## Higher Education in Cambodia: Challenges to Promote Greater Access and Higher Quality

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### Introduction

One of the impacts of globalization on today's international community is the furious competition raging among different countries and regions in all aspects of politics, economy, society, and culture. Globalization makes people, goods, money, and information travel freely across borders. As the phrase "knowledge-based society" aptly denotes, the amount of access to various information determines the international competitiveness of a country, region, or even organization or individual. Given this fact, many countries are much more acutely aware of the importance of training human resources with advanced knowledge and skills through their higher education system and of developing science and technology through their research and development endeavors (Neubauer 2011).

Urged on by such awareness, higher education in many developing countries has been undergoing rapid expansion in recent years. In Asia in particular, new universities are proliferating, resulting in a remarkable expansion of higher education. Even in countries where formerly only a small percent of the university age population actually had gone onto higher education, the percentage has risen dramatically since the 1990s. Cambodia, the subject of the research reported in this chapter, is no exception.

Notably, the law governing universities in Cambodia was relaxed in 1997, authorizing the establishment of private universities. Thus from the mid-1990s, the higher education sector in Cambodia has been growing larger. In the 2000s, the number of higher education institutions (HEIs) mushroomed,

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largely due to the increase in the number of private colleges and universities (Chealy 2005). Such an expansion in the higher education sector arrived in response to the rise in demand by the Cambodian labor market, which has been strongly affected by the global economy, for human resources with higher educational qualifications. Economic development brought with it a larger middle class, which meant an increase in the young population belonging to the middle-income strata. Unmistakably, there are rising expectations and needs among them for further educational opportunities. Because of this recent and rapid expansion of the higher education sector, the importance of improving the quality of education in HEIs is becoming widely recognized (Chealy 2009).

However, we must remember that the higher education sector in Cambodia had suffered total annihilation at one time. Higher education itself had not been in existence for a long time when, in the mid-1970s, Democratic Kampuchea (the so-called Khmer Rouge) led by Pol Pot utterly destroyed the education system of the country. The gradual rebuilding of higher education started in the 1980s, but in Cambodia, the improvement of the quality of higher education is still not necessarily an easy task (Sloper 1999; Chealy 2009). The purposes of this chapter are therefore to identify the issues surrounding qualitative improvement in the rapidly expanding higher education sector of Cambodia and based on the analysis thereof, to discuss the way forward for higher education reform in Cambodia.

### HIGHER EDUCATION IN CAMBODIA TODAY

Modern higher education in Cambodia originated with the establishment in 1947 of the National University of Law, the National University of Political Science, and the National University of Economics, a few years before the end of the 100-year colonial rule by France (Khieu 2011). These institutions had been strongly influenced by the higher education system of France, Cambodia's then suzerain. Later, in the 1960s, higher education quickly amassed in size, starting with the establishment in 1960 of the Royal Khmer University (now the Royal University of Phnom Penh), the Institute of Technology of Cambodia, the Royal University of Fine Arts, the Royal University of Kampong Cham, the Royal University of Takeo-Kampot, the Royal University of Agriculture, and the Royal Academy of Cambodia (established in 1965). Yet, as Pith and Ford (2006) point out, the quality of education provided by these institutions has to be described as extremely poor. Democratic Kampuchea (the Pol Pot regime) that ruled Cambodia between 1975 and 1979 abolished all education systems and destroyed many educational facilities. Indeed, more than three quarters of university academic staff and 96 percent of students were slaughtered by the Khmer Rouge or escaped outside the country (Ayres 2000). Thus razed to the ground, the Cambodian higher education system was unable to relay any knowledge or experience that had hitherto been developed albeit not

necessarily of high quality. Many intellectuals were lost then and the negative legacy is certainly felt to this day.

In 1979, the pro-Vietnamese and Russian-backed Democratic Republic of Kampuchea was established. Many Russian and Vietnamese experts came to reside in Cambodia and a higher education system fashioned on the Soviet model was created. This period saw the reopening of the Royal University of Phnom Penh and other universities that had been founded before the arrival of Khmer Rouge. Incidentally, a power struggle took place within the Royal University of Phnom Penh from the end of the 1980s to the early 1990s. This led to the faculties of economics, law, and education becoming independent. These have subsequently become the National University of Management, the Royal University of Law and Economics, and the National Institute of Education. The government's administrative system developed during this period led to the process whereby government ministries and agencies individually manage universities in the disciplines relevant to them (Table 24.1). Criticism strongly persists that this meant a dispersal of management and supervision of HEIs, resulting in inefficiency.

