

The Development Research Forum in Cambodia

Scoping Study: Research Capacities of Cambodia's Universities



Team Members: KWOK Kian-Woon, CHAN Sopheap, HENG Chinda, KIM Sedara, NETH Baromey and THON Vimealea
Research Assistants: Kelvin CHIA, CHHOENG Sotheavan and NHEM Sochea



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The Development Research Forum in Cambodia
Phnom Penh, August 2010

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● LIST OF ACRONYMS

ACC	Accreditation Committee of Cambodia
ADB	Asian Development Bank
AIT	Asian Institute of Technology, Thailand
ASEAN	Association of South-East Asian Nations
AusAID	Australian Agency for International Development
CBNRM LI	Community Based Natural Resource Management Learning Institute
CDRI	Cambodia Development Resource Institute
CSUK	Chea Sim University of Kamchaymear
CUP	Chamroeun University of Poly-Technology
DHE	Department of Higher Education
DRF	Development Research Forum
ESSP	Education Sector Support Programme
GMS	Greater Mekong Sub-region
HBF	Heinrich Böll Foundation
HEI	Higher Education Institution
ICT	Information and Communications Technology
IDRC	International Development Research Centre
IFL	Institute of Foreign Languages
ITC	Institute of Technology of Cambodia
MoEYS	Ministry of Education, Youth and Sports
NGO	Non-Governmental Organisation
OECD	Organisation of Economic Cooperation and Development
PNSA	Prek Leap National School of Agriculture
PUC	Paññāsāstra University of Cambodia
RAC	Royal Academy of Cambodia
RMIT	RMIT University, Australia
RUA	Royal University of Agriculture
RUFA	Royal University of Fine Arts
RULE	Royal University of Law and Economics
RUPP	Royal University of Phnom Penh
UBB	University of Battambang
UC	University of Cambodia
UHS	University of Health Science
UME	University of Management and Economics
WHO	World Health Organisation

● EXECUTIVE SUMMARY

1. The broad aim of this Scoping Study is to map the current state of research in selected Cambodian universities, with special focus on research capacities – the factors that facilitate or hinder research. The study provides a general assessment of what is needed to enable universities to undertake quality research initiatives.
2. The study covered 15 selected universities, including public and private, comprehensive and specialised, more established and relatively new institutions. Two series of interviews were conducted. Interviews with key informants from the selected universities focused on staff and student profiles, academic programmes, and the current state of research as well as their reflections on challenges, opportunities, and recommendations for improvement. In-depth interviews were also conducted with eight experts who have contributed to higher education in Cambodia.
3. The literature review discusses the role of universities in knowledge production, concluding that universities fulfill their mission best by developing as both teaching *and* research institutions. One global trend is the rise of research-oriented universities. While some Asian universities have moved in this direction, many are facing major challenges, including that of ensuring access and quality in the wake of the massification of higher education.
4. Major policy changes facilitated the phenomenal expansion of the higher education institution (HEI) sector, from eight formally established by 1997 to 76 in 2001, including 33 public and 43 private institutions. In 2009, there were 168,003 students enrolled in HEIs – an increase of more than 16 times since 1997.
5. Quantitative expansion of the HEI sector raises questions about the quality of universities, especially the lack of research culture and research capacity in many universities. In general, most universities function primarily as teaching institutions, although the Royal University of Phnom Penh (RUPP) and specialised public universities such as The Institute of Technology (ITC), University of Health Science (UHS), and the Royal University of Agriculture (RUA) show evidence of increasing research activities.
6. In general, research is not perceived as a core mission of universities. Most universities do not have a clear research policy with supporting institutional mechanisms to promote both the quantity and quality of faculty research. Research is understood by many as student research – which in any case is compromised if lecturers themselves are not active in research. The study has identified the following seven major challenges to developing research capacities:
 - a. *Cultivating newer generations of researchers*: Cambodia faced a missing generation of academics in the immediate post-conflict era, and there is a paucity of well-trained researchers in the country as seen in the low numbers of lecturers with PhDs across all universities.

- b. *Improving academic salaries*: Salaries remain low, especially at public HEIs. Lecturers tend to take up part-time teaching at a number of other institutions. Without being able to earn adequate incomes with a normal teaching load, lecturers are chained to the teaching treadmill, and there is literally no time left for research.
- c. *Developing academic professionalisation*: Cambodian universities, especially the public universities, lack a well-defined system of professional ranks and career tracks in which promotions and salary increases are mapped out for academic staff. This is a most glaring systemic weakness which cannot be solely addressed from within a university; it has to be addressed at a national level and from a national perspective.
- d. *Addressing brain drain*: Low teaching salaries and lack of career tracks and research opportunities provide little incentive for individuals holding advanced degrees to remain in academia, therefore few become lecturers or take up research positions within universities. The government also does not look to public universities for conducting research that is relevant to the formulation and implementation of public policies; almost all its research needs appear to be addressed by in-house research units.
- e. *Improving research facilities*: Basic research facilities (e.g. libraries, laboratories) are present in most universities, but there is an uneven spread of facilities, with some institutions lacking in more specialised facilities for natural and social science research, especially specialised academic databases.
- f. *Ensuring budget allocation for university research*: There is a relative absence of any government budget allocation for research activities in public universities. In relatively more research-active public universities such as RUPP, ITC, RUA, UHS, and to a lesser extent, the Royal University of Fine Arts (RUFA) and the Royal University of Law and Economics (RULE). Almost all past and current research projects conducted by RUPP faculty are donor-commissioned research. Some funds also flow from international projects involving overseas universities and agencies. Faculty-initiated or “home-grown” projects have been minimal.
- g. *Consolidating academic leadership and administrative management*: Funding should not be seen as the most significant factor or the “magic bullet” in strengthening research capacity. Although budget allocation is a function of the priority placed on research by university leaders and administrators, such prioritisation on their part is, in turn, dependent on whether they are personally convinced that that this should be the case and that a research policy is formulated and implemented.

The study also identified a number of positive cases in strengthening research capacities in some public universities. Typically, these cases show that individual efforts on the part of highly motivated university-based researchers and various forms of institutional support are crucial in overcoming some challenges identified in this report. Among other things, If research findings are relevant for policy-making and brought to the attention of policy-makers, lecturers have the opportunity to contribute to policy formulation at different levels. There is also an element of “nationalist pride” among Cambodian university researchers because of the death of Cambodian academics who are actively pursuing research.

7. With the near absence of state funding for university research, Cambodian researchers based in universities have been involved as collaborators or consultants in projects funded by donors, aid agencies, international non-governmental organisations, and foreign universities. However, whether this contributes to the building of sustainable research capacities within Cambodia's universities in the long run is questionable.
8. The study makes the following recommendations:
 - a. *Clarifying What is at Stake and Championing University Research:* Without a sense of the stakes involved, concerted efforts towards strengthening research capacities cannot be initiated and sustained. In particular, there must be champions – in government, academia, industry, and civil society – who can articulate the potential consequences of not addressing current challenges and the urgency in formulating a newer and more coordinated approach. The stakes need to be clarified at every level of policy discussion involving all the relevant institutions, including the various ministries and the universities.
 - b. *Planning for a Differentiated Higher Education Sector:* Policy changes will have to be made at the national level since the public universities are governed by ministries and the private universities are monitored by the Ministry of Education, Youth and Sport (MoEYS). A thorough review of the state of public and private universities in a differentiated higher education sector should include fundamental issues that have been highlighted in this study, especially the following:
 - i. Talent development of newer generations of Cambodian academics and researchers, including revision of academic salaries, developing academic professionalism, and addressing brain drain.
 - ii. Budget allocation for university research, including funding for developing research capacities, facilities, and faculty-initiated projects.
 - c. *Making Research a Core Mission within Universities:* Academic leadership and administrative management in universities should be strengthened in order to ensure that research is emphasised as well as being given priority as a core mission. In particular, a culture of research within universities depends on institutional factors identified in this study, including the following:
 - i. Formulation and implementation of research policy
 - ii. Establishment of research management systems
 - iii. Recruitment and retention of faculty with advanced degrees
 - iv. Identification of and support for research-oriented faculty
 - v. Moderation of teaching hours for research-active faculty
 - vi. Attraction and management of sustained research
 - vii. Expansion of quality postgraduate education
 - viii. Development of research-oriented undergraduate curricula
 - ix. Improvement of research methodology
 - x. Upgrading of research facilities
 - xi. Extension of international academic and research collaboration.

- d. *Extending the Development Research Forum as a Working Model*: For the reasons discussed in this report, universities should increase collaboration with civil society organisations, state agencies and the private sector more actively and systematically. In particular, it is important to identify active university-based researchers to lead and consolidate networking between universities and NGOs and donor agencies in activities such as those organised by the Development Research Forum (DRF). With this in mind, a number of recommendations are suggested:
- i. **Increasing the Exposure of Research through Annual Platforms**. The DRF should consider continuing its annual symposium beyond its first three years. Universities should play a more significant role in taking turns to co-organise and co-fund the symposium from year to year; this will also engage their lecturers and students in current research and earn them a higher profile as research institutions.
 - ii. **Building a Network That Facilitates Access, Dissemination and Sharing of Information**. Building upon the idea of an information and communications technology (ICT) platform for the work of the DRF, and with the participation of university staff, useful and updated information can be organised and disseminated.
 - iii. **Continuing Existing Efforts to Establish a Comprehensive Lexicon of Research Terminology**. The DRF can build upon previous lexicon projects led by CDRI – a significant project in light of the need for Cambodian and foreign researchers to work in at least two languages. Such a project will require the participation of many university researchers and enable them to facilitate the link between local and international researchers.
- e. *Establishing Long-term Goals*. The DRF should work towards a 10-year plan leading to the establishment of an organisation along the lines of a “consortium of partners” – forum for engagement; these partners should include universities, whose presence in the DRF could be more substantial so as to ensure sustainability of research initiatives.
- f. *Working with Stakeholders in the Scoping Study Follow-up*. A number of follow-up steps have been brainstormed by DRF partners:
- i. Plan dissemination of this report, including offering a Khmer version of the report
 - ii. Develop an agenda for DRF (with plan for discussion at the 2011 Symposium and a possible special interest study on academic professionalisation or tenure and university research).
 - iii. Write up this report as an article for the Cambodia Research Journal (which is related to MoEYS and led by H.E. Dr Neth Barom).
 - iv. Develop a process for consultation & discussion with stakeholders (especially policy makers and university leaders, including some experts interviewed for this study, e.g., H.E. Dr. Phoeurng Sackona, Secretary of State, MoEYS).

1 AIM OF STUDY

The aim of this Scoping Study, in line with its Terms of Reference (see summary in Box 1), is to map the current state of research in selected Cambodian universities, with special focus on research capacities – the factors that facilitate (or hinder) research, especially “applied research with a direct relevance to Cambodia’s development challenges”. On the basis of this study, the team has also been tasked to identify opportunities for the Development Research Forum (DRF) “to seed development research through modest financial support”. In particular, and in concluding the study, we are requested to “make recommendations as to how the DRF can, both in its first three years and beyond, contribute even in a modest way in terms of networks, human and financial resources, opportunities for capacity building and collaborative research partnerships, to improve research and research capacity in these universities”.

