnerships with international partners is the main strategy employed to expand staff opportunities to pursue education and training abroad. Some lecturers have pursued degrees abroad through such arrangements. There are instances where RULE has provided some small in-kind support, something that is considered on a case-by-case basis. Support is available for short overseas training and is likewise considered on a case-by-case basis. Since 2013, the university has organized short visits to AUN members to expose faculty and staff to HED in the region. Around a dozen staff members join the trip each year.

12.3.3 Study Abroad of Faculty Members

This section presents the study abroad experiences of the four HEIs. At ITC, there has been an increase in faculty and staff going abroad, with capacity building as the main priority. This is done by sending employees abroad for further experience in teaching, scientific research, and training. For instance, in 2019, 29 lecturers were enrolled in postgraduate studies abroad, and 112 were sent on short-term overseas missions. Funding came from diverse sources, including its own budget, Agence Universitaire de la Francophonie (Association of Francophone Universities) (AUF), ARES-CCD, Erasmus+, AUN/SEED-Net, JICA, etc. (ITC, 2019b). The institute also conducts faculty exchanges. In the same year, based on data provided, it hosted four lecturers from its overseas partners and dispatched 17 abroad, mainly to France and Japan. Its strategic plan also aims to build staff capacity through research collaboration. Research projects are usually conducted in collaboration with international partners (ITC, 2019b).

These initiatives have propelled a constant increase in the number and qualifications of faculty and staff. In the 2019 report on the ITC consortium meeting, the increase in the number of Ph.D. and master's degree-holding faculty members was highlighted, with numbers growing from 33 Ph.D.s and 99 master's degreeholding faculty members in 2012 to 76 and 152, respectively, in 2019 (ITC, 2019b). This rise was credited to international cooperation. Table 12.4 shows the foreign countries from which ITC faculty obtained the highest degrees. Noticeably, half received the highest degrees from abroad, with ASEAN, France, and Japan being the most popular destinations. There is strong individual commitment to pursuing higher degrees among

Country	Doctor/Ph.D.	Master's	Bachelor's	Total
Australia	1	1	0	2
ASEAN (except Cambodia)	14	50	3	67 (32.7%)
France	21	37	1	59 (28.8%)
Japan	28	4	0	32 (15.6%)
Germany	0	1	0	1
Spain	2	0	0	2
EU (except members above)	0	0	0	0
Soviet Union/Russia	0	7	0	7
USA	1	1	0	2
Others	8	25	0	33
Total	75	126	4	205

Table 12.4 Foreign countries where Cambodian staff from ITC obtained their highest degrees, as of 2019

Source Compiled by authors based on data provided by ITC 2019

Country	Doctor/ Ph.D.	Master's	Bachelor's	Total
Australia	3	1	0	4
ASEAN (except Cam- bodia)	5	23	1	29
France	3	2	0	5
Japan	3	5	0	8
Germany	2	4	0	6
Spain	1	0	0	1
Sweden	1	0	0	1
Belgium	0	1	0	1
EU (except members above)	3	2	0	5
Soviet Union/ Russia	1	0	0	1
USA	2	1	0	3
South Korea	2	4	0	6
Total	26	43	1	70

Table 12.5Overseas countries where Cambodian staffof RUA obtained their highest degrees, as of 2019

Source Compiled by authors from data provided by RUA in 2019

many faculty members, and there is also a strong encouragement from ITC to support those with the individual drive to complete higher degrees. France and Japan are its current strategic partners. However, as it expands its partnerships, the landscape of foreign countries from which its faculty pursue degrees will likely change.¹³

Seventy Cambodian faculty members of RUA obtained their highest degrees abroad (see Table 12.5). Twenty-six obtained Ph.D./doctoral degrees, 43 received master's degrees, and one held a bachelor's degree. The most popular destination countries were in the ASEAN group. Their fields of study were mainly in agricultural sciences, agricultural engineering, agricultural economics, livestock production, veterinary medicine, and food sciences. The university does not allocate any of its budget to support

study abroad or the training of its faculty members. Instead, it receives funding from partner HEIs, international networks, and collaborations. Some scholarships are embedded in specific university projects, as discussed below.¹⁴

The trends in study abroad from RUA have changed in terms of destination countries, levels of degrees, and areas of specialization. Many RUA staff went to selected countries in the EU and ASEAN due to the funding availability and arrangements with partners from these countries. Recently, there has been an increasing number of faculty members holding Ph.D.s, although the number of Ph.D.-holding faculty and opportunities for overseas education varies noticeably from faculty to faculty. The increasingly popular fields of study are livestock production, agronomy and food processing, and agricultural sciences and agricultural engineering.¹⁵

There are no RUA regulations mandating specific duties from faculty members after returning from overseas studies. As a requirement, there is a contract regarding duties upon return between the Ministry of Agriculture, Forestry, and Fisheries and civil service staff who pursue their education abroad. However, this is mainly pro-forma. The RUA does not have its own budget for overseas education and training of faculty, and the number of civil servants is decreasing. Therefore, two key HRD strategies to promote education abroad are to increase international partners and networks to create new opportunities and recruit on-contract staff. There are some risks with studying abroad in terms of staff retention and turnover, e.g., brain drain to other HEIs and the private sector. However, it is expected that this has occurred to a small degree, given the "limited opportunities within the university" and better opportunities elsewhere. Some civil service lecturers are too old for education abroad and choose not to apply.¹⁶ Many lecturers are not willing or able to pursue degrees abroad, given their family

¹³Interview with ITC mid-level manager, March 13, 2019.

¹⁶Interview with RUA senior manager, May 2, 2019.

¹⁵ Interview with RUA senior manager, May 2, 2019.

¹⁴Interview with RUA senior manager, May 2, 2019.

situations and other personal commitments and capacities.

At RUPP, 274 civil servant lecturers obtained their highest degrees abroad. Among these, 67 had Ph.D.s, and 207 others had master's degrees conferred by international institutions. Japan, Australia, France, Korea, and the USA were the top countries from which they obtained the degrees (see Table 12.6). Figures for contracted staff were unavailable, but many held degrees from abroad. They held degrees in various fields, spanning the arts, humanities, social sciences, and sciences. RUPP does not allocate its budget to support its faculty and staff for overseas study and training. Thus, they mainly received support from its institutional networks and other international funding sources.

Faculty members at RUPP also engage in outbound capacity building through missions, staff exchanges, and short-term training. Such mobility is not formally recorded. As for terms and conditions attached to the study abroad programs endorsed by RUPP, faculty members are

Table 12.6Foreign countries where Cambodian staff atRUPP obtained their highest degrees in 2018

Country	Doctor/Ph.D.	Master's	Total
Australia	9	14	23
Korea	4	10	14
France	9	11	20
Japan	15	14	29
UK	1	2	3
Germany	3	2	5
EU (Except members above)	5	8	13
Soviet Union/ Russia	2	9	11
USA	4	11	15
ASEAN (other than Cambodia)	10	38	48
Others	5	88	93
Total	67	207	274

Source Compiled by authors based on data provided by RUPP (2019)

Note This record applies to civil servants only. Records by gender were unavailable

Table 12.7	Overseas	countries	where	Cambodian	staff
at RULE obt	ained their	highest d	egrees,	as of 2019	

		-88-	,	-
Country	Doctor/ Ph.D.	Master's	Bachelor's	Total
Australia	1	9	0	10
ASEAN (except Cam- bodia)	3	21	0	24
France	8	31	0	39
Japan	6	4	0	10
UK	0	3	0	3
Germany	1	0	0	1
EU (except members above)	0	4	0	4
Soviet Union/ Russia	3	4	0	7
USA	2	10	0	12
Others	2	12	0	14
Total	26	98	0	124

Source Compiled by authors from data provided by RULE (2019a)

not required to fulfill specific duties upon return. This also applies to those who sign agreements with donors or scholarship providers. Brain drain and staff turnover are influenced by both push and pull factors, as their development trajectory at the university may not match their interests, and the benefits provided by working elsewhere may outweigh those offered by RUPP amid a traditional, routine-based human resource management system.

At RULE, 124 faculty and staff members have obtained overseas degrees (see Table 12.7). Of these, 26 earned Ph.D./doctoral degrees and 98 master's degrees as their highest degree. The most popular country/bloc of destinations were France and ASEAN. The broad fields of study are law, economics, and related fields. Given the absence of institutional funding and limited external funding through RULE, they have obtained funding for studying abroad through various bilateral and multilateral scholarship schemes.

There are no regulations or duties mandated by RULE for those returning from study abroad. This also applies to the few lecturers who pursued their degrees through RULE. There are few major problems resulting from study abroad, including staff turnover and retention, although brain drain to the public and private sectors exists to some extent. Many are not willing or able to pursue degrees abroad, given their family concerns and other personal commitments and capacities.¹⁷

12.3.4 International Aid to the Universities

This section examines the international collaborators and support received by the HEIs. ITC is perhaps the HEI receiving the most in terms of budget and number of projects. In 2019, for instance, there were 30 projects recorded at ITC (see Sok et al., 2023). This is not a conclusive list, as there are unrecorded projects running at the faculty or department levels. While the total budget is unknown, big projects have included those funded by the World Bank (through MoEYS) (USD23 million), ADB (through MoLVT) (USD 10 million), the Japanese government (USD 5 million), Agence Francaise de Development (AFD) (USD 1.2 million), and the ARES Project (ARES-CCD) (USD 1 million). Some cover sub-projects running across multiple departments and centers, while others support individuals' research projects and publications.

ITC has been developing itself as a research institution, having established its Research and Innovation Centre (RIC) in 2015 with support from JICA. In 2019, it had 51 lecturer-researchers,¹⁸ bringing the number of researchers to 90 (ITC, 2019b), who are leading and collaborating on 77 projects. Indispensable to RIC and its projects are support from and collaboration with various international partners, including ARES-CCD (Belgium), AgroSup Dijon (France), and AUN/Seed-Net JICA. A prime example of such collaboration is SATREPS, which involves 35

of its researchers and master's degree students, researchers from other local institutions, and 31 Japanese collaborators from numerous institutions (ITC, 2019b). This has resulted in the consolidation of its research foundation, substantial research publications, and degree upgrades.

RUA is the university that has perhaps received the third-largest external funding of the four cases. Between 2016 and 2018, it recorded nine projects (see Sok et al., 2023). This is not inclusive, as there are likely to have been unrecorded projects at the faculty or department level. Large projects included the ones funded by the USA (USD 2.2 million), the EU (USD 600,000), and the International Fund for Agricultural Development (IFAD) (USD 750,000). In 2019, it also received USD 12 million in funding from HEIP. Recently, it has established additional international networks and collaborators, especially in research and capacity building. Financial support is covered by its partners, and RUA may contribute in-kind support. These projects cover institutional development, scholarships and training, curriculum development, research capacity building, and lab facilities. Such collaborations are a significant means of achieving capacity building. Between 2016 and 2018, there were 14 doctoral scholarships and 19 master's scholarships offered, with 136 faculty members attending training supported by 13 collaborators and networks. All scholarships and trainings were fully funded by the collaborators and networks.

Between 2016 and 2018, RUPP recorded 40 projects with its partners (see Sok et al., 2023). Key funders include ERASMUS+, the World Bank (via MoEYS), Sweden, Japan, and South Korea. The authors were asked not to reveal the budget for each project. The number of projects is indicative and not conclusive, as certain projects at the department level are not reported to the IRO. An interview with a dean confirmed this practice. In 2019, for example, several departments implemented some projects—how-ever, information regarding these was not disseminated to the faculty or the IRO. One PMO officer estimated that the IRO probably receives

¹⁷Interview with RULE senior manager, May 11, 2019.

¹⁸A lecturer-researcher divides his/her work schedule for teaching and research based on the 50–50 formula.

about 50% of the information regarding such projects.¹⁹ Other significant highlights include academic program support and development, infrastructure upgrade, and capacity building through exchange, training, and research collaboration.

The data provided by RULE indicates that it does not undertake large-scale projects. The existing projects primarily focus on student and staff exchange and program development. Between 2016 and 2018, the university recorded 17 small-scale projects, mainly in partnership with French universities (see Sok et al., 2023). The total budget and details of each project's budget remain unavailable. Over the past three years, the faculty members at RULE have benefited from support for capacity building from this international support. There were four doctoral scholarships and 62 participants in training, supported by its collaborators and networks. The focus of the training was on research skills, teaching methodology, library management, and quality assurance. It's also worth noting that only a few people benefit from each project.

12.3.5 Impacts of Study Abroad

Among the four universities, ITC is perhaps where the impacts of studying abroad can be seen the most extensively, given the larger scale and length of its collaborations, as well as its committed university leadership. The impacts can be observed at various levels, from staff upskilling and upgrades, to pedagogy and curriculum, to research and publications. Curricula are revised annually with inputs and feedback from industry and overseas partners. New programs are proposed or developed under the stewardship of overseas returnees, who are also key players in renewing partnerships and bringing in new ones. Many "study abroad" lecturers are actively engaged in teaching and research, making ITC the most research intensive of the four cases, with the most regularly updated curriculum across all the programs. Partners of ITC also run local workshops and seminars for lecturers and students. These lecturers, in turn, give seminars to other students, industry people, and other lecturers.

The establishment of the RIC is another direct impact of studying abroad. ITC has the most innovative research management system, extensive research engagement, and perhaps the highest research outputs per full-time lecturer in Cambodia (see Ros & Heng, 2022). Besides this, the returnees have taken up numerous management positions at ITC, thus contributing to developing the units they are responsible for. The ripple effect through skill transfer is also present in the industry, as some faculty have suspended their academic work to pursue careers in industry or (moonlight to) establish their firms or teach/work elsewhere. A senior manager observed that ITC's study abroad faculty are among the most sought-after, thanks to their academic credentials, research capacity, and project/publication records.²⁰ Some (former) executives and faculty members have also been appointed to technical and political positions in government agencies.

Similarly, for RUA, the study abroad of faculty members is perceived to have had positive impacts on its institutional development. Support for this view can be seen in the increase in peer-reviewed publications. Moreover, overseas-educated faculty have brought in new partners and initiated new projects. Some have shared their knowledge and experiences abroad with other faculty members, e.g., regarding curriculum development and pedagogy, thus contributing to capacity building among its staff. During the group discussion, some lecturers expressed the view that their international engagement has enhanced their capacity for program development. It has also improved their

¹⁹Interview with RUPP mid-level manager, February 11, 2019.

²⁰Interview with ITC mid-level manager, March 13, 2019, and focal group discussion with ITC lecturers, April 28, 2023.

RUA is a technical university with inadequate experience in education management. Many returnees are promoted to various management positions and professors.²¹ Studying abroad has also had positive impacts on the public and private sectors. Some (former) executives and lecturers have transferred to work in other public or private institutions or provided consultancy services, although this is done on a private basis.

At RUPP, study abroad has contributed significantly to its development. The returnees have been provided more opportunities in teaching, research, and administrative/management work such as teaching in more prominent programs, leading collaborative research projects, and promotion to management positions. Many management positions are held by overseas returnees. The focus group discussion with faculty members revealed that the engagement allows them to adapt management practices they went through during their study or training in their work. Numerous returnees have established new programs and streamlined the existing ones based on the models they witnessed during their study abroad. Their exposure and engagement have improved their teaching capacity, e.g., use of flipped classrooms and online teaching platforms. Studying abroad has also improved their research competence, management experience, engagement, and productivity.²² The majority of the research projects are handled by overseas returnees. More importantly, the returnees are the key determinants of teaching and learning quality. Some lecturers have also increased their social engagement, e.g., consultancy and policy dialogue, although this usually happens at the individual level, and there is little effort made to institutionalize social engagement. Some (former) managers and faculty members have been appointed to technocratic and political positions.