The Paris Peace Accords were signed in 1991 and peace finally returned to Cambodia, with a general election held in 1993 under the supervision of the United Nations Transitional Authority in Cambodia (UNTAC). Together with stability, the higher education system returned to its expansion course. In this new phase, the Cambodian higher education system gradually shed the socialist influence that had gained ground in the 1980s emanating from Russia, Eastern Europe, and Vietnam. Instead, the influences of America, Australia,

Table 24.1 Number of universities under management/supervision of government ministries

Parent ministries	$HE\ institutions$	
	Public	Private
Ministry of Education, Youth and	9	56
Sport		
Ministry of Health	1	
Ministry of Agriculture, Forestry and	3	
Fishery		
Ministry of Culture and Fine Arts	1	
Ministry of Economy and Finance	1	
Ministry of Religious Affairs and	2	
Cults		
Ministry of National Defense	4	
Ministry of Interior	1	
Sub-total	22ª	56ª
Other ministries	27	
Total	105	

Source: Khieu (2011)

<sup>&</sup>lt;sup>a</sup>The numbers do not include branches of main campuses in different geographical areas

and Western Europe came to dominate. With the introduction of a market economy, the idea that began to prevail was that universities could be used as a source of commercial profit. The public university came to be officially referred to as a pubic administrative institution, and transformed into a semiautonomous institution (Pith and Ford 2006).

In 1997, private capital investment was allowed into university management. This led to the establishment of many new universities. The number of HEIs (especially private universities) grew dramatically (Fig. 24.1). The proportionate increase in the number of private HEIs is a reflection of the sharply rising demand for higher education. The first private university in Cambodia was Norton University, founded in 1997 after the change in government policy. In 1998, the University of Management and Economics and the National Technical Training Institute were founded, and in 1999, the International University, Cambodia followed. In their wake, many other private universities have been created.

As of the end of December 2014, Cambodia has developed 105 HEIs offering four-year education programs. Of these, 39 are public universities and 66 are private.<sup>2</sup> An extremely limited number of universities cover a wide range of academic disciplines, while some offer programs mainly in practical domains rather than traditional academic domains.

As a direct result of this rapid increase in HEIs, so has the number of university graduates. As in many other contemporary societies, a significant issue is that these graduates have completed their higher education without necessarily acquiring the knowledge or skills the labor market demands. As shown in Fig. 24.2, the majority of higher education students are enrolled either in the humanities, social sciences, economics, or law. We are obviously not denying

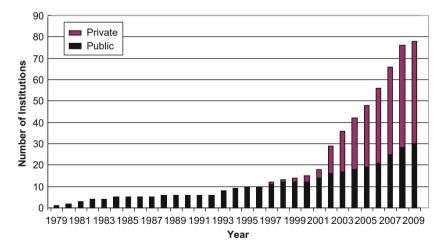


Fig. 24.1 Growth in the number of higher education institutions 1979–2009 (*Source*: Williams et al. 2014)

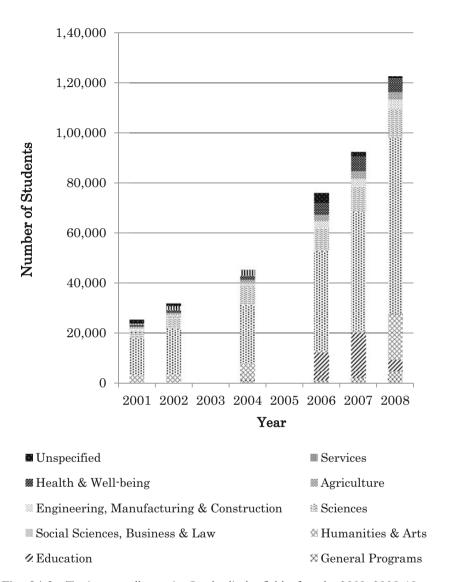


Fig. 24.2 Tertiary enrollment in Cambodia by field of study, 2001–2008 (Source: Williams et al. 2014)

the importance of these academic disciplines. In fact, most students belong to these faculties in universities of most countries. However, for Cambodia and in most of the rest of the developing world, the tertiary industry that would employ the graduates of these disciplines is significantly underdeveloped. For this reason, a mismatch has arisen between the subjects of university majors and employment opportunities, a phenomenon many commentators term "the alignment dilemma," and which is a major factor accounting for the high unemployment rate of university graduates.