The study also kept in view the “long-term” goal of providing “baseline data that can assist conversation on how / who / what / when / where to support public universities so that they are on track to develop on par with standards achieved at reputable regional universities in Southeast Asia”. The “scoping” nature of this study does not allow the collection of such comprehensive detailed baseline data (including on current development research); however, it could serve as a basis for developing a more rigorous “template” for capturing more aspects relating to research capacity across a wider range of universities.

Box 1: Objectives of Scoping Study

1. Map current development research and research capacity in these universities.
2. Identify the main areas of opportunity and the main barriers or challenges to developing research programmes including policies, human resources, systems and facilities
3. Identify opportunities and make recommendations as to how the DRF can, both in its first three years and beyond, contribute even in a modest way in terms of networks, human and financial resources, opportunities for capacity building and collaborative research partnerships, to improve research and research capacity in these universities.

The team’s research started in July 2009, and by September it had met the DRF’s mid-term goal of having its preliminary findings presented at the panel on Research Capacities of State Universities at the 2nd DRF National Symposium held in Phnom Penh. The panel generated much discussion, including points that supported or sharpened the thrust of our analysis and initial recommendations. The penultimate report was circulated in early 2010 and discussed during a roundtable discussion attended by invited DRF participants at CDRI on 26 April 2010; their suggestions for improvement have been incorporated in this final report. In particular, the team highlighted some challenges in ensuring the quality, evenness and depth of the interview data. For example, some interviewees felt constrained in providing more in-depth information about their institutions or in offering their own assessment of the current state of research in

their universities; some offered “socially desirable” responses concerning the priority placed on research and plans for enhancing research capacity, and some who provided critical views requested not to be quoted. Regardless of the indicative and illustrative nature of the data collected, however, this study can serve as the basis for further research.

2 METHODOLOGY

In order to map the challenges and opportunities for building research capacities in Cambodia's universities, the team sought to understand the conditions found in 15 selected universities (see List 1; note the acronyms of the universities that will be referred to in this report). In line with the study's objectives, the focus was placed on higher education institutions (HEIs) that have been established as universities rather than as vocational institutes. Thus, for example, The Institute of Technology (ITC), though named as an institute, has enjoyed a longstanding status as a university. Preah Leap National School of Agriculture (PNSA) is not called a university, but it is considered a major tertiary institution specialising in agricultural studies. Many institutes, although offering degree programmes, are clearly geared towards vocational training. By the same token, some newer private HEIs, which were established as universities, may not necessarily possess all the essential characteristics that constitute a university – and this is also a reason for including them in this study. The Royal Academy of Cambodia (RAC) was included because it was established as a research academy under the aegis of the Council of Ministers. The sample of universities in this study was not meant to be representative of the higher education landscape, although it does consider the differentiation between institutions in terms of the following:

- *Public versus private*: The former are established and funded by the state and overseen directly by a government ministry. The Department of Higher Education (DHE) of the Ministry of Education, Youth and Sport, (MoEYS) oversees eight public HEIs. HEIs established by private parties are not state-funded, and they operate for the most part on a for-profit basis; they are accredited with the Accreditation Committee of Cambodia (ACC) and are recognised by MoEYS, which also has the authority to discontinue their operations if they do not comply with regulations. Note that there are “specialised” public HEIs that are overseen by the relevant ministries (e.g., relating to health, agriculture, culture, religion, finance, defence, and public works).
- *Established versus relatively new*: The year of establishment is based on that provided in the “Statistics of Higher Education Institutions” issued by MoEYS (signed by the Director of DHE and dated 3 March 2010). The year noted within square brackets refers to the year of establishment of the first incarnation of the university. For example, the Royal University of Phnom Penh (RUPP) has its roots in the Royal Khmer University, which was established in 1960. Royal University of Law and Economics (RULE) was established by a Royal sub-decree in 2003 but its origins date to 1948 when the National Institute of Law, Politics and Economics was established; the Institute started a three-year Bachelor of Law degree in 1953. Compared with the public universities with a longer history (RUPP, RULE, PNSA, Royal University of Agriculture (RUA), Royal University of Fine Arts (RUFA), University of Health Sciences (UHS)), the team also considered relatively new public universities such as the University of Battambang (UBB) and University of Management and Economics (UME). Private universities – four are included here – came into existence only from the late 1990s when the HEI sector was opened to private players.

- *Specialised versus Comprehensive*: The terms refer to the range of degree programmes. For example, RUPP and RULE are clearly comprehensive universities; in addition to Law and Economics, the latter has expanded its curriculum to include Finance and Banking, Accountancy and Business Administration. ITC, PNSA, RUA, RUFA, UHS and UME are clearly specialised universities. Chea Sim University of Kamchaymear (CSUK) is considered specialised because it has only two faculties, i.e. Management and Agricultural Science.
- *Phnom Penh Municipality versus provinces*: Most of the selected universities are located or have their main campuses in Phnom Penh, but CSUK, UBB and UME were selected so as to include institutions based in the provinces.

List 1: Cambodian Universities Selected for Scoping Study

	University	Year of Establishment	Private	Public	Specialised	Comprehensive
1	Chea Sim University of Kamchaymear (CSUK; name adopted in 2008)	1993 [Maharishi Vedic University]		•	•	
2	Chamroeun University of Poly-technology (CUP)	2002	•			•
3	Institute of Technology of Cambodia (ITC)	1981 [1964]		•	•	
4	Norton University (Norton)	1997	•			
5	Prek Leap National School of Agriculture (PNSA)	2002 [1950]		•	•	
6	Pannasastra University of Cambodia (PUC)	2002 [1997]	•			•
7	Royal Academy of Cambodia (RAC)	1999		•		•
8	Royal University of Agriculture (RUA)	1984 [1964]		•	•	
9	Royal University of Fine Arts (RUFA)	1979 [1965]		•	•	
10	Royal University of Law and Economics (RULE)	2003 [1948]		•		•
11	Royal University of Phnom Penh (RUPP)	1980 [1960]		•		•
12	University of Battambang (UBB)	2007		•		•
13	University of Cambodia (UC)	2003	•			•
14	University of Health Science (UHS)	1980 [1946]		•	•	
15	University of Management and Economics (UME)	2006 [1998]	•			•

Two series of interviews were conducted in this study. The first covered key informants from the 15 selected universities (See List 1). In seeking comparability of case data, the team developed a common interview guide (See Appendix), which requested basic information about the interviewee and selected institution, focusing on staff and student profiles, academic programmes, and the current state of research. The guide also provided open-ended questions that invited informants to offer their thoughts on the research environment, in particular current challenges, new opportunities, and recommendations for improvement.

List 2: Key Informants Interviewed

Name of Informant	Appointment
Mr.Thou Reno	Deputy Director of Research Office, Royal University of Phnom Penh
H. E. Dr.Neth Barom	Former Vice Rector, Royal University of Phnom Penh and Vice President, Royal Academy of Cambodia
Dr Angus D. Munro	Vice President, Academic Affairs, University of Cambodia and Director, Centre for International Studies
Mr.Phann Sophon	Vice President, International Relations and Quality Assurance Division, University of Management and Economics
Mr Chou Chandary	Director, Training and Research Unit, Royal Academy of Cambodia
H.E. Dr Sum Chhum Bun	Secretary General, Royal Academy of Cambodia
H.E. Dr.Bong Sovath	Rector, Royal University of Fine Arts
Mr Ung Vanthoeun	Vice President, Norton University
Mr Sisowath D Chanto	Assistant Dean, Paññasastra University of Cambodia
H.E. Youk Ngoy	Rector, Royal University of Law and Economics
Mr.Seth Khan	Head, International Relations and Corporation, Chea Sim Kamchaymear University
Mr Phat Muny	Director, Preak Leap National School of Agriculture
Dr Med. Em Sothea	Research Officer, University of Health Sciences
Dr.Med Neak Makara	Chief of Administrative and Secretariat Office, University of Health Sciences
Dr Sun Sout	Executive Rector, Chamroeun University of Polytechnology
Mr Seang Ritchy	Vice-Rector, Marketing and Public Relations, Chamroeun University of Polytechnology
Dr. OM Romny	Director, Institute of Technology of Cambodia
Dr Chunhieng Thavarith	Vice Director, Institute of Technology of Cambodia
Dr Touch Visalsok	University of Battambang

In-depth interviews were also conducted with eight “experts” – appointment holders in the Royal Government of Cambodia or academic advisors who have played important roles in steering the higher education sector in Cambodia (see List 3). These interviewees were in a position to offer interesting and candid perspectives. Interviews were facilitated by the team leader with various different team members contributing to the flow of the discussion. Following the interviews, team members compared notes and discussed the main points of each interview in tandem with the analysis of data collected from other sources.

List 3: Interviews with Experts

Name of Interviewee	Appointments	Date of Interview	Venue
Dr Luise Ahrens	Coordinator, Mary Knoll, Royal University of Phnom Penh	30 July 09	Royal University of Phnom Penh
Dr Brian A. Ponter	Research Adviser, Royal University of Phnom Penh	30 July 09	Royal University of Phnom Penh
Mr.David Ford	Advisor, Chemistry Department, Royal University of Phnom Penh	30 July 09	Royal University of Phnom Penh
H.E. Dr Neth Barom	Vice President, Royal Academy of Cambodia	30 July 09	Royal University of Phnom Penh
H.E. Dr Kol Pheng	Senior Minister, Royal Government of Cambodia	31 July 09	Paññasatra University of Cambodia
H.E. Dr.Phoeurng Sackona	Secretary of State, Ministry of Education, Youth and Sports	31 July 09	Ministry of Education, Youth and Sports
Prof Jean-Jacques Paul	Chef de Projet Economie – Gestion, Université Royale de Droit et de Sciences Economiques	3 August 09	Royal University of Law and Economics
H.E. Dr Hang Chuon Naron	Secretary General, Supreme National Economic Council and Secretary General, Ministry of Economics and Finance	3 August 09	Supreme National Economic Council

3 LITERATURE REVIEW: THE ROLE OF RESEARCH IN UNIVERSITIES

A. The Role of Universities in Knowledge Production

As noted earlier, the emphasis in this study is placed on HEIs that are established as universities rather than other post-secondary or tertiary institutions such as training centres or vocational institutes. Put simply, universities are positioned at the apex of a nation's educational system, typically recruiting faculty with higher degrees and enrolling only a small proportion of qualified high school graduates into undergraduate programmes. The expansion of university education in both developed and developing countries is clearly linked to concerns about quantity and quality of human resources and the demand and supply of higher-level skilled professionals. However, the very status of these institutions of higher learning as *universities* leads a wide diversity of people – politicians, academics, professionals, and ordinary citizens – to have “moral” and “social” expectations that transcend the idea of vocational training or “manpower training” for the labour market. The expectation that universities play a key role in “national development” (and not just *economic* development) and in educating “future leaders” figures prominently in rhetoric (e.g. in mission statements and political speeches), though this begs the questions as to whether, how, and how successfully such a role is fulfilled – and, in the context of this study, where “research” fits into the equation.