At RULE, the impact of returnees on institutional development is-while varying from department to department-well evidenced. The key impact can be seen in regard to program development, especially curriculum development and pedagogy. Such programs as Financial Economics and Accounting Management were the initiatives of lecturers who graduated from Japan and France, respectively. With knowledge and experience gained from studying abroad, returning faculty members can occasionally share their knowledge and experience with others. The impact on research programs is minimal, although some returnees publish individually. There is evidence of returnees promoting social services, and the Graduate Program, chaired by a graduate from Japan, is one of the most active (RULE, 2019b).

The contribution in the form of consultancy and advisory services through the university has been more limited.²³ Some overseas graduates have organized international partnerships. This can include partnering with their alma mater and other HEIs. This has increased institutional partners and benefited the institution, for example, by bringing in international experts and joint degree programs.²⁴ RULE is perhaps the public university that has the most joint degree programs provided in partnership with international providers. Some returnees have taken up management positions. Some former executives and faculty members have left the university and served in various positions in the government.²⁵

²¹Interview with RUA senior manager, May 2, 2019, and focal group discussion with RUA lecturers, April 28, 2023.

²²Focal group discussion with RUPP lecturers, April 28, 2023.

²³Interview with RULE senior manager, May 11, 2019.

²⁴Interview with RULE senior manager, May 11, 2019.

²⁵Interview with RULE senior manager, May 11, 2019.

12.4 Concluding Remarks

This chapter provides a snapshot of HED and the impact of studying abroad in Cambodia. The following section offers some concluding observations.

Although there are more faculty and staff with local degrees, the number who have received an overseas education at the four HEIs is quite large and has been increasing. Most significantly, in terms of HED, the number of faculty and staff who hold postgraduate degrees from overseas continues to grow. More and more faculty members have now held postgraduate degrees, and their fields of study have become more diverse. The total figure for overseas graduates nationwide is unavailable, but it is likely to be substantial since higher education is considered a priority sector requiring overseas support. The opportunities for overseas education and training are mostly funded by bilateral and multilateral agencies. The top five destination countries are Australia. France, the USA, Thailand, and Vietnam. For the four universities, the top destination countries are selected EU and ASEAN countries, Japan, and Australia. This is understandable, given the availability of scholarships and projects they have funded.

Unlike more advanced countries in Asia, there is no permanent national scholarship scheme or national fund for overseas education and training for faculty and staff. However, there are some ad-hoc project interventions-notably HEQCIP and HEIP-that focus on degree upgrades for faculty and staff at HEIs. Likewise, at the institutional level, the four HEIs allocate very little/none of their budget for HRD. There are no national and institutional master plans for HRD. Hence, capacity building for faculty members is fairly random and at the mercy of donors rather than nationally/institutionally crafted and funded to achieve institutional and national development goals. Without the necessary overarching national/institutional policies and strategic financial investment, HRD takes a natural course and is not positioned to support the institutional and national development agenda goals.

International assistance provided to HEIs and MoEYS and scholarships is essential for HRD. It should be applauded and credited for higher education transformation. However, such assistance comes with its own shortcomings and costs, including uneven human resource investment across HEIs and disciplines, dependence on external support, and fragmentation of the Cambodian national agenda. For example, some programs are likely to receive more funding. This includes STEM-related majors and majors related to human rights and democracy for some scholarship programs, as well as HEIs or programs offering STEM-related degrees or conducting STEM-related research. As such, prioritization of investment based on donors' agendas and interests can be detrimental to a comprehensive HRD for Cambodia's HED and national development (Un & Sok, 2022).

At the four HEIs, international partners are numerous and highly diverse. Few come with large-scale and/or long-term investments, while many are short-term and/or small-scale. ITC receives the largest and most consistent support, while RULE receives the least. The other two institutions, RUA and RUPP, lie somewhere in between these two. At the national level, the World Bank has been the most significant and largely sole partner, although other donors are likely to consider investing in the future. The HEIs and concerned central agencies should learn to mobilize and manage international aid to reposition themselves to better support the sector's development.

There are as yet, few publications on the impacts of studying abroad. According to the Australian study discussed in this chapter, the impact of graduates sponsored by Australia on Cambodia's development and the development of institutions is positive, even though challenges remain (Bryant, 2014). At the four HEIs examined here, the impact on institutional development, program development, and career advancement is also shown to be positive. Notably, although the number of Ph.D.-holding faculty members remains relatively small, the growth in numbers is remarkable. The next step for university faculty and staff is to mobilize international and national

support to consolidate program quality and institutional development based on a comprehensive institutional strategy. Such endeavor will require transformative leaders at the university and national levels who put their heart and soul into the higher education transformation.

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Appendix

Basic information about key informants

HEI	Position	Interview date
ITC	Mid-level manager	March 13, 2019
RUA	Senior manager	May 2, 2019
RUPP	Mid-level manager	February 11, 2019
	Mid-level manager	April 1, 2019
	Senior manager	April 5, 2019
	Senior manager	May 11, 2019
RULE	Senior manager	May 11, 2019

Basic information about focus group discussions with lecturers

HEI	Participant numbers	Date
ITC	7 Lecturers	April 28, 2023
RUA	5 Lecturers	
RUPP	7 Lecturers	

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Say Sok, Ph.D., is currently the long-term Technical Adviser on governance, policy and planning, and project management for the Higher Education Improvement Project, implemented by the Ministry of Education, Youth and Sport (MoEYS), Cambodia. He holds a Ph.D. in Political Economy from Deakin University, Australia. He is a board member at the Cambodia Development Center and an advisor and adjunct lecturer at the Department of Media and Communication, Royal University of Phnom Penh. He has worked for or provided consultation to such institutions as MoEYS, Cambodia Development Resource Institute, KHANA, and the National University of Singapore in research, training, and program design and program operations. He has published extensively in (higher) education, resource governance, population health, and media and communication.

Rinna Bunry is the Chief of the Policy and Curriculum Development Office, Department of Higher Education, Ministry of Education, Youth and Sport, and the head of the Governance and Higher Education Institution Management team of the Higher Education Improvement Project, in which she is at the forefront of initiating and implementing higher education governance and management reform. She obtained her master's degree in Development Studies from the University of Melbourne in 2014. She has published rather extensively on genderrelated issues, higher education governance and management, and school administration and leadership. **Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits any noncommercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if you modified the licensed material. You do not have permission under this license to share adapted material derived from this chapter or parts of it.

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13

Exploring the Impacts of Study Abroad Experiences of Cambodian Faculty Members: Comparing Study Abroad and Study at Home

Akemi Ashida and Yuto Kitamura

Abstract

To promote national development, highly skilled human resources must be cultivated. In Cambodia, talented young people have been actively encouraged to study abroad through financial aid from donor countries and international organizations. People who have studied overseas are now taking up leadership roles and participating actively in the government, educational institutions, and businesses. This study focuses in particular on university faculty members who have experienced studying abroad. To elucidate how their study abroad experiences affect their careers and work, we carried out an online questionnaire survey to learn more about their current research-, education-, social contribution-, and university management-related activities. Accordingly, in terms of researchrelated activities, the Study Abroad group and the Study at Home group showed a clear difference in all items. Conversely, there was no clear

Graduate School of International Development, Nagoya University, Nagoya, Japan e-mail: ashida@gsid.nagoya-u.ac.jp

Y. Kitamura Graduate School of Education, The University of Tokyo, Tokyo, Japan

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation. Agency (JICA), Tokyo, Japan difference in social contribution-related activities. Semistructured interviews and discussions conducted according to the results of this survey presented a common belief that an environment that enables devotion to research is crucial to be able to engage in research activities and that research is the primary goal of studying abroad. The results of the above-mentioned questionnaire survey were found to be impacted by these perceptions.

Keywords

Cambodian faculty members · Scholarship availability · Learning and research environment · Medium of instruction · International experience

13.1 Introduction

Cambodia's modern higher education, which commenced with the establishment of the Royal Khmer University in 1960, had previously been entirely destroyed. All public education systems, including higher education, were abolished in Cambodia during the Democratic Kampuchea period, which was under the rule of the Khmer Rouge in 1975 and lasted for nearly 4 years. Vietnam-backed forces then ousted the Khmer Rouge from power, and in 1979, the socialist People's Republic of Kampuchea was established, during which the public education system was

A. Ashida (🖂)

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restored. Consequently, today's higher education in Cambodia practically has a history of only a little over 40 years. Furthermore, higher education institutions could not secure sufficient resources in the 1980s and 1990s, as the civil war persisted. Nonetheless, since the signing of the peace agreement in 1991, Cambodia's higher education has expanded quantitatively and improved qualitatively. Support from donor nations and international organizations is one of the crucial factors that have contributed to fostering the expansion of

higher education (Williams et al., 2014).

In terms of international partners' support for higher education, in addition to providing direct financial aid for the development of university facilities, they have accepted international students from Cambodia and sent teachers there. Immediately after Cambodia's independence from France, France and French-speaking countries were the destinations mainly chosen by university faculty members in Cambodia to study abroad. However, in the 1980s, when the country was being rebuilt with the aid of Vietnam (and the then Soviet Union), the former Soviet Union and Eastern European countries were chosen as destinations for studying abroad. From the 1990s to the 2000s, Japan actively accepted international students from Cambodia in order to promote peacebuilding and national reconstruction and development. Moreover, from the 2010s onward, destinations for studying abroad, including South Korea, China, and neighboring countries in Southeast Asia, besides the United States, European countries, Australia, and Japan, which were traditional study abroad destinations, are expected to diversify. Notably, behind the diversification of destinations for studying abroad, in recent years, Asian countries are actively promoting the internationalization of higher education (Kitamura & Umemiya, 2013).

Considering these historical shifts, it is impossible to disregard how international cooperation and aid have contributed to the growth of Cambodia's higher education sector.¹ Particularly, the Cambodian government has actively encouraged talented young people to study abroad while receiving financial support from donor countries and international organizations, in consideration of the significance of developing highly skilled human resources in promoting national development. Today, people who have studied abroad are taking leadership roles and participating actively in the government, educational institutions, and businesses (Kitamura, 2016).

The aim of this study was to elucidate how study abroad experiences, especially those of university faculty members, impact their careers and work.

As seen in various developing countries, in Cambodia, university faculty members not only work within their university but also participate in development projects carried out by the government and international organizations and are involved in social activities in several cases. Furthermore, some faculty members, in terms of their careers, have experience working in the government, international organizations, and even businesses, rather than working only at universities. In accordance with these facts, although it is important to be careful not to over-generalize, university faculty members in Cambodia are understood to be people who hold leadership positions in society. This study elucidates how university faculty members in such positions are impacted by their study abroad experiences, with the aim of serving as a reference in considering how leaders in Cambodian society are using (or not using) their international experiences.

13.2 Research Methods

13.2.1 Online Survey

In this study, a questionnaire survey of faculty members at the Royal University of Phnom Penh (RUPP), the Institute of Technology of Cambodia (ITC), the Royal University of Law and Economics (RULE), and the Royal University of

¹It should be noted that the expansion of the Cambodia's higher education sector, which has been seen, particularly, since the 2000s, is also due to domestic factors such as rapid economic growth and social stability in Cambodia.

Agriculture (RUA) was carried out. These four universities are the leading universities in Cambodia's higher education sector, and their faculty members are considered to be top-notch experts in their respective academic fields. Involving the faculty members of these four universities was believed to be appropriate since they are regarded as top-ranking, which coincides with the focus of this study, that is, the international activities of university faculty members in Cambodia.

Additionally, in the analysis, faculty members of these four universities were treated as one group. This is because there is no so-called "comprehensive university" in Cambodia's higher education sector, which covers a wide range of academic fields from humanities and social sciences to natural sciences. Grouping the four universities together was believed to be the more appropriate move given that there is almost no overlap in academic fields among these four universities surveyed. To elucidate the impacts of study abroad experiences as well as study experiences at higher education institutions at home to obtain a higher degree, the survey queried the faculty members of these four universities whether their study experiences to obtain a degree encouraged the strengthening of their skills in research-, education-, social contribution-, and university management-related activities. The analysis was then performed, grouping these faculty members as one.

Having said that, it is imperative to recognize that each university is an independent organization of higher education, and every organization has its own unique culture, environment, and system. Therefore, it should also be noted that the survey results were analyzed based on the characteristics of each university as needed.

For analysis in this study, we employed a questionnaire that was created for the research project "Empirical Research Project on Impacts of Study Abroad in Developing Countries, based on Study Abroad Experiences of Academic Professionals of Major Universities in ASEAN Countries" and was common to the four target countries of the project. Using this questionnaire, which is a common format, we prepared options and selections for answering, considering the context of the four target universities in Cambodia.

The questionnaire was prepared with the assumption that the following three groups of people: those who have studied abroad to acquire a higher degree, those who have not studied abroad, and those who have not attained a master's or doctoral degree. It consisted of common questions and questions intended for each of the above three groups. The common questions included nationality, gender, age, current position, university of affiliation, study abroad experience, study abroad destination, study abroad university, field of specialization, study abroad period, and funding for study abroad. The group-specific questions inquired about the reason for choosing a specific study abroad destination and university, the current connection with the study abroad destination and university after attaining a degree, and the impact of study abroad experience, which includes skills that are related to research, education, university management, and social contribution, which were gained through study experience, and changes in their awareness.

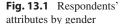
The questionnaire can be answered online, and the survey URL was sent to a total of 875 faculty members of the four target universities via email and the message application "Telegram." The online survey was conducted over 15 months, that is, from March 2021 to June 2022. During the above period, to explain the purpose of the survey and how to respond, we conducted two online sessions using the online conference tool "Zoom" as required. Table 13.1 shows details including the number of people surveyed, the number of respondents, and their percentages. Conclusively, the number of valid responses was 71 with a response rate of 13.3% at RUPP, 111 with a response rate of 73.0% at ITC, 36 with a response rate of 27.3% at RUA, and 21 with a response rate of 37.5% at RULE, which totaled to 239 persons with a response rate of 27.3%.

The attributes of respondents to this survey by gender are classified in Fig. 13.1. Of the 239 valid responses, 177 were male (74%) and 62 were female (26%). By age group, in Fig. 13.2, of the

Target universities	Online questionnaire survey responses (%)	Number of total academic staff
Royal University of Phnom Penh (RUPP)	71 (13.3%)	535
Institute of Technology of Cambodia (ITC)	111 (73.0%)	152
Royal University of Agriculture (RUA)	36 (27.3%)	132
Royal University of Law and Economics (RULE)	21 (37.5%)	56
Total	239 (27.3%)	875

Table 13.1 Online questionnaire survey targets and response status

Note The number of total academic staff is based on Sok et al. (2023)



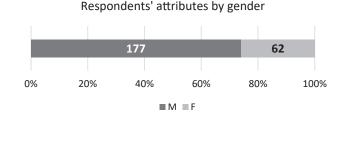
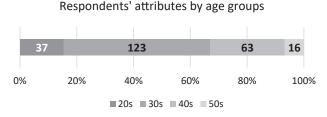


Fig. 13.2 Respondents' attributes by age groups



239 valid responses, 37 were in their 20 s (15.5%), 123 were in their 30 s (51.5%), 63 were in their 40 s (26.4%), and 16 were in their 50 s (6.7%).

The breakdown of online survey respondents by highest degree is shown in Fig. 13.3 as follows: those with a bachelor's degree (5%), those with a master's degree (55%, of which 43% have a degree obtained overseas and 13% have a degree obtained in Cambodia), and those with a doctoral degree (40%, of which 39% have a degree obtained overseas and 1% have a degree obtained in Cambodia). As a result of confirming the place of study where they obtained their highest degree (Fig. 13.4), the majority of those with a master's or doctoral degree attained their degree by studying abroad. Although an increasing number of people have completed a master's program at a Cambodian university in recent years, it was common for most of the faculty members surveyed in this survey to study abroad to acquire a degree.