In examining this issue, the calculations released by HRINC (2010), a human resource consulting firm in Cambodia, are highly interesting. According to this research, more than half the university graduates employed in all sectors had received a business-related education. More specifically, the data for 2009 show that out of the roughly 153,000 graduates in employment, about 55 percent or 82,000 studied business-related subjects. The "business-related backgrounds" referred to here include accounting, banking, finance, economics, business, management, and marketing. This is supported by the data shown in Fig. 24.2, with the overwhelming majority of students majoring in social sciences, business, and law. (As to other areas of study, HRINC research shows that a relatively large number of graduates who are in employment had studied agriculture, construction, tourism, public administration and defense, education, or health.)

Thus more than half of university students finish with business-related backgrounds. However, as mentioned earlier, the tertiary sector (i.e., the service industry) is still undergoing development within the structure of Cambodian industry, which is still predominantly agricultural, with more than 60 percent of the total labor force (not only university graduates) being engaged in farming. Cambodia does not yet have a labor market that can properly cater to and support university graduates.

The next key issue for a country that wants to develop its industry is to significantly increase the number of students who study courses in engineering. Despite the importance, huge fiscal constraints exist that prevent proper investment into elements such as experimental facilities that are essential in improving and expanding engineering education programs, thereby making it even more difficult to increase the number of students in these fields of study. Cambodia is faced with the difficult task of determining and devising how best to train human resources that meet the needs of society, especially when as one regards universities as important instruments of public service.

This being the context, many students are enrolled in more than one degree program (referred to as "double enrollment"), trying their hardest to optimize their employment prospects. Some students major in two different subjects within the same university while others appear to belong simultaneously to degree programs offered by different universities. For example, public universities are generally given higher social status but the education programs of these public universities mainly cover traditional academic domains and do not put much emphasis on education in the practical domains that would lead directly to employment (such as business management, IT, or English). Because of this, there are often cases of students of public universities obtaining degrees in these practical subjects at private universities, so that they can acquire the social status bestowed on a public university graduate but also arm themselves with a practical degree from a private university. We have to take note of the fact that such a phenomenon is a key reason why private universities are flourishing.<sup>3</sup>

Part of the background to this phenomenon is the rise of the middle class, gradual though it may be, in the wake of the steady economic growth achieved since the turn of the century.<sup>4</sup> The number of students who go to university using their own funds without receiving scholarship has been rising since the late 1990s. From around 2005 onwards, such fee-paying students are an overwhelming majority. We point out here that there are a certain number of students among these fee-paying students who are enrolled in two universities or two programs at the same time.

For reference, there is no regulation of tuition fees charged by HEIs in Cambodia. Each university is free to charge whatever fees it wishes. That being so, with the number of university entrants increasing, certain market mechanisms have come to operate. Universities find it difficult to recruit a sufficient number and satisfactory quality of students if they charge exorbitant fees. Therefore annual tuition fees are roughly within the range of USD200 to USD750 (HRINC 2010).

Cambodian society has been changing dramatically since 2000s along with its rapid economic development and a transformation of the labor market, and we must point out that universities are attempting to offer relevant responses to social needs. As can be seen in Fig. 24.2, providing the numbers of students in different fields of study, students majoring in education, who were in an extreme minority in 2001, have lately been rising significantly in number. It is worth noting in particular that from the year 2000 onwards the numbers of children in primary and secondary education in Cambodia are growing remarkably, even in the face of numerous problems including a shortage in the supply of teachers working in these schooling stages and the relative poor quality of teachers (Hirosato and Kitamura 2009). In response, many universities have initiated courses in education and are directing effort into training both pre-service and in-service teachers. Moreover, the reality is that many teachers, especially in secondary schools, have moved into this role without receiving adequate training or education, even as the government is trying to improve teacher training institutions while encouraging in-service teachers to obtain a university education. The fact that universities are responding with relevance to social demands manifests that Cambodian universities are consciously attempting to fulfill their public-service roles.