Knowledge production lies at the heart of the mission of universities. For countries in the Asia Pacific region, as Cummings (2006: 27) points out, the utilisation of knowledge, especially science and technology, is a key strategy for modernisation and national self-strengthening. Japan serves as a prime example with its movement from “knowledge imitation” in the late 19th century to “knowledge innovation” from the 1920s and “knowledge creation” from the 1970s. In view of other Asian countries (e.g., South Korea, Singapore and Taiwan) that are following in this trajectory, Cummins (2006: 28) surmises that the region may be emerging from its “peripheral or semi-core position in global knowledge production”, which has been supposedly dominated by the West, especially the United States of America. The idea of Asia as a “new powerhouse of knowledge production” however, has to be balanced by the realisation that the region is indeed diverse. The successes of the more advanced and wealthier Asian countries in the globalised system of knowledge production should not detract attention away from the challenges faced by developing countries in the region. Hence one perspective that is adopted in the present study on the situation in Cambodia is this: as much as developing countries can learn from the “metropolitan” academic systems (Altbach 2004a:30) and take cognisance of the “basic global status in international higher education (Altbach 2004b: 1), they have to forge their own paths in addressing national needs and priorities and make their own contributions to global knowledge production.

B. Universities as Both Teaching *and* Research Institutions

What then is the place of “research” at universities? If universities are seen primarily as providing post-secondary education, then knowledge production remains more at the level of

knowledge transfer or distribution. The university is viewed primarily as a *teaching* institution, whose degrees mark levels of professional development, facilitates upward socio-economic mobility of their graduates and address the country's human resources development needs. This has been the typical case in the early phases of the development of higher education in developing countries and, as Bernardo (2004:1; quoted in Meek and Suwanwela 2006:15) points out, "it was possible to attain these goals without necessarily having a strong research base". As universities become more established and move beyond knowledge *transmission* to knowledge *advancement* or *creation*, university teaching involves more than just a direct transfer of received knowledge.

This leads to the question of what may be called the "teaching-research nexus" at universities, which in turn rests on conceptions of what *research* means and what *university* teaching entails. As Scott (2005:64) argues, the association between teaching and research should be maintained even in mass higher education systems because "academics need to be engaged in their disciplines to be effective teachers":

If research is defined as a quasi-industrial process of systematic inquiry, the links with teaching may be more difficult to establish than if research is defined in more open and imaginative terms within the broader canvas or framework of academic work. In the latter case, the research-active (or, at any rate, intellectually engaged) teacher as a necessary role model for their students is perhaps more significant than a detailed mapping of the synergies between their research and their teaching. If one of the goals of mass higher education systems within a 'knowledge society' is to produce knowledge workers – who are 'more' than simply graduates with expert academic or professional skills and who have an active 'enquiry capacity', but are 'less' than professional researchers – the significance of the teacher-researcher (and even the teacher-researcher-practitioner) as a role model (and intellectual leader) is correspondingly enhanced.

In other words, the kind of research pursued within the academic context of universities is more open-ended and diverse than that undertaken in industry or government. Harman (2006:44) provides a broad definition of research:

[R]esearch can be defined as critical and creative investigations undertaken on a systematic and rigorous basis, with the aim of extending knowledge or solving particular practical or theoretical problems. Extension of knowledge can be aimed at the following: (i) discovery of previously unknown phenomena; (ii) development of explanatory theory and its application to new situations; (iii) work that provides significant contributions to particular disciplines; (iv) tackling of problems of social and economic significance; and (v) producing original works of intellectual merit.

In light of this definition, Harman (2006:44) also refers to the Organisation for Economic Co-operation and Development (OECD) classification of research (See Box 2). Such a classification is useful because it suggests a continuum – rather than a mutually exclusive categorisation – of research interests and activities, ranging from pure or curiosity driven basic research to strategic or targeted basic research to more clearly applied or problem-driven applied research and product-oriented experimental research.

Box 2: Types of Research (Source: Harman 2006:44)

1. Pure basic research (curiosity-driven)
Experimental and theoretical work undertaken to acquire knowledge without looking for long-term benefits
2. Strategic basic research
Experimental and theoretical work undertaken to acquire knowledge in the expectation of useful discoveries
3. Applied research (problem-driven)
Original work undertaken to acquire knowledge with a specific application in view
4. Experimental research
Systematic work, using existing knowledge gained from research or practical experience, directed to producing new materials, products or devices

This continuum, we suggest, can also be applied to “development research”, which tends to be understood as applied or problem-driven research. In his book on “making the most of development research” by bringing “knowledge to policy”, Carden (2009: 3) states simply that the aim of such research “is to improve the lives of people in developing countries”. In particular, “public policy is an indispensable instrument for converting new knowledge into better lives and better futures”. In keeping with this perspective, however, it should be noted that the results of different types of research, including basic and experimental research, can serve the formulation of public policy. Universities, compared with institutions dedicated more exclusively to applied research (e.g., think-tanks and consultancies), may be better placed in fostering basic and experimental research, which may have significant long-term implications for policy formulation and national development.

C. Towards Research-oriented Universities

Research at universities has been guided by traditional academic norms (e.g., innovation, methodological rigour, and analytical depth) and practices such as wider dissemination of materials through publication or other means involving peer review. However, the thrust and range of research activities carried out at universities have changed over the last two centuries since Wilhelm von Humboldt established the classical European idea of research-based teaching at the University of Berlin in 1810. By the early 20th century, the US model of the “modern research university” spread to other industrial nations with the emphasis placed on basic research and research training. Harman (2006: 44-45) also traces its development from the Second World War towards more direct involvement with government, industry and business and towards the “commercialisation of university research”, which also challenges the traditional academic norms and practice. In developed countries, universities are essential components in “national innovation and science systems”, especially with the increasing emphasis on global competitiveness; hence the rise of “research-oriented” universities, whose key features tend to be similar across the board (See Box 3).

Box 3: Characteristics and Requirements of Research-oriented Universities

- Full-time academic staff with doctoral degrees and a commitment to research. This might seem obvious, but many Asian universities lack professors capable of doing research.
- Work responsibilities that recognise that research is part of the job – teaching loads that are not too high.
- Infrastructure at the university that will support research – libraries, internet access, laboratories, supplies, equipment and the like. These facilities must be kept up-to-date and similar to those found in the most advanced universities.
- Top quality students, especially at the graduate level.
- A research university must offer doctoral degrees and place considerable emphasis on graduate/professional degrees.
- Adequate financial support – including in all cases from governmental sources. Research universities can be private but nonetheless need governmental resources. Further, this support must be sustained over time. It is very damaging for support to vary considerably, as it does in many academic systems. The financial arrangements for a university can include tuition fees from students, support from private industry and others, external donors, and income from patents and consulting, but there must be a firm fiscal base as well.
- Academic freedom and a culture of inquiry.
- The role of the English language

Source: Altbach 2004b, as quoted in Meek & Suwanwela 2006:13

Cummins (2006: 34-35) draws the distinction between two models of knowledge production, which have implications for university research. In the *linear model* of the United States, universities, facilitated by generous government funding (e.g., by the National Science Foundation and the National Institutes of Health), concentrate on basic research “as the foundation generating fundamental breakthroughs that would foster applications that could then be developed into new products and services”. In the *interactive model of knowledge*, exemplified by Japan (and followed by other industrialised Asian countries such as South Korea, Taiwan and Singapore), the commercial sector plays a larger role in Research and Development, spanning both basic and developmental research. As Scott (2005: 63) puts it, “research undertaken in dedicated research settings such as universities... is now only one cluster within a much wider constellation of knowledge production”. In any case, government funding is but one source of support for university research – though this too may be insignificant and inadequate in developing countries compared to developed countries.

D. Key Trends and Challenges Facing Universities in Asia

The challenges of the higher education situation in Cambodia may also be better understood and addressed against the backdrop of key trends and challenges facing other HEIs in Asia (Altbach 2004a; cf. Meek and Suwanwela 2006). Higher education, research, and innovation are instrumental for advancing social and economic development in Asian countries. Altbach (2004a: 27-31) has highlighted the following number of issues in the development in higher education that Asian countries are facing despite their differences in history, demography and political economy:

- a. *Massification*: With limited public funds and resources invested in education, how can academic systems serve different sections of the population?
- b. *Access*: How can greater equity in terms of opportunity and access to higher education be achieved, especially for the poor, women, rural populations, and minorities?
- c. *Differentiation*: What are the various goals and purposes of academic institutions in the country, and how can the different institutions and resources be authoritatively and responsibly managed under a coordinated system involving the state, the academic community and the private sector?
- d. *Accreditation and Quality Control*: How can appropriate standards of higher education be assessed, monitored, and improved, upholding transparency and accountability?
- e. *Research*: How can universities serve as the basis of developing a culture of research and engaging in relevant research necessary for meeting the demands of the knowledge-based economy?
- f. *The Academic Profession*: What can be done (e.g., in terms of working conditions, salaries, workloads, academic evaluation, and academic freedom) to develop the professoriate, attracting committed and motivated faculty with advanced degrees instead of relying on a part-time teaching pool?
- g. *Globalisation and Internationalisation*: With the ease of communication and the access to information facilitated by IT, and with the flow of academic talent to the industrialised nations, how can faculty and students become part of an international academic community and learn from the global academic system without merely importing knowledge from Western academic systems?
- h. *Transnationalisation*: How have transnational higher education enterprises or “foreign providers” from developed countries affected the market, quality, accreditation and regulation of higher education in the developing countries?

4 THE CURRENT STATE OF HEIS IN CAMBODIA

The 1960s marked the beginnings of modern higher education in Cambodia, especially with the establishment of the Khmer Royal University by Prince Norodom Sihanouk in 1960. Between 1964 and 1967, eight universities were established: the Royal Technical University (1964), the Buddhist University (1965), the Royal University of Agronomic Science (1965), the Royal University of Kampong Cham (1965), the Royal University of Fine Arts (1965), the Popular University (1966), the Royal University of Battambang (1966), and the Royal University of Takeo-Kampot (1967). An unprecedented number of Cambodians were enrolled in these institutions – estimated figures range from 5,300 to 14,560 (Clayton & Ngoy 1997: 24).