13.2.2 Semistructured Interviews with Stakeholders

Based on the results of the online survey, the study team conducted semistructured interviews with the department of higher education officials and university officials in management positions from March 29 to April 1, 2023. As for the interview procedure, after showing the outline of the results of the online survey, the results

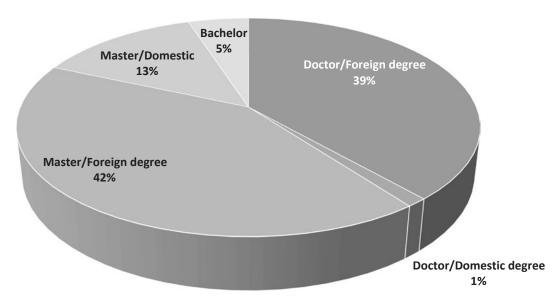
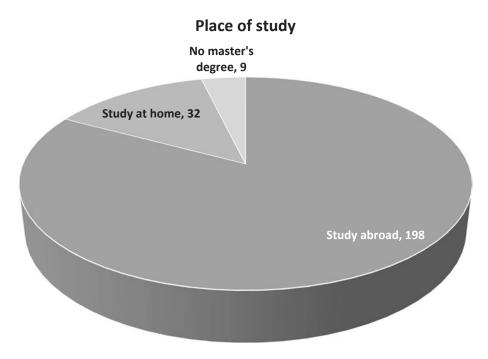


Fig. 13.3 Sample population by the highest degree





Sample population by the highest degree

of comparing the impacts of study experiences were presented, specifically whether the study experiences of those who have studied abroad and those who have not encouraged the strengthening of their skills in four areas: research-, education-, society-, and management-related activities. Using the analysis results of the online survey, how the results could be interpreted was discussed.

13.2.3 Focus Group Discussion

Aside from the above semistructured interviews with stakeholders, a focus group discussion with faculty members of three universities-RUPP, ITC, and RUA-among the four universities surveyed was conducted. With a total of 19 participants, that is, five from RUPP, seven from RUA, and seven from ITC, the discussion was carried out on April 28, 2023, with one session lasting approximately 2 h. The participants were mainly respondents to the online survey (One person who did not respond to the online survey participated in the session with ITC). As with the semistructured interviews with stakeholders, how the analysis results of the online survey could be interpreted was discussed. Particularly, in terms of the acquisition of a higher degree in a study abroad destination or in Cambodia, their observations and opinions from the perspectives of education, research, social contribution, and university management were collected, focusing on reviewing their individual experiences.

Results of Analysis 13.3

13.3.1 Top Destination Countries for Studying Abroad and Studying at Home

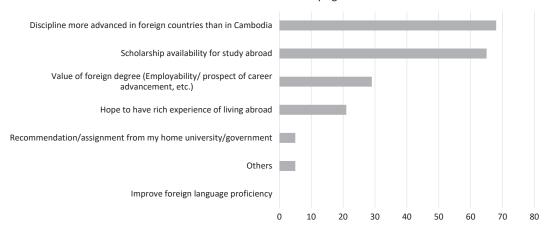
Table 13.2 shows the study abroad destinations where the respondents who obtained their degrees are shown separately for master's and doctoral degrees in order of frequency of responses. First, the table confirms that France and Thailand were most frequently selected as a study abroad destination for a master's degree (36 persons; 21.8%). There were 33 persons who obtained a master's degree in Cambodia.

Afterward, for doctoral degrees, Japan was most frequently selected as a study abroad destination (30 persons; 34.9%), which was followed by France (19 persons; 22.1%). Thailand, which was most frequently selected as a study abroad destination for a master's degree, was ranked third in terms of frequency, with nine persons (10.5%). Furthermore, it was also confirmed that two persons obtained a doctoral degree in Cambodia. The breakdown is as follows: One person obtained a doctoral degree at RUA and another person at a private university in Cambodia.

13.3.2 Reasons for Decision to Study Abroad

In Fig. 13.5, the main reasons for deciding to study abroad are summarized. As a result of asking in the form of a single answer from among seven options, most respondents (68 persons)

Table 13.2 Major study abroad destinations	Master's degree			Doctoral degree			
	Study abroad	France	36	21.8%	Japan	30	34.9%
		Thailand	36	21.8%	France	19	22.1%
		Indonesia	19	11.5%	Thailand	9	10.5%
		Korea	15	9.1%	Belgium	5	5.8%
		Philippines	13	7.9%	Philippines	4	4.7%
		Japan	10	5.1%			



Reason for decision of studying abroad

Fig. 13.5 Reason for the decision of studying abroad

chose the option "Discipline more advanced in foreign countries than in Cambodia," which was followed by 65 persons who chose the option "Scholarship availability for study abroad." Additionally, 29 respondents chose the option "Value of foreign degree (Employability/prospect of career advancement, etc.)," 21 respondents chose the option "Hope to have rich experience of living abroad," and five respondents chose the option "Recommendation/assignment from my home university/government." The reasons other than those listed as options, which were entered as free text, included that there was no environment in Cambodia to obtain the desired degree and that the relevant respondent wanted to obtain a degree after improving one's ability through the opportunity to acquire a competitive scholarship.

Meanwhile, none of the respondents chose the option "Improve foreign language proficiency," which was listed as one of the answer options. The participants of this online survey were those who have studied abroad to acquire a master's or a doctoral degree. This result is considered to be reasonable, given that the main purpose of travel for those who have studied abroad is to have professional education and research experience in a specialized academic field, not to acquire another language, except for some people who major in language studies as an academic research field. In addition, since many higher education institutions (especially graduate programs) in Cambodia today offer courses in English, it is assumed that young researchers do not feel the need to study abroad to improve their foreign language skills (especially English).

13.3.3 Analysis of Impacts of Study Experience in Each Activity

To elucidate the impacts of individual study experiences, single-answer questions were utilized to ask the participants whether their study experience to attain a higher degree strengthened their skills in education-, research-, social contribution-, and university managementrelated activities. A four-point Likert scale was employed to measure responses, with a nominal scale of four categories: 1 (to a large degree), 2 (to some degree), 3 (little), and 4 (not at all). The results were divided into two groups: the results for those with a degree acquired at a study abroad university and the results for those with a degree acquired at a domestic university; moreover, to detect differences in the responses between the two groups, a t-test was performed.

compares the impacts on research-related activities between the two groups: the Study Abroad (SA) group and the Study at Home (SH) group (Table 13.3). In terms of research-related activities, there was a significant difference found at the 1% level between the 2 groups in all 11 items.

Then, we present the results of an analysis that compares the impacts on education-related activities between the SA group and the SH group (Table 13.4). For education-related activities, two out of the 10 items showed a significant difference at the 5% level between the two groups. One of the items is "Initiating/ implementing student exchange programs with foreign universities" (t-223 = -1.987, p < 0.05). The other item is "Organizing international joint educational programs (e.g., joint degree

programs, double degree programs, and twinning programs) in collaboration with overseas universities" (t-223 = -2.109, p < 0.05).

Furthermore, the results of an analysis comparing the impacts on society-related activities between the SA group and the SH group are shown below (Table 13.5). In society-related activities, no significant difference was found between the two groups in all seven items.

Finally, we present the results of an analysis comparing the impacts on managementrelated activities between the SA group and the SH group (Table 13.6). In management-related activities, one of the four items "Contributing to concluding agreements between your university and overseas universities" displayed a significant difference at the 5% level between the two groups (t-223 = -1.987, p < 0.05).

Items	Study abroad		Study at home		<i>t</i> -test	
	Number of respondents	Mean	Number of respondents	Mean		
Making presentations at academic conferences in Cambodia	193	1.740	32	2.340	-3.384**	
Making presentations at academic conferences overseas	193	1.870	32	2.910	-5.458**	
Publishing articles in academic journals/books in Cambodia	193	2.150	32	2.910	-3.905**	
Publishing articles in academic journals/books overseas	193	2.190	32	3.130	-4.712**	
Participating in international collaborative research projects with international researchers (excluding the host country where you studied)		2.220	32	2.940	-3.486**	
Hosting international researchers	193	2.630	32	3.090	-2.388*	
Organizing international conferen- ces at your home university/country	193	2.560	32	3.160	-2.861**	
Launching new research projects	193	2.360	32	3.090	-3.682**	
Obtaining competitive research funds	193	2.560	32	3.310	-3.838**	
Applying for patents	193	3.410	32	3.720	-2.733**	
Adopting new research supervision methods or laboratory management systems for graduate students	193	2.440	32	3.090	-3.734**	

 Table 13.3
 Impacts on research-related activities

Notes Scale four-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all. p<0.05, p<0.01

Items	Study abroad	Study at home		t-test	
	Number of respondents	Mean	Number of respondents	Mean	
Developing/revising education programs	193	1.500	32	1.560	-0.494
Developing/revising courses	193	1.480	32	1.530	-0.437
Developing/revising teaching materials	193	1.560	32	1.630	-0.505
Adopting new teaching methods for undergra- duate students (e.g., sharing sessions, group discussions, and graduation thesis projects)	193	1.510	32	1.560	-0.423
Conducting courses in foreign languages	193	2.010	32	2.310	-1.758
Teaching at overseas universities	193	2.780	32	3.090	-1.654
Initiating/implementing student exchange programs with foreign universities	193	2.190	32	2.560	-1.987*
Inviting international researchers to your university for educational activities	193	2.170	32	2.470	-1.675
Organizing international joint educational programs (e.g., joint degree programs, double degree programs, and twinning programs) in collaboration with overseas universities	193	2.420	32	2.840	-2.109*

Table 13.4 Impacts on education-related activities

Notes Scale four-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all. p<0.05, p<0.01

As described above, we analyzed whether the study experiences to obtain a higher degree encouraged the strengthening of the participants' skills in education-, research-, social contribution-, and university management-related activities. Consequently, it was found that there was a clear difference in research-related activities between the SA group and the SH group. In terms of research-related activities, the mean value of those who have studied abroad showed greater impacts in all items than the mean value of those who have not studied abroad. In education-related activities, differences were observed in two items: "Initiating/implementing student exchange programs with foreign universities" and "Organizing international joint educational programs (e.g., joint degree programs, double degree programs, and twinning programs) in collaboration with overseas universities." In terms of society-related activities, no significant difference was found in any of the items between those who have studied abroad and those who have not. Alternatively, regarding managementrelated activities, a significant difference was found between those who have studied abroad and those who have not in the item "Contributing to concluding agreements between your university and overseas universities."

13.4 Discussion

13.4.1 The Reasons for Selecting a Study Abroad Destination

First of all, Japan and France are cited as the top study abroad destinations to pursue a doctoral program. As support for those studying in Japan and France, several scholarship programs are offered by both countries, and various Cambodian students utilize these programs to study in Japan and France. For example, the ITC has participated in AUN/SEED-Net (ASEAN University Network/Southeast Asia Engineering Education Development Network), one of the Japanese Official Development Assistance

Items	Study abroad		Study at home			
	Number of respondents	Mean	Number of respondents	Mean	<i>t</i> -test	
Contributing to domestic aca- demic societies	193	1.550	32	1.630	-0.589	
Contributing to international academic societies	193	2.300	32	2.470	-0.814	
Publishing articles in academic journals/books in Cambodia	193	2.540	32	2.470	0.35	
Contributing to policy plan- ning/formulation/implementa- tion as a member of advisory committees, etc. for internatio- nal organizations	193	2.740	32	2.750	-0.044	
Contributing to joint activities with the domestic industrial sector	193	2.500	32	2.630	-0.629	
Contributing to joint activities with the international industrial sector	193	2.920	32	2.970	-0.228	
Contributing to community development activities	193	2.090	32	2.190	-0.528	

Table 13.5 Impacts on society-related activities

Notes Scale four-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all. p<0.05, p<0.01

Items	Study abroad		Study at home	Study at home	
	Number of respon- dents	Mean	Number of respondents	Mean	<i>t</i> -test
Contributing to reforms in regulations or systems at your university	193	2.220	32	2.250	-0.156
Contributing to the university management as an administra- tive member	193	2.490	32	2.380	0.614
Contributing to concluding agreements between your university and overseas uni- versities	193	2.580	32	2.970	-1.987*
Contributing to your univer- sity's joining international inter-university networks	193	2.510	32	2.720	-1.042

Table 13.6 Impacts on management-related activities

Notes Scale four-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all. p < 0.05, p < 0.01

technical cooperation projects, since the beginning of the project in 2001 (ASEAN University Network, 2023). This project is designed to support international students to obtain a higher degree at Japanese universities. Actually, several faculty members and graduates from ITC have participated in the project to obtain a higher degree. Furthermore, for those studying in Japan and France, not only are there scholarship programs on the host country's side, but there are systems to support studying in non-Englishspeaking countries, such as a language education program prior to travel. For instance, ITC offers a French language class in the lower grades of undergraduates to encourage students to study in France (from an interview with a faculty member at ITC). Whether or not there is a system to provide such a preparatory program before studying abroad is considered to be one of the factors that determine a study abroad destination for those wishing to acquire a higher degree overseas.

Additionally, as Sok et al. (2023) pointed out, the political situation in the 1980s made Russia one of the most popular destinations to study abroad. Thus, we assumed that Russia would be a major study abroad destination for the participants. However, this survey showed that Russia was not even included in their responses. After checking the age of the survey respondents, we found that 77.8% of all respondents were in their 30 s (123 people) and 40 s (63 people). Although there were 16 respondents in their 50 s (6.7%)who were thought to have studied abroad in the late 1980s, Russia was not listed as their study abroad destination of choice. From the information on those who obtained a degree overseas in the fiscal year of 2018 provided by RUPP, it was confirmed that faculty members with a degree obtained in Russia were enrolled in RUPP (Sok et al., 2023, p. 33). However, it is believed that Russia was not listed as a study abroad destination because the relevant faculty members did not participate in the online survey in this study.

Moreover, in the focus group discussion with faculty members, the following opinions were raised as individual factors that identified a study abroad destination. First, there was an agreement between the university in Cambodia where the relevant faculty member was enrolled and the study abroad university, or there were the Erasmus Program² and other scholarship programs. Second, the relevant faculty member was directly recruited by the study abroad university to pursue a doctoral program there. Third, the decision on which country to study in was made on the basis of the learner's individual level of English. According to participants in the focus group discussion with RUA, the availability of scholarships also has a great impact on their choice of a study abroad destination. Therefore, those with a high English score are likely to study in an English-speaking country such as Australia. Meanwhile, it was possible for those whose English scores were not very high to go to study in non-English-speaking countries.

Based on research conducted by Kitamura, one of the authors of this chapter, Cambodian students tend to go abroad to study at a graduate school if they majored in English during their undergraduate years (Williams et al., 2014). In other words, it is believed that students may have chosen where to study abroad based on their English level and score at the time, not their major or specialty. In this online survey, however, although we asked respondents about their study abroad experience in obtaining their highest degree, we did not obtain information regarding their undergraduate majors. Therefore, we would like to end the discussion on this point, and we need to further explore this issue in our future research.

13.4.2 Research-Related Activities

A clear difference between the SA group and the SH group can be seen in research-related activities. The mean value of the SA group showed greater impacts in all items than the mean value

²The Erasmus Programme was established in 1987 as a joint educational program through inter-university exchange agreements. For more information on the program, including the current Erasumus+Programme, please refer to the official website (https://erasmus-plus. ec.europa.eu).

of the SH group. This finding fits with the idea that the main reason people choose to study abroad is to learn research skills, since the main reason they study abroad is to earn a degree.

We also received comments from faculty members who participated in the focus group discussion regarding their research activities in the study abroad destinations and in Cambodia from three perspectives: "environment that enables concentration on and devotion to research," "acquisition of the skills to advance research," and "pursuit of learning and research activities in English."

13.4.2.1 Environment That Enables Concentration on and Devotion to Research

Several faculty members with study abroad experience stated that they were in a setting where they were expected to learn on their own and do their own research independently while they were at their study abroad university. For example, a faculty member at RUPP who studied in France said that he had to do his own research independently in order to get advice from his busy supervisor at the time. This enabled him to acquire the skills to actively research on his own, and that experience is still alive in his current research attitude. This tendency to require international students to be independent learners is particularly strong in Western culture countries such as France. The former President of ITC says: "International students have to be independent learners because faculty members at their study abroad university are so busy that they can rarely meet the faculty members and even their supervisor in many cases."