We pointed out in this section that the ratio of private universities is exceedingly high among HEIs offering four-year education programs. It is evident that they are playing a significant role but at the same time, they face various issues, especially with regard to the quality of education provided and the diversity of the programs offered. As indicated above many private universities offer education programs that focus only on practical fields of study such as business management, communication (IT), and English. We cannot say that they are properly fulfilling the role of a HEI that delivers public service or more broadly contributes to ideas of the public good. Deep-rooted criticism is being leveled against these institutions that often their quality of the offered education program is not up to university standard. Such issues regarding the quality of education are not just the problems of private universities. Public universities are also beset with a mountain of issues. Therefore, we will move on to discuss what actions are being taken in order to raise the quality of universities in Cambodia.

# Actions to Raise the Quality of Higher Education in Cambodia

Higher education in Cambodia expanded rapidly from the late 1990s. Universities and other HEIs began accepting many students and even as they did so the relative poor quality of education provided came to be widely recognized as a critical issue. In response the Cambodian government has attempted to raise higher education quality by passing legislation and decrees including the New Education Act, the Royal Decree on Certification of Higher Education, and the Sub-decree on the Establishment of Universities. In addition, the government has been actively engaged in improving the higher education system. To improve basic education, the Foundation Year Course (FYC) Program was introduced to all HEIs. A credit certification system and credit transfer system were also introduced (Chealy 2005).

This series of initiatives constitutes actions needed in order to generate the kind of quality students required by the new labor market. It is also widely recognized that the quality of Cambodian HEIs has to be raised in order to prevent the drain of Cambodian students to the higher education markets of neighboring countries. With new universities setting up successively in not only the capital Phnom Penh but also in major regional cities, educational institutions have expanded hugely and become increasingly commonplace. These are the reasons for the active pursuit of reforms by the government.

The core policy of Cambodia on higher education is the Education Strategic Plan (ESP). The ESP 2006–2010 stated its priorities "to realize the guarantee and improvement of quality in both the standard of educational institutions and standard of the system" not only in higher education but also in all stages of education and "to strengthen the management and development of educational institutions" (Ministry of Education, Youth, and Sport 2006). Following on, the ESP 2013–2018, which is the plan current in 2015, emphasizes the strengthening of monitoring at the HEI level of the actions taken to improve quality (Ministry of Education, Youth, and Sport 2013).

As emphasized in the previous section, a strong social demand exists for Cambodian HEIs to provide education programs that meet the demands of the changing labor market. To this end, the FYC was introduced as an important element of reform. From 2005 on, all undergraduates have been obliged to take the FYC, which consists of four key fields of study (humanities, mathematics and natural sciences, social sciences, and foreign languages) and aims to make students acquire a wide range of knowledge in all these fields.

In this way, various initiatives are being implemented to improve the quality of higher education in Cambodia. The Accreditation Committee of Cambodia (ACC) is playing a vital role in the higher education reforms of recent years. Established in March 2003 by Royal Decree (No. NS/RKT 03/03/129), ACC clearly indicates the government's position of fully promoting actions to improve the higher education quality (Khieu 2011). The Royal Decree makes it mandatory for all Cambodian HEIs to acquire accreditation from the ACC in order to confer degrees to students, whether the institution is managed by a Cambodian organization or by a foreign organization. Thus, in order to obtain accreditation, many HEIs have been moved to review the content of their education offerings. To illustrate, they set up the FYC Programs and are publicizing their effort toward the qualitative improvement of education. With support from the ACC, many HEIs have started making self-evaluations (Chealy 2005). The basic rules of accreditation form the framework for these and provide minimum standards for qualification certification and are essential to the accreditation process.<sup>5</sup>

Alongside the creation of this accreditation system, another important quality improvement has been the introduction of the credit certification system and the credit transfer system. Replacing the system whereby student academic records were certified for each academic year, the new credit system adds flexibility to the degree programs, especially for credits obtained at other universities, which are now being recognized (Chealy 2009). This allows part-time students, for instance, to draw up flexible plans for course planning.