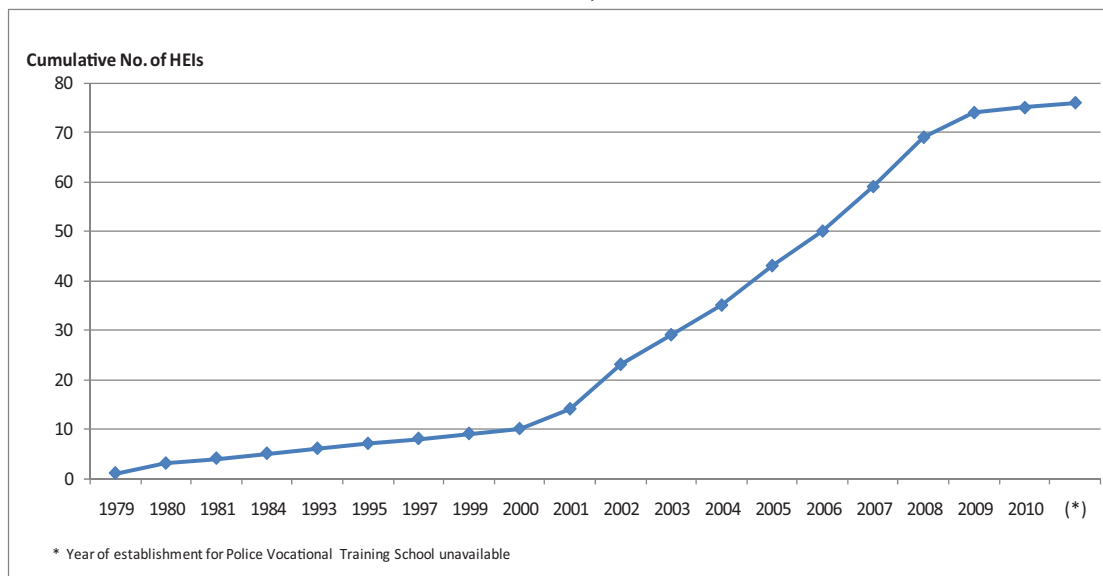
The initial spurt in the development of universities, however, was not accompanied by a concern with the quality of education and by proper planning in terms of finance, staffing and resources (Ayres 2000a: 50-52). The rise of tertiary education was truncated when Sihanouk was ousted from power in 1970 following a coup d'état by Lol Nol. More significantly, the country fell under the control of the Khmer Rouge in 1975. Under the Democratic Kampuchea regime, educational buildings and facilities were destroyed, and it is estimated that 75 percent of tertiary teachers and 96 percent of university students were killed (Chamnan & Ford 2004: 339). The regime ended in 1979, but much of the educational infrastructure had already disintegrated from deliberate destruction and neglect (Ayres 2000a: 126-127; cf. Ayres 1999: 207).

In 1991, the issue of Cambodian education gained international attention during the National Conference on Education for All (Ayres 1997: 210). Internationally sponsored studies on Cambodian higher education led to international efforts to reform the education system. On the part of the Cambodian government, however, educational reform was stymied by tensions between the two main political parties and was seen as a threat to prevailing power structures and autocratic decision making (Ayres 1997: 52).

With the quantitative expansion of basic education in the form of six years of primary schooling, three years of lower secondary and another three years of upper secondary schooling by the mid-1990s, fundamental issues concerning the sufficiency and quality of infrastructure, especially curriculum materials and teachers continued to be inadequately addressed (Ayres 2000a: 180). At the same time, the growing pool of students who had completed upper-secondary education also led to increasing demand for higher education over the years. However, with the priority placed on universalising nine years of formal basic education, the government budget for higher education was modest, and this limited both the qualitative improvement and quantitative expansion of the public universities. From 1997, however, two major policy changes facilitated the phenomenal expansion of the HEI sector. First, the government allowed the public HEIs to enrol students on a fee-paying basis, that is, on top of the state-supported scholarship students who were selected by MoEYS. Second, the government opened up the HEI sector for private parties to set up universities and institutes. In effect, the state encouraged the 'marketisation' or 'privatisation' of higher education, with the expectation that the demand for higher education would be met by market forces (Chamnan & Ford 2004: 356).

The impact of both policy changes was phenomenal. The year 1997 saw the establishment of Norton University, the first private HEI. By 2009, the total number of HEIs was 76— 33 public and 43 private universities and institutes (see Chart 1).

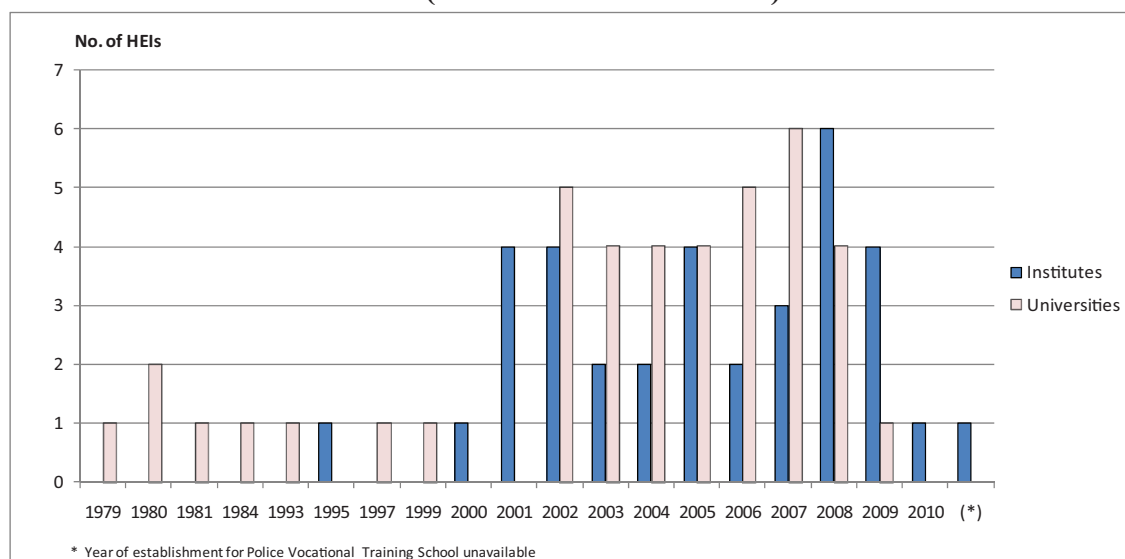
Chart 1: Establishment of HEIs in Cambodia, 1979-2010



Source: Graph plotted from data (official year of establishment of each HEI) provided in “Statistics of Higher Education Institutions” Department of Higher Education (DHE) of the Ministry of Education, Youth and Sport, (3 March 2010).

For the purpose of this study, it may be useful to note that of the 76 HEIs, 35 are not named as universities but are institutes or vocational schools (See Chart 2). The remaining 41 institutions are explicitly called universities, with the exception of three institutions – ITC, PNSA and RAC– which, as noted earlier, are considered as universities in this study. At any rate, it is important to separate the two categories of HEIs because the issue of research capacity is not as relevant or urgent in the case of vocational institutes. In other national educational systems, vocational institutes award *diplomas* rather than *degrees* to its graduates. University degrees represent a level of education beyond skills training; hence the concern with the “teaching-research nexus”, and research-based teaching applies more directly to universities as centres of knowledge production.

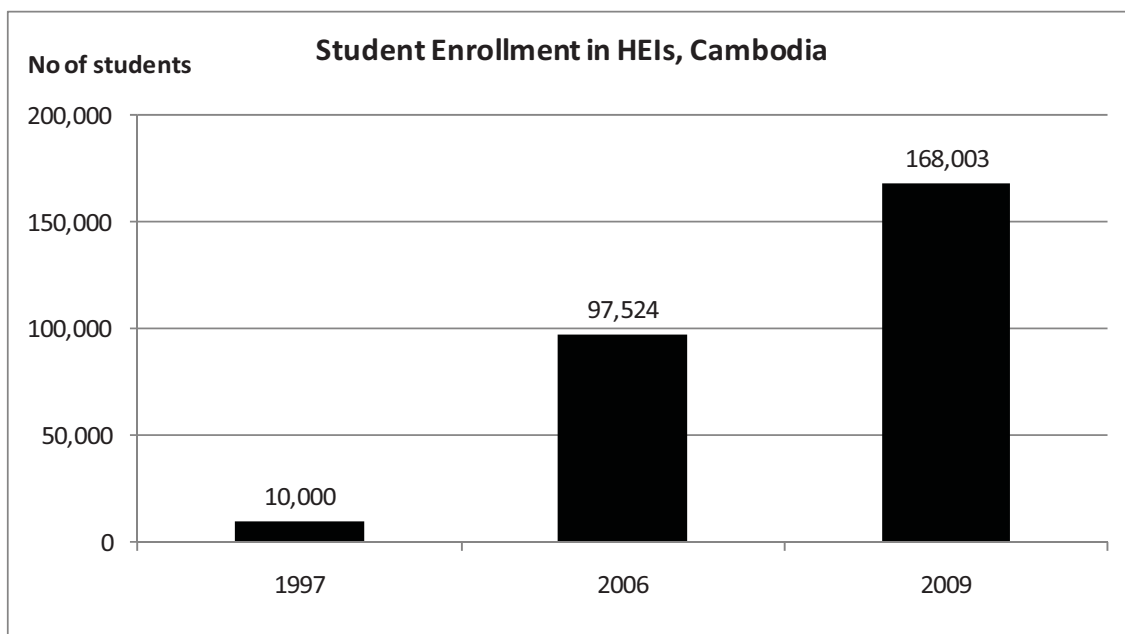
With the public HEIs accepting fee-paying students and with the privatisation of the HEI sector, the total number of students enrolled in HEIs increased nearly tenfold within a decade, from a modest 10,000 in 1997 to 97,524 in 2006. Three years later, the total number enrolled increased by more than 70,000 students, swelling up to 168,000 in 2009 (see Chart 3). The steep rate of increase in HEI student enrolment is a function of the mushrooming of HEIs between 1997 and 2009. Chealy (2009: 156) concludes that private HEIs “are now the major providers of higher education in the country”; he cites a 2004 source that indicates that in that year “around 83 percent of the total higher education enrolment was through private and fee-paying programmes”.

Chart 2: Establishment of HEIs (Universities and Institutes) in Cambodia 1979-2010

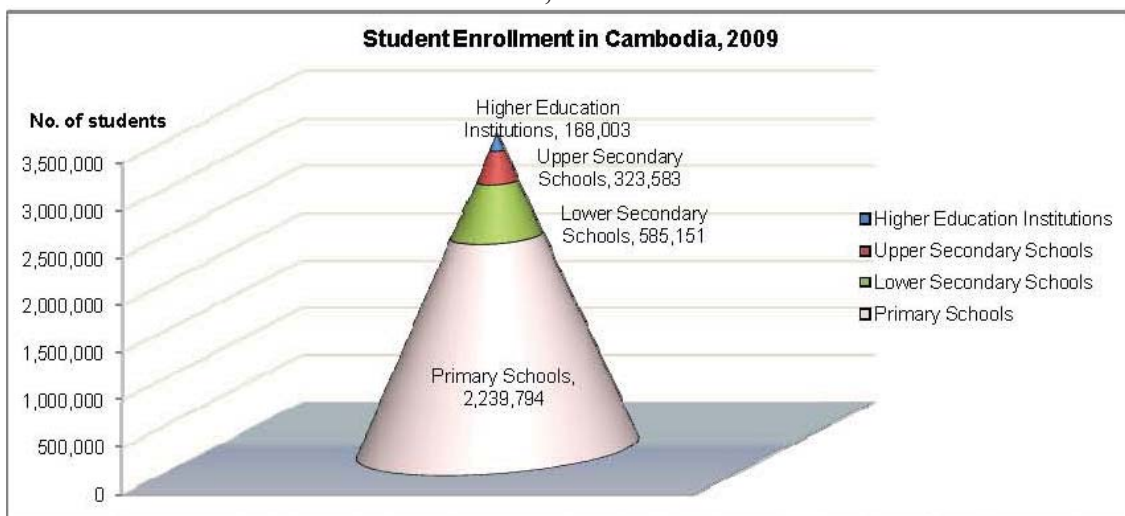
Source: Graph plotted from data (official year of establishment of each HEI) provided in “Statistics of Higher Education Institutions” Department of Higher Education (DHE) of the Ministry of Education, Youth and Sport, (3 March 2010).