There was also a comment saying that compared to studying in Cambodia, studying abroad, allowed for easier establishment of an environment in which students could concentrate and devote themselves to research activities. Two female faculty members who studied abroad and got a master's degree and a doctorate and now teach at RUPP and RUA said that it is hard to make an environment where researchers can focus on research in Cambodia because they tend to be busy with other things like work and chores. Moreover, there are still not enough research facilities for engineering fields in Cambodia.

Furthermore, since many Cambodian students obtain scholarships to study abroad, their desire to earn a degree in the time that they have for the scholarship is an incentive to devote themselves to research. Hence, the environment that enables devotion to research and the clear goal and motivation of obtaining a degree within the scholarship period are regarded to be the characteristics of studying abroad that those studying in Cambodia do not have.

13.4.2.2 Acquisition of the Skills to Advance Research

According to a faculty member at RUPP with study abroad experience in France, he was not very confident about his own research skills and was unsure of how to proceed with research before studying abroad. In this situation, in France, which was his study abroad destination, focused on working on research on previous literature, and he was required to write many reports and study theories based on previous literature reviews. He recalled that he was able to acquire research skills through the repetition of such learning activities. He also indicated that he learned how to write reports and how to conduct research through studying abroad, and that because he learned to understand them himself. he became able to teach them to others. A faculty member who has studied abroad in France also said that when he first went there to study, she asked his supervisor and the university to do too much for him. But once he realized this, he tried to change how he thought and acted so that he could get something out of it, whether directly or indirectly.

13.4.2.3 Pursuit of Learning and Research Activities in English

A faculty member with study abroad experience in France stated that he read many academic papers, especially English ones, more frequently in France than in Cambodia. Such a learning environment enabled him to learn how to read academic papers, including efficiently reading them. Another faculty member who is currently enrolled in a doctoral program at a graduate school in Cambodia to obtain a doctoral degree after obtaining a master's degree in Cambodia pointed out, comparing overseas research activities with domestic research activities, that there were limited opportunities to write academic papers in English in Cambodia. He offered the view that considering this situation if he had been able to study abroad, it would be easier for him to get the chance to publish academic papers in English.

13.4.3 Education-Related Activities

For education-related activities, a significant difference was observed between the SA group and the SH group in the items "Initiating/implementing student exchange programs with foreign universities" and "Organizing international joint educational programs (e.g., joint degree programs, double degree programs, and twinning programs) in collaboration with overseas universities." Faculty members who participated in the focus group discussion held with each of the three universities responded that they were generally satisfied with this result. A faculty member currently working at ITC said that it was possible to create various networks, such as joint programs, at ITC because it has people who have studied abroad at and graduated from different overseas universities and that this, in particular, was one of the several advantages of studying abroad.

Furthermore, as an example of educational practice currently being conducted in Cambodia, a faculty member at RUPP introduced a case where RUPP interacts with a Singaporean university through programs to learn from each other about active learning methods. Student exchange programs can be implemented with overseas universities and international joint education programs by making use of human networks that have been cultivated during study abroad. Given these advantages of those who have studied abroad, the result showing a significant difference between the SA group and the SH is considered to be appropriate. Another faculty member gave us the opinion that she was able to earn a degree from studying abroad because the university where she was a student had exchange programs with overseas universities along with some scholarship schemes.

Meanwhile, we discussed with faculty members who participated in the focus group discussion why there was no significant difference in the other items for education-related activities, including "Developing/revising education programs," "Developing/revising teaching materials," and "Adopting new teaching methods for undergraduate students." Consequently, comments that indicate "differences in teaching methods and instructions" and "differences in teaching languages and educational systems" were obtained from those who have studied abroad to obtain a degree.

13.4.3.1 Differences in Teaching Methods and Instructions

In the focus group discussion with faculty members at RUPP, one faculty member with study abroad experience in both Asia and Europe indicated that it might be challenging to find out the impacts of studying abroad on teaching methods and instructions because they vary depending on the study abroad destination. For example, one faculty member said that Asian countries and other countries with similar cultural environments to Cambodia had similar teaching methods, whereas European countries such as France had different teaching methods. Teaching methods differed not only between countries but also between teachers. She said that based on her experience, it would be difficult to apply educational experience in a study abroad destination as it is in Cambodia after returning home.

There was also a comment that the study abroad experience changed the way of thinking about teaching instructions. Furthermore, a faculty member at RUPP with study abroad experience in Europe indicated that although he believed it was important to provide feedback to students for effective learning, there were fewer opportunities to give feedback to students and fewer amounts of assignments given to them in Cambodia, in comparison to his study abroad destination.

13.4.3.2 Differences in the Medium of Instruction and Educational Systems

In the focus group discussion with faculty members at RUPP, a problem with the medium of instruction was highlighted. According to a faculty member who has studied abroad in Europe, even if he attempts to teach using the knowledge that he has acquired in his study abroad destination, many words are not found in Khmer, the native language of Cambodia. Accordingly, he has to teach while adding translations whenever needed. He said that the problem was that it was impossible to teach without reference information on some words. It was also emphasized that educational systems were different between study abroad destinations and Cambodia. Since not all universities in Cambodia have a system in place to support the research and educational activities of faculty members, unlike universities in study abroad destinations, it is challenging to apply the teaching methods and experience learned in study abroad destinations as they are. This difference in educational systems is believed to be a problem that is related not only to the contents and methods of education but also to university management.

The main goal of studying abroad to obtain a degree is research. Given that many of those who have studied abroad to obtain a degree did not have the intention to actively learn teaching methods, this is regarded to be one of the reasons why no significant difference was found in items for education-related activities in this analysis.

13.4.4 Society-Related Activities

For society-related activities, no statistically significant difference was observed in any of the items. With regard to this result, it was indicated in the focus group discussion with faculty members at the three universities that the primary purpose of studying abroad to attain a degree was research and that social contribution-related activities were not the main goal of studying abroad. A faculty member at RUA with study abroad experience clearly answered that he did not study abroad with a desire to contribute to society and that social contribution was not his purpose for studying abroad. Similarly, it was also highlighted in interviews with the department of higher education officials and university officials in management positions that the main purpose of studying abroad was not a social contribution. The former President of ITC said: "In the first place, the main purpose of studying abroad is not to contribute to society. It may be thought that there is no difference in social contribution-related items between those who have studied abroad to obtain a degree and those who have not because they keep social contribution in mind from the beginning."

Additionally, as Sen (2022) pointed out in his review of recent higher education policies in Cambodia, although there have been efforts to encourage research activities at the policy level through various reforms, teaching activities still tend to be more important than faculty research activities in Cambodia. Since salaries are calculated according to the number of class hours in charge at Cambodian universities, faculty members tend to be reluctant to engage in activities that are not directly related to education or that affect class hours (Muytieng et al., 2022). This is evidenced by the following comment from the director-general of the higher education bureau: "Faculty members are busy with their daily educational activities. This trend has continued even before the COVID-19 pandemic hit. Under these circumstances, there are no direct activities that lead to social contribution at universities." Considering this background, likely, social contribution-related activities are not being performed at universities presently, and it is considered challenging to observe the impacts of study abroad experiences on social contributionrelated activities.

Besides these opinions on the purpose of studying abroad, there were also interesting opinions that focus on the environment that supports the study and life of international students in study abroad destinations. For example, a female faculty member at RUPP indicated that whether or not the impacts of study abroad experiences to earn a degree can be seen in items listed as society-related activities may depend on the environment in study abroad destinations. According to her, "We have Cambodian Students' Associations as a network that connects Cambodian students in study abroad destinations. With this network, there would have been horizontal connections between international students both during and after studying abroad, which may have led to activities related to social contribution." There was also an opinion that there appeared to be little difference in impacts on society-related activities depending on the university of origin and the study abroad destination.

When searching for Cambodian Students' Associations on the internet, we can find a variety of information on them at the national and university levels in the search results. For example, Cambodian Students' Association in Japan (CSAJ) was established in 1994 by Cambodian students who were studying at Japanese universities on a MEXT Scholarship (Cambodian Students' Association in Japan, 2023). CSAJ comprised five regional associations, namely, Cambodian Students' Association in Kanto Region, Cambodian Students Association in Nagoya Area, Khmer Student Association in Kansai Region, Cambodian Students Association in Hiroshima Area, and Association of Cambodian Students in Kyushu Region. Besides promoting cultural exchange between Japan and Cambodia, they currently provide support and assistance for Cambodian students who are studying in Japan in terms of their studies and careers. It can be read from their recent activity reports that various exchange events, which include online and face-to-face events, are being held.

13.4.5 Management-Related Activities

According to a comparison of the number of agreements concluded for 3 years from 2017 to 2019 by the four universities surveyed in this study (Sok & Bunry, 2021), ITC, RUA, and RULE concluded 38, 35, and 22 agreements, respectively, whereas RUPP concluded 493 agreements, which are significantly larger in number than the other three universities. Based on this background in recent years, the survey asked about items related to the conclusion of agreements with other institutions for management-related activities. In terms of management-related activities, a statistically significant difference was observed between the SA group and the SH group in the item "Contributing to concluding agreements between your university and overseas universities." Certainly, it is thought that those who have studied abroad can create a network with overseas universities by using the connection with the universities where they studied in the past.

Meanwhile, faculty members who participated in the focus group discussion with the three universities made the following comment concerning the items in which no significant differences were found. For instance, a faculty member at RUA stated that the items related to university management listed in the survey questionnaire were not conducted within the scope of daily educational research activities. It is thought that it was difficult for faculty members who are mainly engaged in education and research activities to answer these questions related to university management. Given this point, if many of the respondents to this survey were in charge of university management daily, there may have been differences between the SA group and the SH group.

A faculty member at ITC with study abroad experience to obtain a degree in Belgium highlighted the following regarding item 1 "Contributing to reforms in regulations or systems at your university" and item 2 "Contributing to the university management as an administrative member." It appears that there was no difference between the two groups because the attitudes in these items are not acquired through studying abroad. Conversely, regarding item 4 "Contributing to your university's joining international inter-university networks," as with item 3 "Contributing to concluding agreements between your university and overseas universities," in which a significant difference was confirmed, those with a degree obtained overseas are expected to have more opportunities to engage in such activity than those with a degree obtained in Cambodia. Nevertheless, the analysis results of this survey did not show any significant difference. This result is believed to be due to the attributes of the respondents, who are faculty members not involved in university management daily, as mentioned earlier.

Finally, we introduce a comment regarding management in Cambodian universities, which was made as an opinion that would lead to educational research activities by a faculty member at RUPP who participated in the focus group discussion: "At Cambodian universities, there are many problems in managing laboratories. For instance, the system and procedures for purchasing even a single piece of equipment related to research are complicated. We recognize that this is one of the problems related to management in Cambodian universities, but we still have a long way to go to improve management."

13.5 Conclusion

This study has elucidated how the study abroad experiences of Cambodian university faculty members have affected their careers and work. This demographic is significant as Cambodia has achieved quantitative expansion and qualitative improvement in higher education with assistance from donor countries and international organizations since the conclusion of the 1991 peace agreement.

First, there was a clear difference in researchrelated activities between the SA group and the SH group. Particularly, in research-related activities, it was found that the "environment" is one keyword. Specifically, one of the advantages of studying abroad is that researchers are freed from various personal matters in study abroad destinations and can concentrate on their studies and research. Conversely, in Cambodia, it was found that it was challenging for researchers to concentrate on their research because they were busy with their family matters, lives, and current jobs.

Since English is an essential language for conducting academic research, there are several cases where English is employed as the main language for research activities in study abroad destinations. It was confirmed to be one of the advantages of studying abroad that although researchers had a hard time with the language at the beginning of studying abroad, they could use their acquired language skills, especially English skills, to conduct their research activities after obtaining a degree. Furthermore, in study abroad destinations, they are expected to be independent learners, and they needed to become independent as learners and researchers when conducting research activities. It was confirmed that this had led to independent activities as researchers after obtaining a higher degree.

Next, in terms of education-related activities, there was not much difference between the SA group and the SH group compared to research-related activities. One of the factors behind this is thought to be differences in educational methods and the medium of instruction. According to one comment, if a study abroad destination is in Asia, the educational methods there are similar to those in Cambodia. In that case, the teaching methods learned there are easy to apply in educational activities at Cambodian universities. Conversely, teaching the knowledge and contents learned in English in study abroad destinations as they are in Cambodia is difficult because many expressions are not in Khmer. Therefore, English phrases and expressions have to be used to give explanations. It was found that this made some faculty members feel that their teaching activities were not very efficient.

Regarding social contribution-related activities, there was a uniform understanding among the respondents that the primary purpose of studying abroad was research. Since they have not consciously engaged in activities related to social contribution, it is believed that there was no difference in the impacts on social contribution-related activities depending on whether they have studied abroad or not. Moreover, considering the salary system at Cambodian universities, university faculty members are busy with their daily educational activities and are not engaged in activities that directly contribute to society. This is also regarded as one of the reasons why there was no clear difference in these activities between the SA group and the SH group in this analysis.

Finally, regarding university managementrelated activities, there were not many clear differences in items other than the items related to the conclusion of agreements with other institutions between the SA group and the SH group. Many of the faculty members who responded to the survey this time are engaged in educational activities regularly, with most of their daily activities occupied by classes, and have little experience in activities related to university management. These characteristics of respondents are believed to be reflected in the analysis results.

Based on the survey, interviews, and focus group discussion, the following three points have come to light as possibilities for additional research in the future and further discussion. First, international experience may have a positive impact on gender differences in career paths. From the responses of female faculty members in the focus group discussion, we were able to see that faculty members with more international experience can narrow the gender gap in career paths. However, since we do not have enough data to look into this point in this analysis, we would like to show it as a perspective for future research.

Second, internationalization at home is progressing rapidly. It is clear that restrictions on physical travel abroad due to the COVID-19 pandemic are affecting the flow to obtaining a degree in Cambodia.

Lastly, as highlighted in the focus group discussion, there remain several shortcomings in the research environment and the support system for research activities at Cambodian universities compared to universities in other countries. It cannot be denied that the research environment in Cambodian universities is inferior to that in overseas universities. Previous studies have also indicated that faculty members are easily discouraged from engaging in research activities due in part to the insufficient research environment (Heng et al., 2023; Heng, 2023). Based on this, it can be said that improving the research environment is a top priority if Cambodian universities are to grow and become research centers in the future.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Akemi Ashida is an Associate Professor at the Graduate School of International Development, Nagoya University. She received a Ph.D. from Kobe University. Her research areas are comparative education and the sociology of education, and she has worked on empirical studies targeting Latin America and Southeast Asia, particularly Honduras and Cambodia. She has worked as a Programme Officer at the UNESCO Asia–Pacific Regional Bureau for Education (UNESCO Bangkok), as a Postdoctoral Fellow at the University of Tokyo, and as an Assistant Professor at Waseda University. Currently, she also serves as a Research Associate at the University of Tokyo as a member of the research project on the Internationalization of Higher Education.

Yuto Kitamura is a Professor at the Graduate School of Education at the University of Tokyo. He is also a Visiting Fellow at the JICA Ogata Sadako Research Institute for Peace and Development. He specializes in comparative education and has been conducting extensive research on education policies of developing countries in Asia, particularly Cambodia. He has worked at UNESCO and taught at Nagoya University and Sophia University. He has served as a Fulbright Scholar at George Washington University, a Visiting Professor at the University of Dhaka, and a Special Advisor to the Rector of the Royal University of Phnom Penh. He holds a B.A. (Keio University), an M.A. (UCLA), and a Ph.D. (UCLA), all in Education (UCLA).