### EDUCATION AND RESEARCH IN HIGHER EDUCATION Institutions: Findings of a Survey of University ACADEMIC STAFF

In order to delve more deeply into the quality issue we intend to examine the current state of university teaching and research, in particular focusing on the role that university academic staff play in the process. To ascertain the position and environment in which academic staff find themselves we conducted a questionnaire survey in association with the Japan International Cooperation Agency (JICA) in 2011 focused on academic staff belonging to major HEIs in Cambodia (ten institutions, both public and private universities).<sup>6</sup>

The quality of higher education is on most views dependent on large part by the academic background of academic staff. As is the case in many developing countries, it has been said that one of the major reasons for the poor quality of Cambodian higher education is the lack of proper education and training of university academic staff (Chealy 2009). For example, Williams, Kitamura, and Keng (2014) found that the average number of years of post-high school education of staff teaching at DHEs was roughly 5.5 years. This signifies that many teaching staff have only completed their undergraduate education (four years) and some postgraduate training. Importantly the universities surveyed were major ones, meaning that these results were "better" than that of the higher education sector taken as a whole. In numerical detail, 375 staff, which was 71 percent of the all respondents (n = 531), had obtained master degrees. Of these, merely 9 percent (49 staff) of respondents had doctorates. The percentage of those with only bachelor's degrees was as high as 19 percent (101 staff). From these findings, we can surmise that at other universities, a significant number of academic staff possess even less post-secondary education.

The other focus of this survey was the loan of university academic staff and their level of satisfaction with teaching and research environments. Three categories of work are expected of university academic staff: teaching, research, and making a social contribution. Our assumption is that if they can undertake these three in a well-balanced way, a higher quality of education can result. We also assumed that the satisfaction level of academic staff with their teaching and research environments impacts on the quality of higher education. The following results tested these assumptions.

First, we found that public universities offer better working conditions and teaching and research environments than private universities, with greater staff satisfaction regarding their jobs. Teaching staff at the public universities in the capital especially enjoy a good balance of time spent on the three different categories of work. We were able to confirm that the staff were able to spend a regular amount of time on research activities. Compared to those teaching at public universities in other regions, this group is better at making academic contributions involving communicating and publishing research results. (However, we must point out that this is only a comparison within Cambodia. Compared to other countries, especially developed countries, the amount of time staff can spend on research is extremely small.)

Second, we noted that younger staff members spend long working hours focused mainly on teaching and report relatively low levels of satisfaction with their jobs. With respect to the number of hours spent per week on teaching, broken down by age group, 42.7 percent of faculty aged in their 20s to 60s report that they spend fewer than 10 hours a week teaching. However, younger members of staff spend significantly more time teaching. In particular, among staff in their 20s, 46.3 percent spend between 11 to 20 hours a week—the highest among all age groups with some staff even spending an extraordinary 51 hours or more on teaching. In a similar vein, when we asked both full and part-time lecturers how much of their working hours they spend in their main institutions and in other institutions, we discovered that part-time lecturers (which include relatively more of the younger staff) tend to spend considerably more hours working in other institutions compared to full-time staff. Correspondingly, they in turn spend fewer hours working in their main institutions compared to full-time lecturers.

Third, satisfaction among teaching staff is low in the fields of engineering and agriculture. Here we also identified problems in the quality improvement efforts taken with teaching staff and in their access to scientific journals. Data on the satisfaction of academic staff were analyzed by discipline. In the social

sciences, natural sciences, health science/medicine, and fine arts, many staff responded that they were "highly satisfied with their situation." However, in engineering and agriculture, the highly satisfied levels were 17.5 percent and 23.8 percent respectively, reflecting the relatively under-resourced nature of those disciplines.