In essence, the 6+3+3 system of education acts as a funnel through which the masses of the school-going population are sifted in terms of formal educational attainment. Based on the 2009 statistics, the 168,000 students enrolled in HEIs represent only about 5 percent of the total number of students throughout all levels of formal education (see Chart 4). According to the same source, 77.79 percent of the 67,377 students who sat for the Upper Secondary end-of-grade (Grade 12) examinations passed. Assuming that this trend persists in the immediate future, there is a *potential* pool of 52,000 who are nominally qualified for – and may seek – some form of formal post-secondary education in an HEI every year.

Leaving aside the question of whether the current HEI market has reached saturation point, fundamental questions about the range and quality of higher education programmes are yet to be adequately addressed. In particular, the establishment of private universities and increase in fee-paying programmes is more driven by market forces and commercial interests, leading to a concentration of enrolment in a number of popular courses of study, especially business-related programmes. The public HEIs, modestly supported by government budget, have also stepped in to provide such programmes which are readily available in the private sector: “All public and private HEIs are competing to provide training and the training is for the same programmes, barring some unpopular subjects and programmes” (Chealy 2009: 158).

Chart 3: Student Enrolment in HEIs in Cambodia (1997, 2006 and 2009)

Sources: Chealy (2009: 156) and information provided by Ministry of Education, Youth and Sport, Annual Education Congress, 17-19 March 2010.

Chart 4: Student Enrolment in Cambodia, 2009

Source: Graph plotted from information provided by Ministry of Education, Youth and Sport, Annual Education Congress, 17-19 March 2010.

5 CURRENT STATE OF RESEARCH CAPACITIES IN CAMBODIA'S UNIVERSITIES

To begin with, the team notes that a number of researchers have attributed the lack of research capacity in Cambodian universities to what they see as deep-seated and endemic cultural features of the society. Thus, Chamnan and Ford (2004:357) write: “[The] lack of research capacity may stem from deeper cultural traditions in Cambodia. In the traditional teaching, the teacher leads and students passively follow. Learning without a teacher, which is the essence of research, goes against this tradition”. Chealy (2009:161) repeats the assertion (using almost the same words) and, in addition, makes an observation about reading materials in the Khmer language:

The lack of research capacity may also stem from deeper cultural traditions in Cambodia. Some examples of these traditions might be the historically hierarchical societal roots [sic] in which children are taught by rote and also taught not to question either parents or teachers or any other authority figures. It is not “polite” to question others and questioning is the essence of research at all levels. Furthermore, there is a lack of stimulating reading provided for children in Khmer language, and libraries are a relatively new addition to some urban and semi-urban schools.

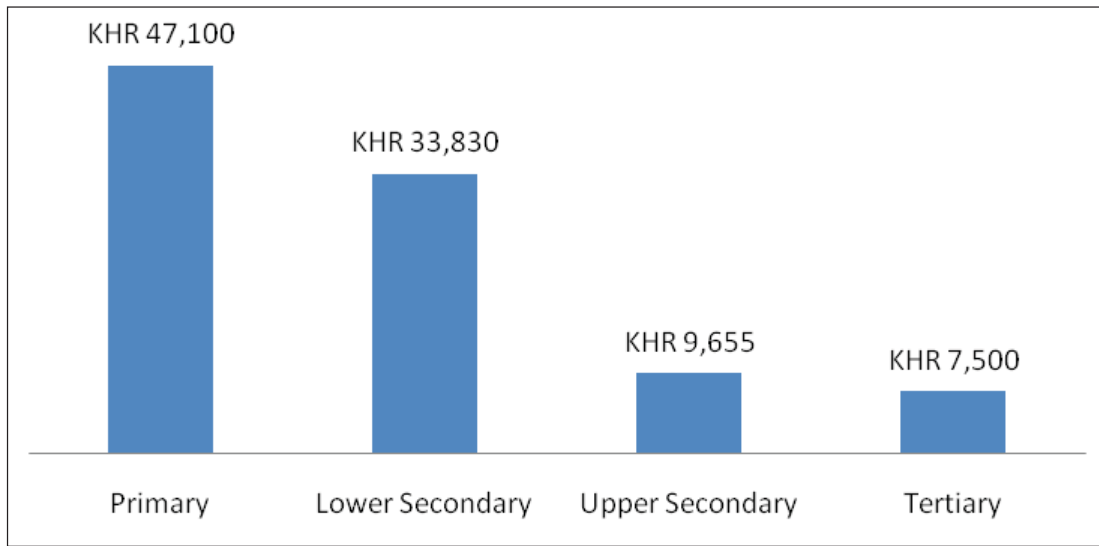
However, this “culturalist” argument can also be overstated in a deterministic or an essentialist way, especially when it is presented as an invidious contrast between “Western” and “Eastern” civilisations. Hierarchical social structures and teacher-led pedagogies, as well as rote learning in early schooling, have been aspects of traditional East Asian countries such as China, Japan, and South Korea and in Southeast Asian countries such as Thailand, Malaysia and Indonesia. Yet there is clear evidence of increasing research capacities at universities in these countries. In any case, sustained development of modern basic and tertiary education is a relatively recent development in Cambodia. A “research culture” at universities does not develop automatically or within a short time frame.

Thus, it is important to note that university research has not received any significant or concrete emphasis in Cambodian national policy. In *The Rectangular Strategy for Growth, Employment, Equity and Efficiency in Cambodia* (2004: 18), it is stated that:

The Royal Government is committed to achieving the goal of “Education for All” by ensuring equity in the attainment of nine years of basic education for all children and enduring access by the children of the poor households to education, especially by improving the quality and number of public education institutions and providing more scholarships to poor students. The Royal Government will continue to strengthen its partnerships with the private sector and the national and international community to enhance and improve the quality of education services, both in vocational and technical training and in higher education, consistent with international standards and the development needs of the nation [emphasis added].

This indicates general willingness on the part of the Cambodian government in reforming the higher education system, although state funding has clearly concentrated mainly on basic education (see Chart 5). However, consistency in the quality of higher education with both “international standards and the development needs of the nation” entails significant state investment in building up research capacities in public universities as a national policy priority.

Chart 5: Proposed Government Funding for Education Sectors in Cambodia in 2010
(in million KHR)



Source: Summarised from Education Sector Support Programme (ESSP) 2006-2010, Ministry of Education, Youth and Sport, December 2005; pp. 6 -14.

In the section on “main programmes and activities” in the ESSP (2005: 12), the first item reads: “[E]nhance quality of higher education to meet the labour market demands through providing budget for institutional operation and research activities to HEIs”. However, there is no specific allocation of budget to “research activities”, compared with “institutional support and operation” in HEIs. The same section includes the following activity (ESSP 2005:15):

Review the selection criteria and financing formula for each HEI, taking into account issues of fee levels and demand, and improve governance and management of HEIs through increased transparency and accountability of all higher education, including Government contributions, student fees and private sector contributions in cash and in kind.

Indeed there is a lack of such budgetary information at the level of both national government allocation and at the institutional level of each HEI. As Chealy (2009: 158) points out “In-depth study of financing higher education in Cambodia is close to zero. It is very difficult to figure out how much the total sub-sector needs and can absorb in practice annually”. In particular, such study could throw light on the distribution of funding for the key strategically important areas in the mission of universities that are not addressed by student fees and private-sector funding sources. As Harman (2006: 48) points out, for universities in the Asia-Pacific region, the state generally plays increasingly important roles in funding, stimulating, and directing research activities in universities, but this must presuppose that research is regarded as a key priority

by the relevant authorities. This is not the case if we note that “key indicators and targets” for higher education listed in the ESSP (2005: 12) do not include research activities and outputs.

Chealy (2009) highlights the establishment of the Scientific Research Department and the Pedagogical Research Department under MoEYS as an indication of the growing importance placed on research by Cambodian policymakers. Nevertheless, he qualifies that the two departments are “very limited in scope and capacity” (Chealy 2009: 161-62). He also points out one of the latest developments in this area – the sub-decree on research funding – is an attempt to promote research in Cambodia by providing an honorarium to those who are classified as researchers by the Cambodian government. However, he notes that the selection process lacks transparency and researchers who are selected are not rewarded on the basis of their results or performance. This leads Chealy (2009: 161) to draw a pessimistic conclusion on the present state of research activities in Cambodia’s universities:

Research is still in a dark stage for Cambodian higher education. The government budget allocated for research activities in public HEIs is relatively nonexistent. Some major universities such as the Royal University of Phnom Penh, the Royal University of Fine Arts, and the Royal University of Agriculture have their research activities carried out with external assistance given by foreign donors and partners. In private HEIs, on the other hand, research activities are almost completely absent.

Since “the rewards for research are often intangible and related to national or institutional interests rather than individual benefit” (Chamnan & Ford 2004: 357), this overall situation can change only if public universities, adequately funded by government, embrace research as part of their mission and if private universities are more than just providers of fee-paying programmes. However, any attempt to build research capacities in Cambodian universities must grapple with serious challenges, which we present and analyse in the next two sections.

6 CHALLENGES OF DEVELOPING RESEARCH CAPACITIES

Two salient features figure prominently in the majority of the 15 universities surveyed. First, the universities function primarily – some almost exclusively – as teaching and degree-granting institutions. Second and as a corollary, in many universities (e.g., PUC, Norton, CUP, RULE, PNSA, CSU, UC, UME, and UBB), lecturers are not expected to – and do not – conduct research as part of their academic responsibilities. When asked about the state of research at their universities, officials tend to think of “research” in terms of student research or research as part of degree requirements. Many informants report that lecturers are not engaged in research; some acknowledge the importance of research and mention general, often vague, plans for emphasising research in the future.

In particular, the private universities (PUC, Norton, UC, and CUP) have clearly not emphasised faculty research. PUC is a possible exception. A committee at the deanery level has been convened to look into possible research areas, and it has identified social development, economics, and the environment as the three majors concerns for future research. In the longer term, the university plans to publish a periodical entitled PUC Social and Economic Review. Norton places emphasis on the growth of its undergraduate programmes from 800 students when it was first established to 10,100 in 2009. UC supposedly has a research institute, but it has not been formally established and is expected to be in place only when the university is relocated to its new location near Phnom Penh International Airport in 2010. CUP places strong emphasis on market-driven education and training programmes because of revenue generation from fee-paying courses. Although it offers part-time (mainly political science and public administration) courses for government officials above the age of 35 – 2,110 students in the Master’s programmes and 651 students in the PhD programmes – none of its teaching staff are involved in research projects other than those who are themselves enrolled in graduate degrees at CUP and RAC and have to fulfil thesis requirements. Indeed, it is difficult to imagine how CUP can manage such an inordinately large pool of postgraduate candidates without a large research-oriented faculty.