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14

Diverse Impacts of University Faculty Study Abroad on Higher Education Development in Southeast Asia

Nobuko Kayashima, Naoki Umemiya and Atsushi Tsujimoto

Abstract

This final chapter presents a comprehensive analysis of the impacts of study abroad experiences of faculty members at leading universities in developing countries. It synthesizes the findings of the case studies presented in Chaps. 4 through 13, adding new comparative perspectives, such as country of origin and country of destination. Key findings are, firstly, that faculty study abroad experiences have positive impacts on academics' subsequent teaching and research activities, particularly in the context of universities' expanding international engagement, which has recently gained momentum in Southeast Asia. Secondly, the impacts vary in magnitude, with Vietnam and Cambodia showing more pronounced effects than Malaysia and Indonesia. This suggests that as domestic graduate education progresses, the impacts

JICA Ogata Sadako Research Institute for Peace and Development, Japan International Cooperation Agency (JICA), Tokyo, Japan e-mail: kayashima.nobuko@gmail.com

N. Umemiya Center for Global Education and Discovery, Sophia University, Tokyo, Japan

A. Tsujimoto VNU Vietnam Japan University, Hanoi, Vietnam of study abroad tend to diminish. Striking a balance between promoting domestic graduate programs and strengthening internationalization through faculty experience abroad becomes critical. Finally, our research underscores the unique strengths of different host countries. Some destinations, such as Japan and the Netherlands, excel at facilitating faculty research activities, while others, such as France and the United States, are notable for fostering faculty teaching skills. Diversifying study abroad destinations allows universities to tap into a wide range of strengths, enriching the overall academic landscape.

Keywords

Study abroad · Impact · Faculty members · Southeast Asia · Academic mobility · Higher education internationalization

14.1 Introduction

In the higher education sector, the knowledge and skills acquired by university faculty members through study abroad have played a significant role in the development of leading universities. Building on this background, the JICA Sadako Ogata Research Institute for Peace and Development conducted an empirical study

N. Kayashima (🖂)

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on the impacts of university faculty members' study abroad experience on university development from 2018 to 2023. The research questions this study seeks to address are: (1) How has the study abroad experience of faculty members of major universities in Southeast Asia changed over the course of their development? What are the factors contributing to this transition? (2) What impacts have the study abroad of faculty members of major Southeast Asian universities had at the individual and institutional (affiliated university) levels?

To address these questions, ten prominent universities in Malaysia, Indonesia, Vietnam, and Cambodia were selected: Universiti Sains Malaysia (USM) and Universiti Teknologi Malaysia (UTM) of Malaysia, Universitas Gadjah Mada (UGM) and Institut Teknologi Bandung (ITB) of Indonesia, Vietnam National University, Hanoi (VNU) and Hanoi University of Science and Technology (HUST) of Vietnam, Royal University of Phnom Penh (RUPP), Institute of Technology of Cambodia (ITC), Royal University of Agriculture (RUA), and Royal University of Law and Economics (RULE) of Cambodia. Data were collected through documents, questionnaire surveys, and interviews. Chapter 1 presents the background to this study and an overview of the research project, as well as the reasons for the selection of target countries and universities.

This final chapter presents a comprehensive analysis of the impact of the study abroad experiences of leading university faculty members in developing countries by synthesizing the findings of the case studies in Chaps. 4 through 13 and adding new comparative perspectives. The similarities and differences in the impact of study abroad by university faculty members in terms of country of origin, country of destination, faculty member's discipline, and timing of study abroad are analyzed, as well as what factors contribute to these differences. The ultimate goal of this chapter is to clarify the characteristics and changes in study abroad impacts and higher education in Southeast Asia and provide suggestions for relevant future policies. The results of the analysis of study abroad transition (the first research question) in the four focal countries are presented in Chap. 2. Country case studies on the impacts of study abroad are presented in Chaps. 5 and 6 for Malaysia, Chaps. 8 and 9 for Indonesia, Chap. 11 for Vietnam, and Chap. 13 for Cambodia.

14.2 Higher Education Development in Southeast Asia and the Impacts of Study Abroad

14.2.1 Higher Education Development in Southeast Asia

Higher education in Southeast Asia has evolved significantly in recent decades, driven by the interplay of globalization, economic growth, and the pursuit of educational excellence. This section provides an overview of the current state of higher education in the region, drawing on insights from previous studies and focusing on key themes such as center-periphery theory, massification, diversification, internationalization and regionalization, and privatization.

Altbach's center-periphery theory provides a lens through which to view Southeast Asian higher education systems. This theory depicts a hierarchical structure with powerful institutions and regions in the "center" and less influential ones in the "periphery." In this context, central universities are located in developed countries, while those in developing countries, including Southeast Asia, occupy a peripheral status in the global knowledge system. In addition, many faculty members at leading universities in these developing countries, reinforcing this disparity (Altbach, 1981, 2003).

A noticeable trend in Southeast Asia is the massification of higher education. Governments in the region are actively expanding access to higher education in response to increasing demand from their populations, fueled by economic growth. These efforts have resulted in substantial increase in enrollment rates, with more young adults pursuing higher education than ever before (Lee, 2006; Welch, 2016). For example, there has been a significant quantitative expansion of higher education in Malaysia, Indonesia, and Vietnam since the 1990s and in Cambodia since the 2000s. The most recent gross enrollment rates in higher education in each country reached 41% (2021) in Malaysia, 36% (2018) in Indonesia, 36% (2021) in Vietnam, and 13% (2021) in Cambodia (Fig. 14.1). However, this rapid growth has also strained the resources and quality of higher education, leading to challenges such as overcrowded classrooms, faculty shortages, and limited funding. Policymakers face the critical task of ensuring that massification does not compromise the quality of education (Altbach, 2004; World Bank, 2000).

As access to higher education has expanded in Southeast Asia, so has the diversity of higher education institutions. Traditionally, universities in the region have followed a conventional, research-oriented model. However, many countries are now exploring different models to better meet the evolving needs of students and industry (Lee, 2006; World Bank, 2000). Moreover, the use of online and distance learning programs is expanding access to education, particularly in remote and underserved areas (Raab et al., 2001).

Internationalization has become an important factor in higher education in Southeast Asia, driven by globalization and economic growth (Collins & Jones, 2023; Ho et al., 2023). Universities in the region are increasingly incorporating international perspectives, languages, and intercultural competencies into their programs to prepare graduates for the global job market (Ratanawijitrasin, 2015). This approach enhances the quality of education and equips graduates with valuable skills. In addition, Southeast Asian universities have actively embraced internationalization by attracting foreign students, engaging in cross-border collaborations, and aligning with global academic standards. Singapore has already established itself as a new regional education hub, and Malaysia is following suit (Knight & Morshidi, 2011).

Regionalization is another notable aspect of higher education in Southeast Asia. Countries in the region are recognizing the benefits of cooperation and integration in education. Initiatives such as the ASEAN University Network (AUN) and the Southeast Asian Ministers of Education Organization (SEAMEO) foster collaboration between universities while promoting academic mobility. These regional initiatives aim to enhance the quality of education and research by pooling resources, sharing expertise, and fostering academic partnerships across borders (Kuroda, 2016). However, challenges such as

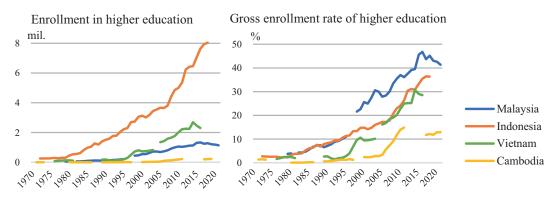


Fig. 14.1 Higher education development in Malaysia, Indonesia, Vietnam, and Cambodia (1970–2021) *Source*: Created by the authors with following data; UNESCO UIS Data (http://data.uis.unesco.org/) accessed on 23 August, 2023

World Bank Education Statistics (https://datatopics.worldbank.org/education/) accessed on 23 August, 2023

differing academic standards and language barriers remain.

Finally, privatization has played a central role in shaping higher education in Southeast Asia. Private institutions have proliferated alongside public universities, offering diverse programs that attract students seeking alternative educational pathways. While privatization can increase access, there are also concerns about equity and quality (Teixeira & Amaral, 2001; Welch, 2011).

The academic profession in developing countries faces many challenges, including financial constraints, heavy teaching loads, bureaucracy, and corruption (Altbach, 2003). Southeast Asian countries aspire to develop their premier universities into world-class institutions, but the challenging environment in which academics work is an obstacle to achieving this goal (Altbach, 2007). Recent changes in higher education, such as internationalization and marketization, have also brought changes to the academic profession, demanding international competence and exposing them to a performance-based work environment (Lee, 2006). Overall, the academic profession in Southeast Asia is evolving, with ongoing efforts to adapt to global trends while addressing local challenges and opportunities in higher education (Enders, 2006).

14.2.2 Study Abroad Impact

Throughout history, study abroad has been an element of higher education. However, with the development of higher education and the progress of globalization in the second half of the last century, the number of students studying abroad worldwide has increased dramatically. Consequently, research on study abroad has also grown in recent years. Based on this research, this section provides an overview of the key findings to date on the impact of study abroad.

Regarding studies on the impact of study abroad on individuals, Asada (2017) provides a comprehensive review of previous studies based on Akande and Slawson's (2000) classification. Asada's review cites numerous studies showing that study abroad has various positive effects on individuals. This includes, first, impacts on academic attainment, such as improved undergraduate and graduate academic performance and language acquisition (Hadis, 2005; Rivers, 1998), and second, impacts on intercultural development, such as better understanding of one's own and other countries' cultures and diversity of friendships (Bringle & Hatcher, 2011; Musil, 2007). A third factor identified by Asada comprises the effects on career development, such as higher employability and wages, as well as international work orientation (Janson et al., 2009; Norris & Gillespie, 2009). A final factor is personal/social development, including self-affirmation, broader perspectives, and the cultivation of an international mindset (Braskamp et al., 2009; Dwyer, 2004). Asada's review primarily analyzed the individual-level impacts of study abroad experiences for students in developed countries, dealing mainly with medium- and short-term exchange programs at the undergraduate level.

In terms of faculty study abroad, faculty members of leading universities in developing countries have often obtained advanced degrees from developed countries (Altbach, 2003; Moeliodihardjo, 2023; Nguyen, 2023; Sirat, 2023; Sok et al., 2023). As the importance of academic mobility increases with the internationalization of higher education, research on the impacts of study abroad for advanced degree-seeking by university faculty is gradually increasing, although it remains less common than research on the impact of student exchange-type study abroad mentioned above. For example, studies on Chinese, Thai, Brazilian, and Vietnamese faculty members with advanced degrees from developed countries have shown that they contribute to the quality of university education by internationalizing their teaching content and methods and publishing papers abroad (Chen, 2017; Chen & Li, 2019; Kaowiwattanakul, 2016; Li, 2020; Ma & Pan, 2015; Pham, 2019; Silva et al., 2016). While many studies have shown that study abroad experiences have a positive impact on faculty teaching and research activities, a small number of studies have found different results (Muller et al., 2018; Shin et al., 2014). Muller et al. (2018) analyzed the educational backgrounds and subsequent careers of nearly 5,000 South African university faculty members, demonstrating that career differences are not due to training effects but rather a result of the selection effects between domestic and overseas Ph.D. programs.

Globally, international research collaborations and international co-authored publications are increasingly valued at leading universities. Studies on the relationship between international academic collaborations and faculty study abroad experiences have examined on university faculty members in Vietnam, Malaysia, China, and Uganda, showing a correlation between the two (Chen, 2017; Eduan, 2019; Jiang & Shen, 2019; Jonkers & Tijssen, 2008; Yonezawa et al., 2016). Networking with researchers in the host country over several years of doctoral study builds substantial academic social capital, leading to collaborative research and joint publications after returning home. These studies also analyze factors that increase the international research productivity of faculty members who have studied abroad, including destination country, length of stay abroad, gender, and field of specialization.

In addition to positive effects, negative impacts of study abroad by university faculty have been identified. For example, some returning academics have found it difficult to adjust and reintegrate into the institutional environment in their home country. In addition to dissatisfaction with the research environment, salary levels, bureaucracy, fraud, and corruption, some returnees have reported reservations about participating in the local academic community, which they perceive as closed and conservative (Da Wan et al., 2022; Karakaş, 2020; Kuzhabekova et al., 2019; Shin et al., 2014; Zink, 2013).

From the broader perspective of academic mobility, the long-discussed issue of "brain drain" is another negative consequence of faculty studying abroad (Altbach, 1981, 2003). Many of the adjustment and reintegration challenges upon return from study abroad mentioned above are also common causes of brain drain (Moon, 2023). In recent years, however, new forms of mobility of highly educated

human resources have emerged, such as brain circulation, in which professionals move back and forth between two countries after studying abroad, and brain linkage, which serves as a link between two countries regardless of faculty place of residence (Lee & Kim, 2010; Odhiambo, 2013; Saxenian, 2005).

Most of these existing studies on the impact of studying abroad have analyzed specific countries. Our research on study abroad impact is unique in that it conducts a large-scale survey of four Southeast Asian countries, seeking to draw comparisons among the four countries and identify characteristics of the Southeast Asian region as a whole.

14.3 Research Methods and Data

14.3.1 Research Methods

To address the research questions, this project selected a total of ten leading comprehensive universities and science and technology (S&T) universities in Indonesia, Malaysia, Vietnam, and Cambodia for the survey. A questionnaire survey was administered to all faculty members at these universities, followed by semi-structured interviews with selected faculty members, university administrators, and higher education officials. More than 3,000 university faculty members responded to the survey, and the interviews provided valuable information from more than 100 interviewees from the target universities and governments. Information on higher education policies and study abroad programs in the four focal countries was also collected. The details of the questionnaire and interview surveys are described in Chap. 2 (see Sect. 2.3.1).

14.3.2 Demographic Characteristics of the Sample

The survey collected valid responses from 3,288 university faculty members (Indonesia: 1,747, Malaysia: 915, Vietnam: 387, Cambodia: 239)

	Home country	No. of faculty members	Final degree	Final degree		
			Doctoral degree	Master's degree		
SA faculty members: 2,000	Malaysia	482	435	47		
	Indonesia	1,105	985	120		
	Vietnam	226	190	36		
	Cambodia	187	86	101		
SH Faculty members:	Malaysia	382	294	88		
937	Indonesia	403	199	204		
	Vietnam	126	66	60		
	Cambodia	26	0	26		

Table 14.1 SA and SH sample population by country and degree level

Source Created by the authors

from the ten universities in four countries. Of these, 2,937 provided the responses necessary to analyze the impact of study abroad. The analysis provided in this chapter is based primarily on the data from these 2,937 respondents. The demographic characteristics of the sample collected are presented in Table 14.1.

Of the total sample of 2,937, 2,000 had studied abroad at the master's or doctoral level (hereafter referred to as "SA faculty"), and 937 had studied in domestic graduate schools without studying abroad (hereafter referred to as "SH faculty")thus, two-thirds of the total sample had studied abroad at the graduate level. The breakdown by country is 864 participants from Malaysia, 1,508 from Indonesia, 352 from Vietnam, and 213 from Cambodia. Although the total number of destination countries for SA faculty is more than 40, it is concentrated in seven countries where 80% of SA faculty have studied: Japan, the United Kingdom, Australia, the United States, France, Germany, and the Netherlands. In terms of specialization, since one comprehensive university and one S&T university were selected per country except for Cambodia, about 70% of the sample population is from the S&T fields and about 30% from the Humanities and Social Sciences fields. The demographic characteristics of the sample are representative of faculty members at major universities from the focal countries, except for the large difference in the number of participants per country of origin and the imbalance of the number of respondents between disciplines. The analysis in this chapter takes these sample characteristics into account. A detailed analysis of the study abroad experience of the target faculty members has been provided in Chap. 2.

Since the purpose of this study is to clarify the impacts of study abroad on faculty activities, we focus on study abroad in master's and doctoral programs, which play an important role as training programs for faculty members. In recent years, offshore and branch campuses have flourished, and variations of study abroad, such as earning a foreign university degree while living in one's own country, have increased. However, due to the significant impact expected from physically living and studying in a foreign country, this study defines study abroad as "studying in a regular doctoral or master's program at a foreign university while residing in that country for at least one year."