Interestingly, many staff indicate that the quality of education had improved over the previous five years, an indication that the quality of HEIs in Cambodia overall is rising. In particular, university teaching staff that regularly engage in faculty development (FD) activities have the perception that the quality of education has risen in the past five years. Table 24.2 indicates the correlation between FD activities and the perceived quality of education. The correlation manifests strongly in the fields of humanities, social sciences, health science/ medicine, and teacher training/education, whereas (again), in engineering and agriculture, no correlation was found between investment in FD activities and rise in the quality of education. Our presumption is that in these fields, what is most needed is investment in facilities and equipment required for experiments. We surmise that efforts to raise the quality of teaching staff through FD activities do not easily lead directly to the raising of the quality of education in engineering and agriculture.

The fourth of our findings is the inadequacy of the framework of HEIs generally that would allow active research activities. Figure 24.3 illustrates the interest of academic staff in teaching and research. The largest proportion of staff, 43 percent overall, replied "leaning towards research" and 21 percent replied "primarily in research." The attention of the academic staff in these instances seems to be basically directed toward research.

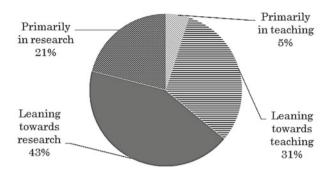
Despite that, the framework for conducting research in Cambodian HEIs is not adequate. We found limitations in the aspects of time available for research, funding, facilities, and manpower. With regard to working hours, as indicated earlier, academic staff in private universities spend many of their working hours

Table 24.2 Correlation between FD activities and educational quality

Area of specialization	R	N
Humanities	0.332*	43
Social sciences	0.357**	73
Natural sciences	0.263*	61
Engineering	0.037	47
Agriculture	0.047	43
Health sciences/medicine	1 **	2
Fine arts	0.052	40
Teacher training/	0.428*	25
education		
Other	0.321*	46
Not classified	_	_
Total	0.262**	464

Source: Kitamura et al. (2014)

p < 0.05, p < 0.01



**Fig. 24.3** Division of interest between education and research (*Source*: Kitamura et al. 2014)

on teaching activities both during or outside lecturing terms. Even in public universities, academic staff in regional institutions spend a significant amounts of time on university administrative work and social contribution activities. These staff are unable to devote sufficient time to research. An analysis of working hours by age revealed that younger staff are able to devote a relatively larger number of hours on research, but they also spend many hours on university administration, social contributions, and other activities, resulting in long working hours overall. Outside of term time, some work as part-time lecturers, consequently spending a high proportion of their time in teaching rather than research.

The Cambodian higher education sector has been on an expansion course over the past several years and the mounting need for higher education is predicted to rise along with continuing economic growth and increases in the relative size of the younger population. It is against this backdrop that these various attempts are being made to raise the quality of higher education. Our survey indicated that many academic staff are actually enjoying the benefits of such efforts. However, given the relative brevity of Cambodian higher education, we also clearly witnessed that the country is encountering many difficult issues in establishing an environment where higher quality education and research would prevail.

Notwithstanding these, the overall environment surrounding university academics is gradually improving as the Cambodian higher education sector continues to expand along with national economic growth.<sup>8</sup> Among younger academics especially, an increasing number of researchers have higher qualifications (i.e., doctorates) mainly those with overseas study experience. Thus the supply of human resources for raising the quality of education and research is improving (Kitamura and Umemiya 2013). Given that, a serious problem continues to exist in the poor job satisfaction rate mainly of such younger academics, due in part, no doubt, because of the toll that long working hours (especially for teaching) take and the structural problem of low wages, which is

one of the root causes of the long teaching hours. As the dissatisfaction demonstrates, there are many problems confronting Cambodian university academics that cannot be solved without financial measures such as better pay and university facilities and equipment. To find solutions for these issues, the Ministry of Education, Youth, and Sports (MoEYS) should take the lead in formulating a clear political will and speed up reforms in the higher education sector.

### Conclusion

Higher education in Cambodia still faces major issues in the aspects of access, equity, quality, relevance, funding, and administrative management. The higher education enrollment rate is undeniably low by international standards. The fields of study offered by HEIs have led to enrollment concentrating only in a limited range of fields focusing on business-related subjects. What is more, in terms of fairness of access, an analysis of those enrolled in HEIs shows that large degrees of inequality exist between the capital and regions and between men and women.