Although research is conducted in the specialised universities (ITC, UHS, RUFA and RUA), RAC (a research-based institution), and RUPP (a major comprehensive university), the actual research output of these institutions appears to be modest and uneven. The positive lessons from these cases will be considered in the next section on opportunities for strengthening research capacities. It suffices here to highlight RAC, which though planned as a leading academy with a comprehensive research mandate in diverse fields, ranging from arts, humanities and social sciences to science and technology, has not had adequate resources and number of researchers to fulfil this plan. Thus, it has resorted strategically to providing graduate programmes in order to address the gaps of research programmes across its six institutes. With approval from the Office of the Council of Ministers, RAC has produced four cohorts of master’s degree programmes in which all graduate students have to fulfil a five-year work contract with RAC. Every student is given USD70 per month by the government to support their research. Most of these students work as researchers or pursue doctoral degrees on campus. In practice, therefore, research-based graduate teaching, rather than faculty research, is emphasised as a main institutional priority.

In most of the universities, research methodology courses and research projects (usually in the form of a graduation thesis) are incorporated into the undergraduate programme. Not all students, though, get to conduct research before graduation due to varying levels of financial support. Only the top ten or twenty percent of students are allowed to write graduation theses in RULE and RUPP, and this is reported to be a MoEYS regulation. Moreover, there is a perception among students that research consists primarily of library or online research. At any rate, the tendency to think of research as research conducted by students rather than by lecturers suggests an anomaly: if university lecturers are not active in research, how can they claim competence in guiding and supervising research? Even if the research thesis option is extended to more students, who will they be supervised by and what would be the quality of supervision? More importantly, the fact that lecturers in general do not conduct research also suggests that university teaching is for the most part not research-based. In our interviews with informants and experts, and in informal discussions with individuals in the HEI sector, there were concerns expressed about the quality of university teaching, especially in terms of curriculum design and content – this deserves a separate study. Examples of poor teaching include inadequate course preparation, absence of course outlines (with specific topics and required readings), use of outdated teaching materials, and lack of fieldwork and written assignments.

With the lack of institutional emphasis on research in most Cambodian universities, it is not surprising that some of our interviewees highlight the lack of a research culture in Cambodian universities. Among the foreign lecturers we interviewed, there is a tendency to offer some version of what we have earlier called the “culturalist” argument. In particular, “Cambodian culture” is characterised as lacking a spirit of inquiry; students acquire knowledge through rote learning and accept what has been taught by the teacher. In such a culture; what is absent, as one interviewee puts it, is “a culture of inquiry and a sense that the world is a fascinating place to be explored”. Another interviewee shared a personal anecdote involving a discussion between him and a senior student when he was asked to supervise a research project on the nutritional value of breast milk. When he pointed out that this would not constitute original research (given the wealth of literature on this subject) and proposed that the research could explore new areas by comparing samples of breast milk of Cambodians residing in different areas (e.g., rural and urban dwellings), the student could not see the point that research is not about already having the “right answer” and merely confirming what is known. Using this personal anecdote, the interviewee surmised that the very idea of research as an exploration of new areas is lacking in Cambodian culture.

Again, we caution against any essentialist view of “Cambodian culture” as an obstacle in developing research culture in Cambodian universities. Among other things, any “culture” is not static or frozen in time, especially in the wake of fundamental social, political, and economic change. The lack of a research culture, as we argue in this report, is the result of “structural” or “systemic” impediments rather than cultural factors per se. In what follows, we identify and analyse the key challenges of building research capacity in Cambodian universities.

A. Cultivating Newer Generations of Researchers

The destruction of the educational infrastructure during the Khmer Rouge era was mentioned in our literature review. One specific consequence is “structural”, as suggested by one respondent’s view of the masses of university teachers and students who were killed during the Pol Pot years: “It resulted in a missing generation of intellectuals who would now have been in their 50s [or mature years]. They would have been heading departments in universities serving as mentors to today’s young scholars had they survived the Khmer Rouge”. In other words, there was a near-total loss of an entire generation of academics, many of whom might have studied overseas or earned higher degrees and, in any case, could have played important leading roles in Cambodia’s public universities. Those who survived the Khmer Rouge era or have returned from abroad are too few and far between, and the lack of a critical mass of committed academic leaders has serious implications for institutional memory and generational renewal. In the immediate post-conflict era, a culture of research had to be rebuilt almost from scratch. As an example, H.E. Dr Neth Barom noted that in earlier years, the Khmer term for “research” (*sray chreav*) generated fear among the population because the word was associated with the idea of “investigation” (and hence also “surveillance”) for the purpose of exposing and punishing individuals who were thought to be disloyal.

Yet, there is some realisation that it is no use bemoaning the structural fact of a “missing generation” and the urgent task today is to cultivate newer generations of highly-educated academics. Consider the following reported numbers of faculty staff with doctoral degrees:

- CSUK: 54 full-time lecturers; six hold PhDs
- ITC: 78 academic staff; nine hold PhDs
- RAC: 76 full-time researchers; 21 permanent faculty members, all of whom hold PhDs
- RULE: in six selected departments, 49 academic staff; six hold PhDs
- RUA: 109 full-time academic staff; 18 hold PhDs
- RUPP: 294 academic staff; 15 hold PhDs and 132 hold Masters Degrees. This is the official information from the university’s website – the team’s own source reported 16 PhDs and 191 Master’s qualifications. Note also that postgraduate programmes at RUPP usually engage external teaching staff – most of whom do hold PhDs – from relevant ministries, civil society organisations, development partners, and international partner universities.

At some universities, however, there are selected graduate programmes with more PhD holders involved in teaching. For example, according to the brochure on the Master of Arts programme in Development Studies at RUPP, there are 19 “key local faculty”, of whom 12 are foreign-trained PhD holders (RUPP 2009a). This, however, appears to be an exceptional case, and one that shows that if there are concerted and collaborative efforts dedicated to establishing specialised programmes, it is possible to recruit and deploy more highly trained faculty. The reliance on donors and other foreign organisations may not be sustainable in the long run. Their continued involvement depends on consistent financial support from foreign sources, which in turn depend on socio-political considerations that are not entirely within Cambodia’s control.

For example, even though the French Cooperation at RULE has been successful in training PhDs, there is some uncertainty as to how long the French government is willing to fund and maintain the programme.

Low numbers of faculty with PhDs hinder the building of research capacity in universities. With a critical mass of faculty who have experienced conducting independent and intensive research for their doctoral training, universities are better enabled to achieve the following: a) institutionalise research as a component of an academic vocation; b) develop research-based teaching that goes beyond the pedagogy of upper secondary teaching or skills training; c) identify and nurture younger research-oriented faculty to take up university leadership roles, including research mentors; and d) build up quality postgraduate programmes, which can in turn, educate a newer generation of researchers.

B. Revising Academic Salaries

Working conditions at public universities are determined by state investment in higher education.

A number of respondents report that the Cambodian government offers much less financial support for higher education since basic education and functional literacy remain primary concerns. On one hand, this is understandable, but many interviewees offer the view that Cambodia has reached the stage where state support for higher education needs to be significantly increased – not least because the provision of lower levels of schooling have now created a demand for places in universities. As analysed earlier, the demand has been addressed by the privatisation and marketisation of the HEI sector, but the quality of university education has not improved significantly over the years. The low funding for higher education has meant that universities have to prioritise their areas of expenditure. Since the amount of resources allocated for teaching has to be maintained due to increasing enrolment rates, the funding for research is severely limited in many universities – even though the lack of research capacity, as pointed out in the literature and by a number of interviewees, has implications for the quality of undergraduate teaching.

Academic salaries remain low, especially at public HEIs. In effect, fee-paying programmes and the enrolment of fee-paying students constitute an indirect way for lecturers to be better paid by teaching extra hours and for public universities to supplement their modest budgets with generated income. The basic monthly salary for full-time lecturers can be as low as USD50, although the actual take-home salary is more as full-time faculty are also paid hourly rates for basic teaching duties. This usually works out about USD100 per month, which is insufficient for meeting daily expenses of families. Part-time lecturers are paid on an hourly basis and according to their qualifications: Bachelors USD6 to 8, Master's USD8 to 15, PhD USD18 to 20. With low salaries in any given university, lecturers tend to – or are compelled to – teach at a number of other institutions. It is reported that some lecturers may teach up to a maximum of ten hours a day, six days per week. In any case, with added teaching hours at other universities, especially the private HEIs, monthly incomes for lecturers are reported to be between USD200 and USD700.

The implication of low salaries is clear: without being able to earn adequate incomes with a “normal” teaching load, lecturers are chained to the teaching treadmill, and there is literally no

time left for research. This, though, also depends on the levels and disciplines taught and the choice on the part of lecturers to moderate their additional part-time teaching for the sake of conducting research.

However, the impact of long teaching hours on pedagogy and learning at universities deserves serious consideration. Lecturers have limited time to prepare for lessons and update teaching materials, especially based on knowledge of newer literature and actual research experience. More specifically, since one's income is directly dependent on contact hours, faculty members tend to focus only on lectures, and have reportedly omitted written assignments as part of the requirements for earning credits. One interviewee observes that “teachers avoid written exercises as it involves time for grading, which does not count towards contact hours; they also do not conduct tutorials – which have come to be seen as “not counted” as the credits awarded for a course are based only on lecture hours”.

C. Developing Academic Professionalisation

Cambodian universities, especially the public universities, lack a well-defined system of professional ranks and career tracks in which promotions and salary increases are mapped out for academic staff. This is a most glaring systemic weakness, which cannot be addressed from only within a university; it has to be addressed at a national level and from a national perspective. To be sure, MoEYS has already identified the need for a proper academic track for university lecturers when it listed the following under “main programmes and activities” in its ESSP document (2005a: 14): “Develop criteria for university teachers’ status / title based on qualifications, experience and capacity”. However, the team has not come across any evidence to indicate that this intended MoEYS exercise is underway. Yet the urgency is greater than ever before if we consider the need to develop research capacity in Cambodian universities. It will not be possible to establish a professoriate (with ranks such as Assistant Professor, Associate Professor, and full Professor, or their equivalents) within a short time frame. This should be done carefully and consistently across universities – in ways that recognise the contributions of each academic justifiably and transparently. The fundamental task of defining clear criteria for professional ranks, including qualifications, experience, responsibilities, and performance, is long overdue.