14.4 Study Abroad Impact of University Faculty Members

14.4.1 Comparison Between Countries of Origin

This section examines the similarities and differences between Malaysia, Indonesia, Vietnam, and Cambodia regarding the impacts of studying abroad.

In order to clarify the impacts of study abroad experience on the subsequent activities of university faculty members, this study focused on the four areas of teaching, research, social contribution, and university administration. The questionnaire had two main questions: (1) Do you think your study abroad experience enhanced your skills and knowledge in dealing with the following activities? (2) Have you conducted the following activities in the past five years? The first question asked about the faculty member's perceptions of the impact of the study abroad experience on their subsequent activities using a four-point Likert scale ((1) to a large degree, (2)to some degree, (3) a little, and (4) not at all), while the second question asked about their actual activities using a two-option yes or no scale. Since the purpose of this study was to empirically examine the impacts of study abroad, in addition to the 2,000 SA respondents, approximately 900 SH faculty members were asked the same questions as a control group, with "study abroad" replaced by "study at home" in the questionnaire.

Impact on Education Activities

In the area of education, nine activities (see E1– E9 in Fig. 14.2) were examined, covering areas related to teaching, such as course development, teaching methods, and international exchange programs. Four domestic educational activities (E1-E4) and five international educational activities (E5–E9) were included. Figure 14.2(1)shows the differences by country between the mean of the SA faculty responses and the mean of the SH faculty responses (SH group mean-SA group mean) to the question of whether the study abroad experience (or domestic study experience) enhanced the skills and knowledge needed to perform these activities. Because the responses are on a four-point Likert scale, with one being "to a large degree" and four being "not at all," a positive difference indicates that the SA faculty group perceived a greater impact than the SH faculty group. Figure 14.2(2) shows the percentage of SA and SH faculty who performed E1–E9 activities over the past five years.

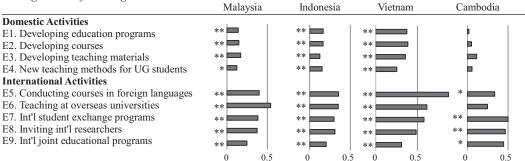
Across all of the four focal countries, in many educational activities, the extent to which SA faculty members think that their study abroad experience had an impact on their teaching activities is greater than the extent to which SH faculty members think their domestic study had an impact on their teaching activities, confirming a statistically significant difference.

Study abroad has a particularly strong impact on international educational activities (E5-E9). The difference in perceived impact between SA and SH faculty members is greater for international educational activities than for domestic educational activities (Fig. 14.2(1), suggesting that the impacts of studying abroad are greater for international educational activities. The percentage of faculty conducting international educational activities is also about 10-40 percent points higher in the SA faculty group than in the SH faculty group (Fig. 14.2(2)). In the interviews, various examples of the positive impacts of studying abroad were mentioned, such as using study abroad experiences to invite foreign researchers as guest lecturers (see Sect. 11.4.1), co-teaching and co-supervising doctoral programs at foreign universities (see Sect. 9.4.1), developing double degree programs with foreign universities (see Sect. 8.3.4), and implementing student exchange programs and international joint education programs (see Sect. 13.4.3). The internationalization of higher education at home is becoming increasingly important in developing countries, and the international networks of SA faculty members and their international experience contribute greatly to the internationalization of education at the universities where they work.

On the other hand, when looking at the percentage of implementation of domestic activities (E1–E4), as these are regular activities of university teaching staff, both SA and SH faculty members implement these activities equally (80–95%), and there is little difference in the percentage of implementation between them (Fig. 14.2(2)). However, there is a difference in the perception of impact between SA

(1) Difference of faculty members' perception on the impacts of SA or SH

Q: Do you think your study abroad (or study at home) experience enhanced your skills and knowledge in dealing with the following activities?



(2) Percentage of SA or SH faculty members who carried out specific education-related activities

Q: *Have you actually conducted the following activities in the past five years?*

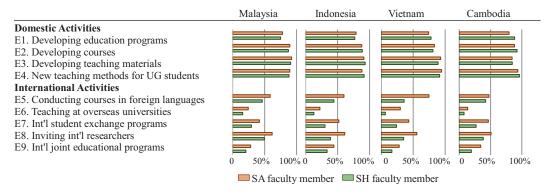


Fig. 14.2 Comparison of SA and SH impacts on education activities by country of origin *Note* 1 Figure (1) shows the difference of the mean response values (4-point likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all) between the SA group and the SH group *Note* 2 * p<0.05, ** p<0.01 *Note* 3 Malaysia SA n=482, SH n=382; Indonesia SA n=1096, SH n=397; Vietnam SA n=225, SH n=126; Cambodia SA n=187, SH n=26

Source Created by the authors

and SH faculty members, with the exception of Cambodia (Fig. 14.2(1)). Faculty members' perceptions of the impacts of study abroad are also confirmed for domestic educational activities, although to a lesser extent than for international educational activities.

In the interviews conducted at each university, the following impacts were mentioned in relation to the impacts on domestic education: at ITB, Indonesia, an SA faculty member said that due to his experience studying abroad, he tries to promote students' independence and autonomy to think for themselves rather than forcing them to learn, despite a culture of passive learning in Indonesia (see Sect. 8.3.1). At VNU, Vietnam, qualitative changes in teaching methods, such as the shift from lecture-based to discussion-based teaching and instilling a joy of learning that leads to lifelong learning, were also discussed as impacts of studying abroad (see Sect. 11.4.1). At USM, Malaysia, a respondent talked about how the hands-on experience in laboratory practices—including working as a lab facilitator—in his study abroad program provided the foundation for becoming an educator in the science field. Moreover, the skills and knowledge of tools such as massive open online courses (MOOCs) and videoconferencing acquired overseas helped them to continue teaching during the pandemic (see Sect. 5.4.1). An academic staff member in the field of International Relations at UGM who graduated from Japan stated that he had adopted his advisor's scientific tradition of multidisciplinary socio-legal analysis when teaching his UGM students. In practice, he has given his students the freedom to explore diverse theories and frameworks (see Sect. 9.4.1). Although both SA and SH faculty members are continuously involved in domestic educational activities, these interviews suggest that the study abroad experience has had a qualitative impact on faculty members' daily educational activities. In particular, they repeatedly mentioned the use of discussion-based participatory classes rather than one-way lectures, thereby fostering student independence and autonomy and cultivating a joy of learning, as well as emphasizing experimental and practical skills.

A comparison of impacts across the four focal countries shows that study abroad has a greater impact in Vietnam than in Malaysia and Indonesia, although this varies slightly depending on the particular educational activity. In Vietnam, the difference between SA and SH faculty is quite considerable, both in the perception of impacts and in the implementation rate of activities. The difference in the implementation rates of courses delivered in foreign languages (E5) is nearly 40 percentage points, and that of teaching at foreign universities (E6) is more than 20 percentage points (Fig. 14.2(2)). This may be because, in Vietnam, the acquisition of English through study abroad has a greater impact on the implementation of these specific international educational activities than in Malaysia and Indonesia. In Cambodia, the impact on domestic activities is smaller than in Malaysia and Indonesia, but the impact on international activities is slightly larger than in Malaysia and Indonesia. The likely reasons for the smaller impact on domestic educational activities in Cambodia include differences in the medium of instruction and educational systems (see Sect. 14.4.3).

Impacts on Research Activities

Eleven research activities were addressed in the questionnaire: six domestic research activities (see Fig. 14.3: R1–R6) and five international research activities (see Fig. 14.3: R7–R11). For each of these activities, SA and SH faculty members were asked for their perceptions on the impacts of studying abroad or studying at home and whether or not they had undertaken the activity in the past five years. The results of the survey are shown in Fig. 14.3. The positive differences in faculty perceptions indicate that perceptions of the impacts are greater among SA faculty members than SH faculty members (Fig. 14.3(1)).

The overall trend in the impacts on research activities is that the impact of studying abroad is greater than studying at home. Furthermore, when comparing domestic research activities (R1-R6) and international research activities (R7-R11), the impacts of study abroad appear to be significantly greater for international research activities, both in terms of faculty perceptions and the implementation rate of activities. The international experience and networks that faculty members gain through study abroad appear to have a larger impact on their international research activities than on their domestic research activities. A thematic analysis of the interview data from Vietnam shows that research collaboration is the sixth most common recurring theme, indicating that the impact of study abroad on international research activities is significant (see Sect. 11.4.2). Indonesian interviewees emphasized that strong connections with academic supervisors, other academic staff, and international friends while studying abroad provide long-lasting multinational academic social capital that serves as a foundation for their subsequent international research activities, along with international experience and confidence (see Sect. 8.3.5).

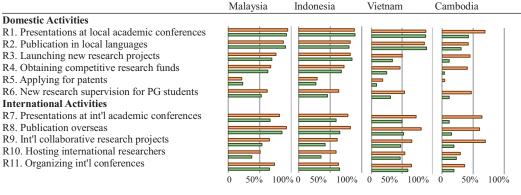
Comparing the four focal countries, the largest impact of study abroad can be seen in Cambodia, followed by Vietnam, and Malaysia/ Indonesia, respectively. This impact can be seen in terms of both faculty perceptions and the rate of activity implementation. In Cambodia, for example, the difference in the activity (1) Difference of faculty members' perception on the impacts of SA or SH

Q: Do you think your study abroad (or study at home) experience enhanced your skills and knowledge in dealing with the following activities?

dealing with the jollowing activities:	Malaysia	Indonesia	Vietnam	Cambodia
Domestic Activities				
R1. Presentations at local academic conferences	* 🗖	*	*	**
R2. Publication in local languages				**
R3. Launching new research projects	** 📖	*	*	**
R4. Obtaining competitive research funds	** 🛄	** 🗖 **	*	**
R5. Applying for patents		** *	*	*
R6. New research supervision for PG students	**	**	*	**
International Activities				
R7. Presentations at int'l academic conferences	**	**	*	**
R8. Publication overseas	** 🗖	**	*	**
R9. Int'l collaborative research projects		**	*	**
R10. Hosting international researchers	**	**	*	**
R11. Organizing int'l conferences	** 📖	* 🗖 🔹 *	*	**
	0 0.5	0 0.5	0 0.5	0 0.5 1.0

(2) Percentage of SA or SH faculty members who carried out specific research-related activities

Q: Have you actually conducted the following activities in the past five years?



SA faculty member SH faculty member

Fig. 14.3 Comparison of SA and SH impacts on research activities by country of origin

Note 1 Figure (1) shows the difference of the mean response values (4-point likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all) between the SA group and the SH group

Note 2 * p<0.05, ** p<0.01

Note 3 The sample size is the same to Fig. 14.2 Source Created by the authors

implementation rate between SA and SH faculty in presentations at international academic conferences (R7) is about 50 percentage points, and for overseas publications (R8), the difference is more than 40 percentage points. When the four countries are compared separately for SA and SH faculty members, the country differences are larger for SH than for SA faculty members. Between the four countries, SH faculty members have visibly different rates of implementation while differences among the four countries' SA faculty members are less pronounced. In Cambodia, where domestic graduate education is underdeveloped, the impact of study abroad on research activities is especially significant. The level of development of domestic higher education is strongly related to the level of impact of study abroad on research activities. In the interviews in Cambodia, respondents repeatedly mentioned that the main purpose of study abroad is to conduct research. This is because studying abroad allows them to concentrate

more on research compared to studying at home in Cambodia, where there are many problems, such as the lack of sufficient research facilities and poor management of laboratory equipment (see Sects. 13.4.2 and 13.4.5).

However, some research activities show more substantial impacts from studying at home compared to studying abroad. In Malaysia and Indonesia, the perception of impact on applying for patents (R5) is higher among SH than SA faculty members. In Indonesia, the difference between SA and SH faculty members is statistically significant. One reason that applications for patents may be higher for SH is that SH faculty members are more likely to be familiar with local industry needs through domestic study and have established networks with local communities (see Sect. 8.3.2). Regarding publication in local languages (R2), SH faculty are more likely to undertake this activity than SA faculty in Malaysia and Vietnam. This may be because study abroad experience is more likely to have a positive effect on writing articles and books in foreign languages, while domestic study may have a positive effect on writing articles and books in the local language, as described below.

In recent years, university faculty members have been strongly expected to publish their research in the form of academic articles and books, and the number of publications is often used as a performance indicator of research activity. In the country case studies, the expression "publish or perish" indicates that faculty members are under heavy pressure to write and publish papers and books (see Sect. 11.4.2). In the questionnaire survey of this study, SA and SH faculty members were also asked about the number of academic articles, book chapters and books they had published (Fig. 14.4). For academic articles and book chapters, SA faculty published 20-40 percentage points more than SH faculty in all countries. Comparing this number separately for publications in local and foreign languages, the number of foreign language publications is higher for SA faculty in all four countries. In comparison, the number of local language publications is higher for SH faculty in all of the countries except Indonesia. The number of academic articles and book chapters published in foreign languages by SA faculty is 1.3 times higher than that of SH faculty in Malaysia, 1.6 times higher in Indonesia, 2.1 times higher in Vietnam, and 7.0 times higher in Cambodia. This suggests that the impact of study abroad experience on foreign language publication productivity is extremely large and that it is also larger in countries with less developed higher education systems. As higher education develops, the level of postgraduate education in the country increases, and SH faculty members show similar performance in terms of academic publications to SA faculty members. The number of book publications shows a similar trend

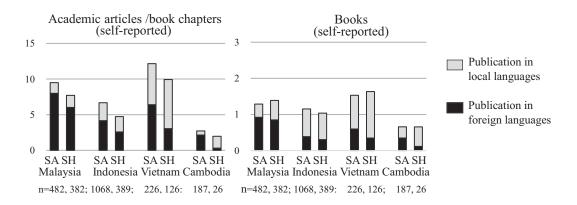


Fig. 14.4 Comparison of the number of academic publications between SA and SH faculty members by country of origin *Source* Created by the authors

to that of articles and book chapters, with SH faculty publishing more books in local languages, except in Indonesia, and SA faculty publishing more books in foreign languages in all countries. However, in the case of book publications, the share of local language publications is dominant, and the difference between SA and SH faculty members is smaller than for articles and book chapters.

Impacts on Social Contributions and University Administration Activities

Since the basic functions of the university are teaching, research, and social contribution, this study also examined the impact of the study abroad experience on the social contribution activities of university faculty members. In addition to the three functions, faculty members also play an important role in university administration. Therefore, activities related to university administration were also covered in the survey. The social contribution activities included four domestic activities (see S1-S4 in Fig. 14.5) and three international activities (see S5–S7 in Fig. 14.5). The surveyed university administrative activities included two domestic activities (see U1–U2 in Fig. 14.5) and two international activities (see U3–U4 in Fig. 14.5). For these activities, the difference between SA and SH faculty perceptions of the impact of study abroad/ study at home is shown in Fig. 14.5(1), and the percentage of activity implementation by SA and SH faculty is shown in Fig. 14.5(2).

In terms of faculty perceptions, studying abroad generally has a higher impact than studying at home. However, the difference between SA and SH faculty members in social contributions and university administration activities is smaller than for teaching and research activities. Regarding the implementation rate of activities, the difference between SA and SH faculty is also small, especially for domestic activities.

When comparing international and domestic activities, the perceived impact of study abroad experience is greater, and the implementation rate of activities is higher for international activities in both categories. This indicates that SA faculty members are able to use the international experience, language skills, and international networks developed through study abroad to contribute to these international activities. On the other hand, SH faculty members have a higher impact on some domestic activities. This is likely because SH faculty members are more familiar with the domestic situation and have more domestic connections.

In a cross-country comparison, the tendency for the impact of study abroad to decrease with the development of higher education, as seen in teaching and research activities, is not observed in social contributions or university administration activities. While the impact of study abroad is somewhat stronger in Vietnam, there is no clear difference in impact between Malaysia, Indonesia, and Cambodia.