Among the many issues faced by Cambodian universities, quality issues as discussed in this chapter are perhaps the most serious. There is insufficient progress in system improvement to guarantee the quality of education. Accreditation has only recently been implemented. The course credit system cannot yet be said to be operating to full advantage to meet the needs of students; even where the system has been introduced, issues such as constraints on the universities' management capacity have posed problems.

Another major issue is that graduates of HEIs today have completed their higher education without necessarily being equipped with the knowledge and skill sets required by the labor market. As this chapter indicates, the majority of students enrolling in higher education study humanities, social sciences, or business and law. We are obviously not denying the importance of these disciplines nor the fact that the largest number of students belongs to these subject departments in universities of most countries. However, in many developing countries including Cambodia, the tertiary sector (i.e., the service industry) that would be the employers of the graduates of these disciplines is as yet underdeveloped, resulting in a considerable mismatch has arisen between the subjects of university majors and extant job opportunities. This is one of the reasons for the high unemployment rate among university graduates.

In addition, it is extremely important for Cambodia, which wants to develop its industries, to increase the number of students who study engineering and related subjects. However, the country has grave financial constraints that prevent adequate investment into experiment equipment and facilities that are essential in improving and expanding engineering educational programs. This has led to the difficulty in increasing student numbers therein. From the perspective of the public service value of universities, this is looming large as a major policy issue in the education and training of human resources that meet the needs of society.

This chapter includes a summary of the findings of a questionnaire survey conducted on university academic staff concerned with the quality of education and research in Cambodian HEIs. Compared to the higher education sector in many other Asian countries, university academic staff in Cambodia are working in a very difficult environment. It is not an easy task to improve the quality of education and research in universities under these conditions. While it is true that some problems inhere to some of the activities of academic staff themselves, such as excessive dissatisfaction with the economic situation or low motivation for research activities, nevertheless many academic staff who are at the frontline are fighting a difficult battle in order to fulfill their roles as educators and researchers in the face of a tough reality. As Cambodian society aims to undergo further development not only in economic but also in political, social, and cultural terms, the role to be played by higher education is bound to increase in importance. We conclude by stating that many university academic staff are fully aware of the significance of the social responsibility they shoulder in playing this important role and are making constant, energetic, and valiant efforts in delivering expected results.

### Notes

- 1. Around 1942 and 1943, before these universities were founded, an Ecole Normale, which is a teacher training college, was opened. We could regard this to be an alternative starting point of higher education in Cambodia.
- 2. Based on data obtained from the Directorate General of Higher Education at the MoEYS in January 2015 when the author made a research visit to Cambodia.
- 3. It is extremely difficult to obtain data on the number of these students who are enrolled in more than one degree program. Many facts are not clearly identifiable. According to the findings of interview surveys the author conducted on university staff and students (in January, August, and November 2010), a quarter of the students in a modest estimate and nearly half the students in a generous estimate seem to be enrolled in more than one degree program.
- 4. Although we pointed out that private universities are growing in number to cater for the rising population of middle-class children, even before private universities came into existence, fee-paying programs had been offered in public universities where tuition was free as a basic rule. Such fee-paying programs are considered to be a necessary means to supplement funding for HEIs and to incentivize academic staff.
- 5. For specific details of how ACC's assessment of FYC is conducted, for example, see Khieu (2011).
- 6. This survey was conducted as follows. In November 2011, we distributed our questionnaires in Khmer and in English to academic staff belonging to ten selected universities through their university offices.

- The completed questionnaires were collected at the end of February 2012. A total of 539 questionnaires were returned, eight of which were reduplications and so were eliminated. The other 531 questionnaires were analyzed. The findings of the survey quoted here are found in Kitamura and Umemiya (2013) and Kitamura, Umemiya, and Osawa (2015).
- 7. Notably with regard to staff with doctorates, all respondents belonged to universities located in Phnom Penh. There were none in regional universities. Although there must be few staff with doctorates in regional institutions who were not among the respondents of our survey, the finding of our survey indicates the fact that human resources with higher qualifications have resulted in concentrating in the capital Phnom Penh.
- 8. See Williams, Kitamura, and Keng (2014) for more details on the recent expansion and improvement of the higher education sector in Cambodia.

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