Currently, all university teachers in Cambodia are known as lecturers (the distinction between ‘lecturer’ or ‘senior lecturer’ depending on age and seniority), and are provided with more or less the basic salary (though the actual income for each staff member may vary according to contact hours and part-time assignments outside of the university and appointment to senior management). Given the implications of low academic salaries and high teaching hours (for the sake of supplementing income), the absence of a system of academic professionalisation not only offers no institutional incentive for research but also makes an academic career less attractive for younger Cambodians with advanced degrees. In a mature university setting, the salaries of its academic staff are differentiated according to a set of criteria as determined by the university's leadership. Such criteria include experience and performance in teaching and research. In universities focusing on developing research capacities, promotions and salary increases for academics could be on the basis of their level of engagement and performance in research activities without compromising the need for teaching excellence. Indeed, it is also possible for excellent and experienced teachers who do not at the same time excel in research to be placed on a “teaching track” – which also has clear benchmarks for career advancement.

A few interviewees have pointed out that promotions on seniority and the absence of assessments open the door to promotions based on patronage and connections. A teaching position at a public university in Cambodia is also essentially a “tenured” position that provides income until retirement; the possibility of dismissing academic staff on the basis of poor performance appears to be rare. One respondent even referred to this phenomenon as a “hangover from the socialist system where everyone earns the same salary”. Another respondent also likened the teaching position as a “welfare system” that “pays salary even when the employee does not show up for work”. In general, the older lecturers have practical local experience, though relatively few are highly trained and hold advanced degrees, and are perceived as not having moved on in their pedagogy; younger generations may have graduate degrees, but lack experience. One interviewee commented that “we can’t let them [i.e. the young Cambodians] fall into the same thing [situation] as the older generation” and highlighted the need to have fresh perspectives or else “we are feeding our own system”. At the same time, there is some feedback to suggest that older-generation academics may also be reluctant to nurture and make way for younger academics to succeed them.

In any case, the present system is untenable and unsustainable in the long run. All lecturers are placed within a system which provides no clear sense of academic professionalisation as they progress through the years – and without research activity as part of the criteria for evaluating academic performance. The transition to a new system of academic ranks is likely to involve “sensitive” change management over several years, involving the exit of the older lecturers and the entry and rise of younger academics.

D. Addressing Brain Drain

As a number of respondents point out, young Cambodians who have received their postgraduate education in foreign institutions are relatively well-trained in conducting research. The time that they spent overseas also allows them to establish networks with their peers and professors within the larger academic community. However, such young Cambodians are “pulled in every direction” because “there are more places that well-educated people can go”. One example is found in the French Cooperation at RULE, where there have been cases of young scholars identified by the French professors and provided the opportunity for post-graduate education – after which they have found opportunities to work in government and the private sector. Low teaching salaries and lack of career tracks and research opportunities provide little incentive for individuals holding advanced degrees to remain in academia; therefore, few become lecturers or take up research positions within universities. As one respondent commented, “there are no permanent researchers [in Cambodia’s universities], only permanent teachers”. This statement however may well be an over-generalisation since there are positive examples (e.g., at RUPP), which we highlight later in our discussion on positive examples of research-active faculty.

Interviewees have repeatedly mentioned the ‘brain drain’ from universities – or what one calls “internal haemorrhage” – especially to the government or private sectors. Those who remain in universities have to confront practical issues relating to salaries, and may need to increase their teaching hours substantially, leaving little or no time for engaging in research activities. Once they lose touch with research engagements because of their teaching load, they also tend to lose their links with the academic community, making attempts to re-engage in research thereafter even more difficult.

The government also does not look to public universities for conducting research that is relevant to the formulation and implementation of public policies; almost all its research needs appear to be addressed by in-house research units (e.g. under the Supreme National Economic Council), which also manage policy-oriented research funded by foreign donor agencies. Hence, there is a near complete absence of government-initiated or government-commissioned research in public universities such as RUPP and the specialised universities in spite of the fact that they enjoy a good reputation among foreign research partners. Only RAC reported that such research is conducted “very occasionally”.

E. Improving Research Facilities

Basic research facilities (e.g. libraries, laboratories) are present in most universities, but there is an uneven spread of facilities, with some institutions lacking in more specialised facilities for natural and social science research. Comparatively, RUPP, UHS, PUC, UC, and ITC provide more facilities than other universities. UC boasts one of the best libraries in Cambodia, and houses one of the most extensive collections of books, periodicals, magazines, and newspapers; similarly, the library at RUPP also houses a considerable amount of books, documents, and other reading materials. Generally, however, research facilities are limited compared to those provided in leading regional universities. This is even more clearly the case for a UHS, which reported the availability of library resources and IT systems, and yet these would be considered very limited when compared to the international standards of a medical school.

A small number of universities offer specialised research facilities that are specific to their own academic focus. For example, RUA has identified the need for students to improve their English language skills for the purpose of agricultural and science studies. CSUK has an agricultural laboratory equipped for soil analysis, seed moisture and quality testing and blood sample testing. It also has agricultural land and experimental plots for growing rice, vegetables and fruit trees. Moreover, the university owns an 80-hectare research farm located 20 kilometres from the main campus. PNSA provides a 24-hectare facility that includes fish, poultry, pig, vegetables, fruit tree, mushroom, ornamental flowers, and rice-corn farms.

Internet is generally available, but access is limited and speed may be slow, though UC stands out as providing high-speed access at its Internet Centre and Virtual Library. There is a lack of access to specialised academic databases – only ITC and PUC are reported to provide such access.

F. Ensuring Budget Allocation for University Research

There is a relative absence of any government budget allocation for research activities in public universities. One exceptional case is RAC, which reported that government-supported research amounts to 40 percent of all sources of research funding, the actual sum is rather modest and insufficient for promoting quality research – about USD10,000 per year for each of its six research institutes. All other universities surveyed reported either no or minimal government funding for research.

Consider, for example, the case of RUPP, which also reflects on a different scale the situation in other relatively more research-active public universities such as ITC, RUA, UHS, and to a lesser extent, RUFA and RULE. RUPP informants report that almost all past and current research projects conducted by RUPP faculty are donor-commissioned research. The one instance of government support was not strictly for research. It was for RUPP staff to translate textbooks into Khmer or to develop Khmer teaching materials. Even so, the amount is very limited and is insufficient for developing quality teaching and learning materials. Donors play a crucial role in supporting faculty research. Typically individual researchers or research teams bid for funding by writing project proposals that comply with the agenda of donors and fulfil their requirements.

Some funds also flow from international projects involving overseas universities and agencies. Faculty-initiated or “home-grown” projects have been minimal – one good example is the effort of RUPP senior faculty to propose a large Khmer Studies project that was supported by the Heinrich Böll Foundation (HBF) over ten years (1996-2007). RUPP informants could easily list nearly 30 donors and aid agencies as examples of research partnerships and exchange programmes with overseas institutions. Many research projects conducted by its faculty are donor-driven rather than faculty-initiated or government-funded. Examples of such research can be seen in the list of current research projects conducted by faculty and students that are all funded by foreign-based NGOs or donors as reported in the information on RUPP’s Master of Arts programme in Development Studies (RUPP 2009b):

No.	Title of Project	Funder
1	Migration, Rural Poverty and Natural Resource Management	International Development Research Centre (IDRC), Canada
2	Industrial Skills in Development in Cambodia	Japan Society for Promotion of Science (JPS) through Nagoya University, Japan
3	Capacity Building for Gender, Poverty and Mobility Analysis of Road Transportation Development in GMS Region	ASEAN Foundation through Asian Institute of Technology (AIT), Thailand
4	Study of Financial Access to Health Services for the Poor	AusAID through RMIT University, Australia, and World Health Organisation (WHO)
5	Community Needs and Attitudes to the Impact of Growth and Development in Phnom Penh	The United Nations Global Compact-Cities Programme through the RMIT University Global Cities Institute

Opportunities for faculty or students to take up overseas scholarships or exchange programmes are growing but limited (e.g. PNSA, RUA, RAC), though universities such as RUPP, ITC and UHS have obviously broadened their overseas research networks over the years. For instance, RUPP started international partnership programmes in 1996 and RULE reported that it has academic exchange programmes with a total of 20 foreign universities and institutions such as the University of Nagoya (Japan), the Institute Universitaire d'Etudes du Development (Switzerland), and the National Cheng Kung University (Taiwan). In universities such as PUC and PNSA, partnerships with United Nations Development Programme and Oxfam were also mentioned. ITC has actively cultivated such international partnerships through memoranda of understandings and conventions signed since the mid-1990s. In addition to formal ties with overseas institutions, RUA actively seeks research sponsorship from foreign partners – their officials readily produced a list of 47 such research projects conducted by its eight graduate

schools. Research funding from donor agencies and foreign universities is welcomed, but there are concerns which are discussed in the penultimate section of this report.

As for private universities, it would appear viable for part of their revenue from fee-paying students to be used for funding research activities and higher salaries for teaching staff (which would allow them to decrease their teaching load and become more active in research). However, the proliferation of private HEIs has also meant the dissipation of demand across many institutions, which do not necessarily focus on delivering quality programmes. One respondent offers this view: “Now [there are] a lot of private universities, maybe more than 100 HEIs [sic]. It [i.e. the provision of higher education] has become like a business. There are too many universities. There is no quality but only numbers. We have to streamline the number of HEIs and not allow too many – maybe [we should keep it to] about five private universities, and then, you will have enough money to talk about research”. However, it is not revenue generation but budget allocation that is crucial in developing research capacity.

Private universities do not regard research as a priority, not least when they are oriented towards profitability – even though research can help a university improve teaching quality and raise its profile. With public universities admitting fee-paying students to supplement their revenues, it might be thought that the additional funding could go towards improving the salaries of university teachers and providing support for research activities. However, this depends significantly on whether research is considered a top priority by the university administration.

G. Consolidating Academic Leadership and Administrative Management

In a sense, funding should not be seen as the most significant factor or the “magic bullet” in strengthening research capacity – a point which we will develop in the next section. Here, it is worth highlighting the idea that though budget allocation is a function of the priority placed on research by university leaders and administrators, such prioritisation on their part is in turn dependent on whether they are personally convinced that that this should be the case and that a research policy is formulated and implemented. Harman (2006: 43) refers to “research policy” as the “guidelines and decisions expressed in directives, regulations, or laws with regard to the funding and regulation of research activities whereas the term “research management” refers to implementation of research policy, including the determination of strategic directions, allocation of resources and roles, and monitoring and evaluation of performance”. In light of this definition, there is a lack of clear research policy at various levels, whether at MoEYs or in the universities.

The sense of urgency in drawing attention to the need for university research is not often articulated by university leaders. One exception is H.E. Dr Neth Barom, who views research as a prerequisite for universities to remain relevant to the needs of national development. Universities that do not conduct research risk becoming, as he says, “peripheral universities”. Although most informants agree that research is important, they also report that their universities do not have formal policy concerning *faculty* research (see PUC, RULES, PNSA, RUA, CSUK, UC, CUP, RUFA, UME, and UBB). As observed earlier, “research” is understood as referring primarily to student research as part of the curriculum and degree requirements.

Some universities do have official statements related to the promotion of research. For example, the team learned that in RUPP’s Strategic Plans, laid out only in internal documents,

research is emphasised for institutional development and staff promotion. There is no clear reward system for research, though active researchers take pride in their work and are well regarded by the “high quality” faculty.