As noted in Sect. 14.2.2, one challenge of long-term study abroad can be reintegration into the local academic community upon return. Comparing the percentage of SA and SH faculty members who participated in university administration (U2) by age group, the SH faculty either demonstrates higher participation, or there is no difference between SA and SH faculty, until around the early 40s (Fig. 14.6). It is only in the age groups around 50 years or older that the percentage of SA faculty as administrative members is higher than that of SH faculty. For Indonesia in particular, the participation rate of SH faculty members in their 30s in university administration is about 20-25 percentage points higher than their SA counterparts. As a faculty member who received her Ph.D. in Indonesia commented, "When you enter a Ph.D. program at your own university, you have to do both teaching and administrative work as a faculty member at the same time as being a graduate student. You are involved in university administration from an early stage, so you become more skilled in university management than those who return from studying abroad."

In this volume, the USM Malaysia and the VNU/HUST Vietnam case studies contain specific sections discussing the challenges of reintegrating study abroad returnees. In the case of USM, the study cites instances where insufficient support and mentoring from senior staff, (1) Difference of faculty members' perception on the impacts of SA or SH

Q: Do you think your study abroad (or study at home) experience enhanced your skills and knowledge in dealing with the following activities?

	Malays	ia	Indonesia		Vietnam		Cambodia	
Social contribution								
Domestic activities								
S1. Domestic academic societies			i		**			
S2. Country gov. advisory committees					*			
S3. Collaboration with the domestic industry	* 💼			*	**		•	
S4. Community development activities				**	**			
International activities								
S5. Int'l academic societies	**		**		**			
S6. Int'l organizations' advisory committees	* 💼		**		**			
S7. Collaboration with int'l industry	**		*		**			
Univ. management								
Domestic activities								
U1. Reforms of university regulation or system	**		**		**			
U2. Univ. management as an admin. member	**				*			
International activities								
U3. Agreements with overseas universities	**		**		• **		*	
U4. Int'l inter-university networks	**		**		**			
	0	0.5		0.	5	0 0	.5 0	0.5

(2) Percentage of SA or SH faculty members who carried out specific social contribution and university management-related activities

Q: Have you actually conducted the following activities in the past five years?

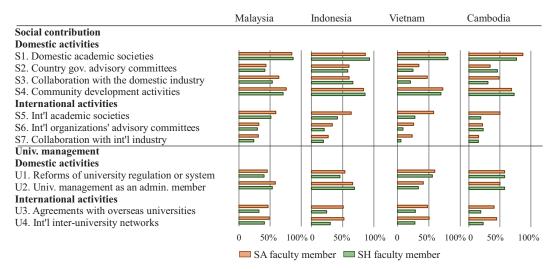


Fig. 14.5 Comparison of SA and SH impacts on society contributions and university management activities by country of origin

Note 1 Figure (1) shows the difference of the mean response values (4-point likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all) between the SA group and the SH group

Note 2 * p<0.05, ** p<0.01

Note 3 The sample size is the same to Fig. 14.2

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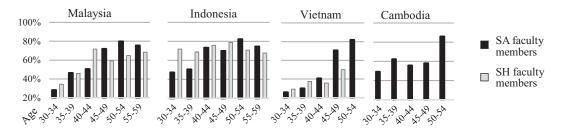


Fig. 14.6 Engagement in the university management

(Percentage of faculty members who have contributed to university management as an administrative member within the past five years by age group)

Note 1 SA or SH groups by age with sample sizes of 10 or less have been dropped

Note 2 Malaysia SA n=466, SH n=370; Indonesia SA n=868, SH n=288; Vietnam SA n=204, SH n=106; Cambodia SA n=147

Source Created by the authors

university bureaucracy, and lack of funding make the reintegration of study abroad returnees difficult (see Sect. 5.4.4). For VNU/UST, the challenges faced by SA faculty include reverse culture shock upon return, lack of local academic networks due to absence while studying abroad, and research topics in developed countries that do not fit the local context (see Sect. 11.4.4). It is crucial to consider not only the positive effects of study abroad but also the advantages of domestic study.

Key findings from the comparison between countries of origin

This section has examined the similarities and differences in the impacts of faculty study abroad, focusing on four countries of origin: Malaysia, Indonesia, Vietnam, and Cambodia. The main points are summarized below.

The first commonality is that in many of the teaching and research activities, more SA faculty members perceive their study abroad experience to be impactful than SH faculty perceive their domestic study experience to be impactful, and the percentage of SA faculty who engage in these activities is also greater than among the SH faculty. For many social contributions and university administration activities, study abroad has a greater impact than study at home, but to a lesser extent than teaching and research.

The second commonality is that the impacts of the study abroad experience are more evident in international activities than in domestic activities, in all areas of teaching, research, social contributions, and university administration. Long-term study abroad for advanced degrees provides faculty members with opportunities to gain international experiences, build international networks, and acquire language skills that have a greater impact on their international activities as academic professionals when they return home. In Southeast Asia, leading universities are becoming increasingly internationalized, and the academic activities of faculty members are no longer limited by national borders. More than ever, top faculty members are expected to engage in international teaching and research activities, and the impact of study abroad on international activities is becoming increasingly important.

However, differences also exist among the four countries. The difference in impacts between studying abroad and studying at home is greater in Vietnam and Cambodia than in Malaysia and Indonesia. For teaching activities, the difference between SA and SH faculty is particularly large in Vietnam. For research activities, the difference between SA and SH faculty is particularly large in Vietnam and Cambodia. In Malaysia and Indonesia, domestic graduate schools are growing, and the number of domestic degree holders is increasing. Such schools are increasingly closing the gap in providing education at a standard similar to that offered by foreign graduate schools. In Vietnam and Cambodia, graduate education is still inadequate in terms of training university faculty, and study abroad makes up for this qualitative deficiency.

14.4.2 Comparison Between Destination Countries

Many faculty members at top Southeast Asian universities have studied in developed countries to obtain advanced degrees. At the ten leading universities in Malaysia, Indonesia, Vietnam, and Cambodia from which data were collected for this study, about 90% of the 2,000 SA sample studied in developed countries, of which 90% (about 80% of all SA faculty) studied abroad in Japan, the United Kingdom, Australia, the United States, France, Germany, and the Netherlands. Therefore, this section focuses on these seven major study destination countries to examine differences in the impacts of study abroad by destination country and various features of each destination country.

Difference of Study Abroad Impacts on Education and Research Activities by Destination Country

Faculty perceptions of the impacts of study abroad and the implementation rate of activities used in the previous section are tabulated here by destination country (Fig. 14.7). Because of the differences in sample size and study abroad impacts among home countries, the top five destination countries were selected for the tabulation for each home country. Then, focusing on teaching and research, which are the core responsibilities of faculty members, the averages of the responses of SA faculty members in the four areas of domestic teaching activities, international teaching activities, domestic research activities, and international research activities are shown by home country and by destination country.

First, with regard to domestic educational activities (Fig. 14.7(1)), there are no significant differences across destination countries in either the perception of impact by SA faculty (blue

dot in Fig. 14.7) or the implementation rate of activities (black bar in Fig. 14.7). Domestic educational activities are the primary academic responsibilities, so almost all faculty members implement these activities and the differences in their perceptions of impacts among destination countries are small. On the other hand, it is in the area of international research activities that the differences between the destinations are observed (Fig. 14.7(4)). In this area, both the perception of impact and the implementation rate of activities are high for returnees from Japan in the case of Malaysia, the Netherlands in Indonesia, Korea in Vietnam, and Japan in Cambodia. However, Cambodian returnees from Korea show a low perception of impact and a low implementation rate of activities, indicating that even though Vietnamese and Cambodian faculty studied in the same country, they tend to show different impacts depending on their country of origin. Thus, when comparing the impacts across destination countries in the four areas of activity and across the four countries of origin, Japan and the Netherlands appear to have somewhat stronger impacts in the area of international activities than other destination countries, but the difference is not always clear across the countries of origin.

Acceleration of Activities as a Result of Studying Abroad

The questionnaire also asked which of the following activities were most accelerated by studying abroad: (1) international research, (2) domestic research, (3) international education, (4) domestic education, (5) social contributions and university management. The responses to these questions are shown in Fig. 14.8 for each of the top seven study destination countries.

International research was the most frequently selected activity by returnees from the Netherlands and Japan (33% and 32%, respectively), while domestic teaching was the most frequently selected activity by returnees from the other five countries. Of the faculty members who studied in France and the United States,

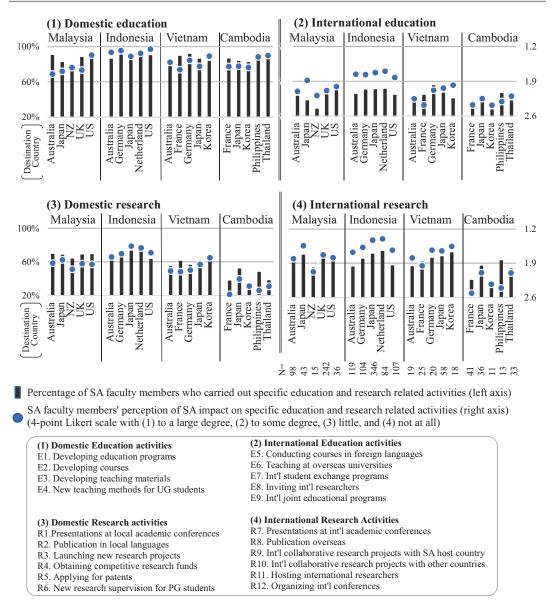


Fig. 14.7 Comparison of SA impacts on education and research related activities by main destination country *Note* The figure shows the top five destination countries for each country of origin *Source* Created by the authors

51% and 45% chose domestic teaching activities, respectively. This means that almost half of the returnees from these two countries perceive domestic education as the most accelerated activity over other activities. This figure suggests that when comparing the seven major study destination countries, faculty members perceive that studying in the Netherlands and Japan is more effective in promoting international research activities while studying in the United States and France is more effective in promoting domestic teaching activities. In the interviews at ITB, Indonesia, many respondents agreed with these country-specific

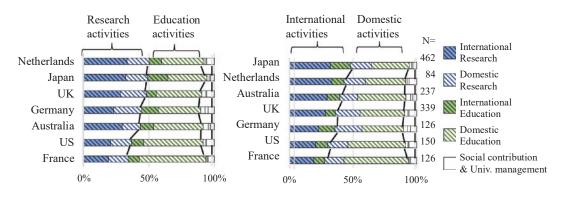


Fig. 14.8 Most accelerated activities by SA experiences

Q: Please select the activities that you have accelerated most based on the knowledge/skills/networks you acquired in your study abroad?

Note The figure shows the destination countries where more than 80 faculty members have studied abroad *Source* Created by the authors

characteristics of studying in Japan, which is strong in research activities, and studying in the United States, which excels in educational activities (see Sect. 8.3.7).

In all destination countries, the combined ratio of teaching and research activities is over 90%, but the proportion between teaching and research activities varies by destination country. Those who studied in the Netherlands, Japan, and the United Kingdom are more likely to have accelerated their research activities (both domestic and international) based on the knowledge, skills, and networks acquired through study abroad, while those who studied in France, the United States, and Australia are more likely to have accelerated their teaching activities (both domestic and international).

When the responses to the same question are rearranged into the three categories of international activities (teaching and research activities), domestic activities (teaching and research activities), and social contributions/university management, international activities are more frequently selected by returnees from Japan and the Netherlands. Returnees from the other five countries consider domestic activities to have accelerated the most. In the case of France and the United States, the difference between domestic and international activities is as high as 40 percentage points. Destinations with higher percentages of research activities have higher percentages of international activities, while countries with higher percentages of education activities have higher percentages of domestic activities. Interestingly, the results of the two types of comparisons, education vs. research activities and domestic vs. international activities, show very similar trends.

International Research Activities

As noted above, the differences between destination countries are more pronounced for international research activities. This section provides a closer look at these international research activities.

Figure 14.9 shows the responses to the question of whether SA faculty members maintain the personal relationships they established during their study abroad upon return to their home countries. Of returnees from the Netherlands and Japan, 70% said they "very often" or "often" maintained communication with their academic supervisors, which is about 20-30 percentage points higher than those from the other countries (Fig. 14.9(1)). Communication with faculty members other than supervisors is also about 20-30 percentage points higher in the Netherlands, Germany, and Japan than in the other countries (Fig. 14.9(2)). On the other hand, communication with international faculty also studying abroad is maintained by about 20-30% of faculty ("very

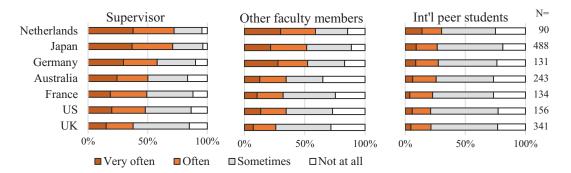


Fig. 14.9 Communication with former supervisors and other faculty members after returning home *Q: Do you still maintain close communication with your supervisors/other faculty members you met at your study abroad destination?*

Note The figure shows the destination countries where more than 80 faculty members have studied abroad *Source* Created by the authors

often" and "often") in all countries, with little difference between destinations (Fig. 14.9(3)). Faculty members who studied in the Netherlands, Japan, and Germany are more likely to maintain academic networks with faculty members of the destination countries after returning home.

Figure 14.10 shows the responses of SA faculty to the question of whether they had conducted international collaborative research in the past five years with researchers from their host country (Fig. 14.10(1)) or with researchers from other countries (Fig. 14.10(2)). The rate of international collaboration with researchers in the host country was 64% for the returnees from Japan and 54% for the returnees from the Netherlands, compared with about 40% for the returnees from the United States. In the case of destinations where strong academic networks had been established during study abroad and maintained afterward, such as Japan and the Netherlands, it is likely that these networks often evolved into international joint research activities after the SA faculty member had returned home. This pattern was frequently mentioned in interviews in each focal country. For example, an Indonesian faculty member who received his master's degree from a Japanese university stated, "My research colleagues during my study in Japan have since become faculty members in Japanese universities, and I have conducted international collaborative

research with them by obtaining two large competitive international collaborative research funds from the Japanese government."

Studying abroad can provide a gateway to international academic networks and subsequent international activities of faculty membersnot only for those faculty members who study abroad but also for the host faculty. A study on ODA participation by Japanese university faculty members provides an example of how they expect their international students from developing countries to become future research partners (Kayashima, 2022). In Japan, the internationalization of higher education is progressing rapidly, and university faculty members are required to conduct international collaborative research and publish international co-authored papers. Compared with the United States and the United Kingdom, Japanese universities are latecomers to the internationalization of higher education, both as a world academic center and as a destination for study abroad. Therefore, it is understandable that after receiving outstanding faculty members from top universities in developing countries as international students, Japanese university faculty members seek to maintain active communication with them and expect future joint research and joint educational activities with their countries. Research on Japanese university faculty members indicates that the same mechanisms that lead from study

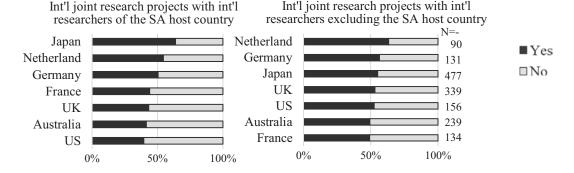


Fig. 14.10 Participation in international collaborative research projects *Q: Have you actually engaged in the international collaborative research projects in the past five years (2015–2019)? Note* The figure shows the destination countries where more than 80 faculty members have studied abroad *Source* Created by the authors

abroad to academic networking and then to international joint research activities are at work in the host country as well as the country of origin (Kayashima, 2022).

Key Findings from Comparison Between Destination Countries

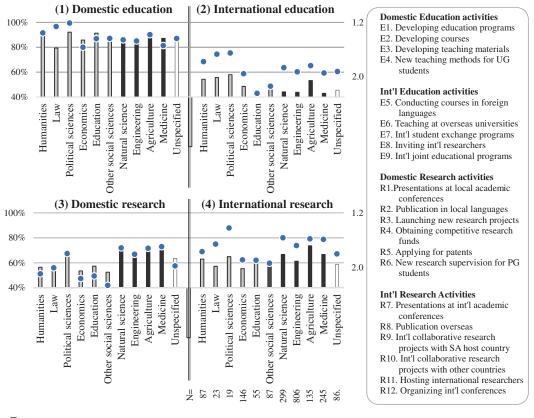
This section examined the differences in the impacts of study abroad among the seven major destination countries. The main results are as follows. First, the overall analysis of the questionnaire survey did not reveal differences in the impacts of study abroad by destination country as clearly as differences by country of origin. However, the results indicated that faculty members who studied in Japan and the Netherlands perceived that their experience enhanced their international research activities, while those who studied in the United States and France perceived that their experience strengthened their domestic educational activities. This characteristic by country of study was often confirmed in the interviews. In addition, faculty members who studied in Japan and the Netherlands were more likely to maintain relationships with researchers in their host countries and to engage in international collaborations with these countries. These findings suggest that academic networks formed through study abroad have evolved into international research activities and that the strength of the network and the frequency of cooperation vary by destination country.

14.4.3 Other Comparisons

Comparison Between Fields of Study

Similar to the analysis by country of destination, SA faculty members' perceptions of the study abroad impacts and the implementation rate of activities was tabulated for each faculty member's discipline (Fig. 14.11). Country of origin is not distinguished here, as there is no extreme country bias by field of specialization. The fields of specialization were grouped into 11 areas: humanities, law, political sciences, economics, education, other social sciences, natural science, engineering, agriculture, medicine, and unspecified. The mean response values for perceived impact (blue dot in Fig. 14.11) and the rate of activity implementation (black bar in Fig. 14.11) of SA faculty for each field of specialization are shown in the four areas of domestic teaching activities, international teaching activities, domestic research activities, and international research activities.

With regard to the impacts of study abroad by field, the following can be noted. First, in the educational domain, humanities and social sciences disciplines receive a greater impact from study abroad than the S&T disciplines in international activities, while there are no significant differences between disciplines in domestic activities. Among the international educational activities, the activities with the greatest impact in the humanities and social sciences were conducting



Percentage of SA faculty members who carried out specific education and research related activities (left axis)
 SA faculty members' perception of SA impact on specific education and research related activities (right axis) (4-point Likert scale with (1) to a large degree, (2) to some degree, (3) little, and (4) not at all)

Fig. 14.11 Comparison of SA impacts on education and research related activities by field of study *Source* Created by the authors

courses in foreign languages, and teaching at overseas universities. The difference in activity implementation rates between the two groups was 11 percentage points and 24 percentage points, respectively.

On the other hand, in the research domain, the impact was generally higher in S&T disciplines than in humanities and social sciences disciplines for both domestic and international activities. Among these, the activities receiving particularly high impact in S&T disciplines were obtaining competitive research funds, and applying for patents. The difference in activity implementation rates between the two groups was 12 percentage points and 13 percentage points, respectively. While it is natural that teaching/research methods and priorities differ depending on the field of specialization, SA faculty in humanities and social sciences are more active in international teaching activities, while SA faculty in S&T are more active in research activities, making use of their study abroad experience.

Comparison by the Year of Degree Acquisition

For this study, the period in which respondents received their advanced degrees spanned nearly half a century, from the early 1970s to the late 2010s. In order to understand how the impact of study abroad changes with the timing of study abroad, SA faculty members were grouped based on the year of degree acquisition abroad, and changes in the impacts of study abroad were examined over time. Although faculty members' perceptions of study abroad impacts decreased slightly as the time of degree acquisition became more recent, the study at home impacts of SH faculty members likewise decreased, so it cannot be said that study abroad impacts decreased relative to domestic study abroad.

14.5 Conclusions

Based on the above analysis, this volume concludes with the following three points.

14.5.1 Study Abroad Impacts

First, the faculty members' experiences of studying abroad have positive impacts on many of their subsequent activities. The impacts are more significant for international activities, including teaching activities such as international student exchange programs, inviting international researchers for educational activities, and international joint educational programs. Similarly, significant impacts can be seen in international research activities, such as publication overseas, international collaborative research projects, and hosting international researchers. This was demonstrated through the results of a large-scale questionnaire survey that asked about the perceptions of faculty members and their activities. Many specific examples were also discussed in the interview survey.

In recent years, higher education in Southeast Asia has experienced a rapid expansion, and governments are working to improve the quality of leading universities in addition to quantitative growth. As the internationalization of higher education has progressed, internationalization efforts have become more closely linked to improvements in quality at top universities. In developing countries especially, where highlevel education and research communities are not necessarily widespread, leading universities need to participate in the global academic community and engage in cooperation and competition with foreign universities to achieve growth. Many of the ten universities included in this study advance the goal of becoming world-class research universities by focusing on the internationalization of education and research. There are, however, many variations and nuances in the degrees and expectations of success (Moeliodihardjo, 2023; Nguyen, 2023; Sirat, 2023; Sok et al., 2023). For universities aspiring to become world-class research universities, it is essential to note that the study abroad experience of faculty members is likely to positively impact the international education and research activities conducted within the university.

The international networks that faculty members established through their study abroad experiences play an important role in influencing the internationalization of education and research. Strong connections with foreign graduate school supervisors and other faculty members have contributed to the implementation of collaborative research and the formation of international joint education programs upon return to their home countries. In addition, SA faculty members have made personal connections with peers from third countries who studied in the same classes or laboratories and with engineers and researchers in industries they met while undertaking their research projects. The relationship between international research productivity and the construction of academic social capital through study abroad has been shown in many previous studies (e.g., Chen, 2017; Eduan, 2019; Jiang & Shen, 2019; Jonkers & Tijssen, 2008), and the results of this study largely replicate these findings. However, while most previous studies have analyzed the correlation between doctoral study abroad and the number of international co-authored publications, this study is novel in that it goes beyond the research field to include international educational activities, such as conducting courses in foreign languages, teaching at overseas universities, managing international student exchange programs, inviting international researchers, and conducting international joint educational programs. The interviews revealed that in addition to the global academic network, language skills, international experience, and self-confidence developed through study abroad play a vital role in the process by which study abroad experiences lead to international activities.

Although the study abroad of faculty members has significant impacts on international education and research activities, it should be added that the positive impact on domestic education and research activities-creating courses, developing teaching materials, implementing new teaching methods for undergraduate students, and establishing new research supervision for postgraduate students-was also observed. The following qualitative changes in the daily classroom teaching and laboratory research supervision of faculty members were frequently mentioned in the interviews: the shift from classes in which students participate passively to classes that require proactive participation; a shift from rote learning and information transfer to discussion-based classes; a more horizontal faculty-student relationship in which students can speak freely; the improvement of experiments and hands-on practice; and faculty involvement in students' laboratory work. While it was difficult to capture these qualitative changes with quantitative data from the questionnaire survey, it was very impressive to hear many SA faculty members raise them in the interviews, along with criticisms of the one-way, rote-centered teaching style they had used in the past. Many university faculty members in developing countries have had few opportunities to receive specialized training as educators, so the coursework and research supervision they received in undergraduate and graduate school often serve as models when they become faculty members themselves. In this sense, the experience of being exposed to different styles of teaching and research instruction in the host country-and sometimes of participating in educational activities at the host university as a teaching assistant or laboratory facilitator-has a valuable impact on the activities of faculty members upon their return. This impact on daily teaching activities should not be overlooked.

Furthermore, faculty members' study abroad experiences have an impact on educational activities that are systematically undertaken at the departmental and university levels, such as course development, program development, and the formation of joint international educational programs with foreign universities. The activities at the departmental and university levels depend largely on the experience and skills of individual faculty members. It is clear that faculty members' study abroad experiences have impacts on the university's performance as a whole that go beyond the impacts on individual faculty members.

Many positive impacts of study abroad were identified in both the questionnaire and interview surveys, but negative impacts related to adjustment and reintegration upon return from study abroad were also observed. Research environment, salary levels, bureaucracy, fraud, and corruption are common problems in higher education in many developing countries, and faculty members returning from study abroad can experience significant stress from these problems. In some cases, they also feel a sense of alienation, such as difficulties in re-integrating into the academic community of their own country and university. They may also experience a sense of impatience, such as lagging behind SH faculty in adjusting to the domestic environment due to their prolonged absence. These are consistent with the challenges identified in many previous studies (e.g., Da Wan et al., 2022; Karakaş, 2020; Kuzhabekova et al., 2019; Shin et al., 2014; Zink, 2013). From another perspective, however, this is evidence that SA faculty members may return to their home universities with aspects of the culture and values absorbed while studying abroad. It is important to ensure that this results in a positive difference in their home universities and academic communities. As noted in the Malaysian case study chapter, supportive policies that mitigate the reintegration challenges of returning faculty will help maximize the impacts of their study abroad experiences (see Sect. 5.5).

14.5.2 Study Abroad Versus Study at Home

The second significant finding of this study is that the impacts of studying abroad relative to studying at home decrease with the development of higher education in the home country. The common format questionnaires and interviews for Malaysian, Indonesian, Vietnamese, and Cambodian faculty members revealed that the difference in impact between SA and SH faculty is generally greater in Cambodia, followed in decreasing order by Vietnam, and Malaysia/ Indonesia. Examining SA faculty alone shows that study abroad impact varies slightly across countries, while examining SH faculty alone shows that the impact of studying at home varies significantly across countries. A four-country comparison of the impacts of study abroad relative to study at home shows that as domestic graduate education develops and improves in quality, the gap between the impacts of study at home and study abroad narrows. In Chap. 2, data from the questionnaire show that in Malaysia, Indonesia, and Vietnam, the number of domestic graduates is growing rapidly, especially at the master's level, and that domestic graduates now outnumber foreign graduates, indicating that graduate education is developing in these countries (see Sect. 2.4.1). In addition to the quantitative development of graduate education identified in Chap. 2, this chapter has shown that the quality of graduate education is also improving in a direction that is replacing the traditional acquisition of foreign degrees.

The governments of Malaysia and Indonesia continue to provide large-scale scholarship programs for faculty study abroad while expanding domestic graduate education. In the context of developing domestic graduate education, Moeliodihardjo (2023) and Sirat (2023) state that there should be an appropriate balance between support for advanced study at home and support for advanced study abroad. Since the growth of domestic graduate schools requires talented students, quality faculty, and a welldeveloped teaching and research environment, it is necessary to promote domestic study by considering fields of specialization and comparing domestic graduate schools with those abroad rather than sending all outstanding students abroad for study. On the other hand, as international experience becomes increasingly important for domestic students as well, it is necessary to create an educational environment that allows domestic students to gain international experience, such as participating in double degree programs, short-term study abroad, and international academic conferences.

14.5.3 Destination Countries

While the destinations of the 2,000 SA faculty members in this research project spanned more than 40 countries, 80% of faculty members studied in just seven countries: Japan, the United Kingdom, Australia, the United States, France, Germany, and the Netherlands. Therefore, based on the questionnaire survey results, an attempt was made to compare the impacts of studying in these seven countries. While no clear differences in the level of impact between the host countries could be confirmed, some responses in the questionnaire did reveal characteristics of the study abroad destinations. This included the finding that studying in Japan or the Netherlands is most likely to promote faculty members' international research activities upon return, while studying in France or the United States is most likely to promote domestic educational activities. Moreover, returnees from Japan or the Netherlands are more likely to engage in collaborative research with the host country. The interview survey frequently asked about differences in the study abroad experience by destination country, and many of the responses generally confirmed the above trends.

On the other hand, some respondents noted that the choice of academic advisors and the educational environment were more crucial than the choice of country and university when deciding where to study abroad. In addition, some Indonesian interviewees pointed out that each destination country has its own strengths and weaknesses, so it is essential to diversify the number of study destinations. In other words, by diversifying destination countries, faculty members can bring back different experiences and networks, and thus, universities can build richer international networks (see Sect. 8.3.7).

The study destinations of faculty members from developing countries have been concentrated in Western countries, such as former colonial powers, due to each country's historical background and geopolitical conditions. The rise of the World University Rankings in recent years has led to their increased use in selecting universities for study abroad. However, it is difficult to compare destination countries and universities solely based on quantified indices. This trend also carries the potential risk of diminishing the richness that diversity can bring. The presence of faculty members who have studied in a range of countries provides a variety of options for improving university education and research, as well as rich opportunities for collaboration with many partners in promoting internationalization. It is, therefore, necessary to diversify the number of countries in which faculty members study abroad, taking into account the varied characteristics of the destination countries.

What emerges from the above three findings is that the meaning of study abroad is changing. Many universities in developing countries were established based on the model of Western universities and developed by bringing advanced Western knowledge and technology through the study abroad of faculty members. In this context, the purpose of studying abroad was to bring foreign learning back to their home countries. However, around the 1990s, there was a simultaneous rapid growth and expansion of higher education in Southeast Asia as higher education was becoming increasingly globalized. With these significant tectonic shifts in higher education, the role of study abroad for Southeast Asian university faculty members seems to be changing from "transfer and introduction of advanced foreign knowledge and technology" to "gateway to an international academic network." As Altbach (2006) argues, the gap between the center and the periphery of higher education has been maintained and even widened under globalization. However, it is difficult to narrow the gap between the center and the periphery without participating in this global knowledge system. In this sense, study abroad will continue to play a vital role.

Finally, we discuss the limitations of this research project and our expectations for future research. This project began with a desire to determine the impacts of study abroad at the institutional and societal levels beyond the individual level. We then examined the impacts of study abroad by focusing on the experiences of university faculty members and their subsequent faculty activities, due to the crucial role of universities in the development of developing countries. Faculty study abroad experiences are relatively traceable, and the activities of faculty members are comparable across countries. However, the findings of this study are related to the study abroad impacts of faculty members at leading universities in Southeast Asia and cannot be generalized to the overall impacts of different study abroad experiences. The manifestation of study abroad impacts of a particular social activity, beyond the impacts on individual-level attitudes and potential knowledge and skills, is highly dependent on the context of the activity. Thus, even in this study, the impacts of faculty members' study abroad experiences are largely defined by the changing environments in which top Southeast Asian universities are situated. Acknowledging these limitations, we hope that new research on the impacts of study abroad in different contexts, such as the public service or African universities, will shed additional light on the diversity of study abroad impacts in the future.

Note: The interviewees granted permission to the editors and authors to publish the content of the interview in this book.

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Nobuko Kayashima, Ph.D., is Senior Research Advisor at the JICA Ogata Sadako Research Institute for Peace and Development. She joined JICA in 1982 and has played a leading role in the planning and implementation of JICA's education cooperation over the past four decades. Prior to her current assignment, she served as Senior Vice President, Director/Deputy Director of the JICA Ogata Research Institute, and Director General of the Human Development Department. While holding management positions at JICA, she has been actively involved in academic research activities and received her Ph.D. from Nagoya University for her research on the internationalization of Japanese universities. Naoki Umemiya, Ph.D., is Professor at the Center for Global Education and Discovery, Sophia University, Japan. Before assuming his current position, he served as the Deputy Director General, Human Development Department, JICA, in charge of JICA's cooperation projects in higher education, JICA expert for the Malaysia-Japan International Institute of Technology (MJIIT), and JICA expert for the ASEAN University Network/ Southeast Asian Engineering Education Development Network (AUN/SEED-Net) in Thailand. He holds an M.Ed. from Harvard Graduate School of Education and a Ph.D. from Tokyo Institute of Technology. He specializes in comparative and international education. He is Visiting Professor at Tokyo Institute of Technology. Atsushi Tsujimoto is a JICA expert (Sub-Chief Advisor) at Vietnam Japan University, a member university of Vietnam National University, Hanoi. Previously, he contributed to the JICA Ogata Sadako Research Institute for Peace and Development from 2017 to 2022. His background includes being a researcher at Kyoto University (2016–2017), a program officer at JICA's Human Development Department (2014–2016), and a JICA Expert (Project Coordinator/Cooperation Planning) at Egypt-Japan University of Science and Technology (2012–2014). He holds a Master of Education degree from Hiroshima University.

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