UHS’s “Strategic Directions Year 2008-2012” makes research and development a key part of its overall mission, with the aim of enhancing the quality of its programmes in order to reach regional and international standards. However, many of the initiatives (e.g. establishment of a research support unit, capacity-building, and dissemination of research findings) are planned but yet to be fully implemented. UHS has both an Administrative Council and a Research Office; in the university’s strategic plans, faculty are required to use 60 percent of working hours for research and 40 percent for teaching – though this policy has not yet been approved by the relevant authorities. UHS has also lobbied the Ministry of Health to authorise the university to establish a national research centre for health, but the decision is still pending.

ITC has a clearer research policy already in place: lecturers who participate in research projects have half teaching loads (192 hours) but are still paid as full-time lecturers (who teach 384 hours). They also receive support for research trips, conferences, and training courses arranged with foreign institutions.

Many universities have some form of research board or committee or office to supervise research activities, but in the absence of clear research policies the roles of these bodies remain ill-defined and their effectiveness in implementation is questionable. As mentioned, some research bodies are in charge of student research (e.g. CSUK and CUP). There is also little conscious planning in the establishment of research centres, and when asked about such arrangements some universities even report laboratories and libraries as research centres (e.g., PUC and ITC), which indicates lack of understanding of units fully dedicated to spearheading new research.

RUPP also has a research office, though there is no appointed committee for monitoring and reviewing the quality of faculty research. Given the paucity of faculty research in many universities, “quality” is often understood as teaching quality rather than research quality. RUPP has a quality assurance unit, but its focus is on teaching. For research, quality assurance, if at all carried out, concerns student research in the form of assessment by lecturers. Ironically, most of these lecturers are not PhD holders and are not active researchers. Generally, there is a lack of institutionalised and sustained mechanisms to ensure the quality of faculty research; peer review is rarely practiced, although UHS, for example, has specific committees working under individual departments to monitor, review, and comment on research papers and research projects.

For one respondent, the issue of research management is also linked to larger concerns about accountability and the transparency of HEIs, which is on a par with the lack of a “climate of accountability” in school management in the lower levels of education (Tan 2007: 23). Some of the rectors of public universities are, apparently, also advisors to the Prime Minister and the Deputy Prime Minister, and there are concerns that auditors may be hesitant in reporting any irregularities. Some fundamental institutional conditions in Cambodian society are also embedded in the national education system. Cheating is prevalent in high school examinations (Khouth & Tha 2009), and the admission of students into universities based on such examinations tended to lead to situations in which a cohort of undergraduates exhibited widely varying capacities and motivations. One respondent wonders if this has contributed to a lack of capable

and well-qualified teachers. He asked: “How can universities attract good teachers [and, by extension, also researchers] when the students are not good?”

At the broader level, one interviewee offered the view that the “largest obstacle” for universities in developing research capacities is the lack of autonomy. According to him, the government officials at the highest levels “sit at the top and dictate what they feel is good for national development, but [the problem is] they do not have a complete vision or experience with higher education.” One reason given is that those appointed to serve in ministry or accreditation committees may also not be in a position to exercise judgment because they themselves have not earned advanced degrees.

Within universities, the style of management is also instrumental in retaining young Cambodians who have returned from abroad. As one key interviewee explains, “young people who are trained overseas will not accept old models of management” that are based on centralised decision making. This highlights a potential area of conflict between the older and younger generations of teaching staff in universities, and raises questions as to how the exit of the old and the entry of the new could be managed. Together, these contribute to construct an institutional environment that is increasingly unattractive to well-educated and well-qualified Cambodians who are able to find better opportunities elsewhere.

7 STRENGTHENING RESEARCH CAPACITIES: POSITIVE CASES AND ENABLING FACTORS

Regardless of the challenges of developing research capacities in Cambodian universities, a number of positive examples that illustrate initiatives undertaken by some Cambodian universities can be highlighted:

- At RUPP, the momentum for research as an institutional priority was first created in late 1996 when the university organised an International Conference on Khmer Studies, garnering support from donors for its research activities and capacity training programmes. A growing number of lecturers are involved in research collaboration with local and international partners, and with support from donor agencies or from international partner universities.
- ITC, UHS and RUA have actively engaged in applied research to solve practical problems, often with the funding of and in collaboration with overseas institutions.
- ITC – as highlighted earlier -- is a case in which there is a conscious policy to moderate the teaching load of research-active lecturers, who teach half the required number of hours per academic year (i.e. 192 out of 384 hours) but are paid on a full-time basis. The research covers a wide range in engineering and technology, especially in topics related to environmental studies.
- Although UHS's strategic plans are not fully implemented, there are many examples of heightened research activity at UHS. For example, its research office applied for and received Asian Development Bank (ADB) funding for a project on swine flu transmission in provinces along the Cambodia-Vietnam border. Ten faculty members of the Faculty of Dentistry at UHS are doing research on dental and oral health in partnership with Korean, Japanese and Australian universities. Research on herbal medicine, led by the Faculty of Pharmacology, is also reported as an important growing field in UHS.
- Both RUA and PNSA specialise in agriculture, but the former is clearly more research-oriented and the latter is primarily a teaching and training institution. As mentioned earlier, RUA's Graduate School listed 47 internationally-sponsored research projects on specific topics dealing with natural resources, food, livestock, land management, agro-industry, and agronomy.
- Some Cambodian universities have done well in producing research materials. Although research-related activities (e.g. workshops, seminars, conferences) and deliverables (e.g. books, journals, working papers etc) are not widely reported in all the universities surveyed, a number of them have made significant progress in this area, though publication in internationally-ranked journals is rare. RUPP, for example, is known for its diversified research activities and interdisciplinary academic platforms. To date, RUPP has produced

nine volumes of Socio-Cultural Research Congress proceedings, 10 research training books, two proceedings of Khmer Studies Conferences, two volumes of HBF-supported research working papers, while the Centre for Population Studies has published nine working papers. Workshops, seminars, international and national conferences, public forums, research training workshops, congresses and symposiums to disseminate faculty research findings (particularly research projects funded by donors and RUPP's partners) are also frequently organised at RUPP. Such a relatively vibrant research scene is not new to the university – from 1996 to late 2007, RUPP had been significantly involved in organising many of such research-related events with support from the Heinrich-Böll Foundation, Toyota Foundation and other donors.

- The numbers of Cambodians who have received scholarships to pursue higher education overseas have increased over the years, and their exposure to other academic environments and research traditions may help change the culture of research in Cambodia in the long run. This, however, rests on both the quantity and quality of university teachers and researchers, and so much will be contingent on improving their working environment.

Having highlighted these positive examples, we now pose the following question: What are some of the enabling factors that have facilitated research in Cambodian universities? To answer this question, we must look at the personal experiences of university-based researchers, and here we may report on the feedback to an early draft of the present report provided by Dr Ngin Chanrith, who is the founding director and a lecturer in RUPP's Graduate Programme in Development Studies. Agreeing with the preliminary analysis of the scoping study, Dr Chanrith provided a list of observations on the following key factors that, taken together, enable lecturers to be more research active instead of increasing their part-time lecture hours to the point where they have no time for research:

- Research-oriented lecturers tend to have already earned a post-graduate degree from a university of international standing – in particular, in research-based PhD programmes in which the candidate has actually experienced doing thesis research and writing a dissertation. Such lecturers bring their research experience to their university careers and are personally motivated to continue with academic research.
- In light of the lack of government or university research funding, these lecturers also attempt to match their specialised research interests with the needs of funding agencies. To be sure, there are financial incentives for research work; instead of part-time teaching, they can also earn additional income as part-time researchers or consultants in funded research projects.
- These lecturers also benefit from research mentorship and advice from visiting professors and expatriate researchers, if indeed their universities have the presence of such scholars on campus.
- Support and encouragement from the university leadership is important because this shows that research is a necessary and valuable part of a lecturer's work.
- The involvement of students in faculty research is a “win-win” situation for both lecturers and students; lecturers are offered research assistance and students gain practical research experience which goes beyond what they learn in research methodology classes.

- In actively pursuing research, lecturers can also have opportunities to present their research findings at local and international conferences and for publication.
- If research findings are relevant for policy-making and brought to the attention of policy-makers, lecturers have the opportunity to contribute to policy formulation at different levels.
- Last but not least, there is an element of “nationalist pride” among Cambodian university researchers because of the dearth of Cambodian academics who are actively pursuing research

In his feedback to the study team, Dr Chanrith concludes: “Lack of confidence – inadequate research knowledge and skills -- is the greatest challenge hindering lecturers from doing research”. All in all, the above-mentioned points support the thrust of the analysis in this study. In particular, they constitute “micro” factors, especially motivational factors, in the academic settings of Cambodian universities that can hinder or facilitate research. Ultimately, university research requires not only aptitude but also passion. In other words, engaging in scholarly research is not an undertaking that can be motivated solely by financial considerations. As H.E. Dr Hang Chuon Naron puts it, one “has to *like* research very much” to pursue it. In universities, he adds, lecturers also cannot “just teach without knowledge of the real world”. The question of “confidence” is a chicken-and-egg issue: lack of confidence hinders research, but lack of actual research experience also reinforces ill-confidence. Hence, all factors enabling research must be addressed in order to strengthen research capacity and expand research opportunities in Cambodian universities.

On this note, we turn to some more “macro” reflections by two interviewees, both experts who have attempted to improve the overall situation during their years of service in academia or government: H.E. Dr Hang Chuon Naron and H. E. Dr Kol Pheng. Dr Naron emphasise the importance of skilfully communicating research findings to the relevant authorities in Cambodia. The way in which findings and recommendations are communicated could make a critical difference: “Researchers must still say the things that others don’t want to hear, but how [and when] do you say it? How much [does one] say so that the audience will follow?” These comments underscore the importance of research and the communication of research findings in making an impact on policy-making (cf. Carden 2009). Research may yield new information and new ways of looking at old problems – ideas and insights which may be ahead of the times or perceived to be critical of the status quo. In view of this, independent and rigorous scholarly research at universities could be potentially significant for national development in the long run. However, this also requires that faculty-initiated research is undertaken and that the government also considers universities as valuable sources of policy-relevant knowledge.

Dr Kol Pheng offers the view that the education sector in general and the trajectory of higher education in particular need to be informed by “a complete vision of what [Cambodia aspires] to do with its human resources.” To him, such a vision is rooted in basic questions as the following: “How can we make a better Cambodia whose people are physically and spiritually healthy? How can we provide role models for future leaders? “How can we develop the human spirit in the people as they [i.e., the young] reach adulthood? “What do we [i.e., Cambodians] want our people to be in 10, 20 or 25 years time?” The vision is a “philosophy of the future”, which also involves mapping out the directions for developing education, health, and economic

development. Dr Kol Pheng implies that the Cambodian government has yet to fully articulate such a vision for the country. This of course might come across as an unfair criticism given the comprehensiveness of the government's 2004 "Rectangular Strategy for Growth, Employment, Equity and Efficiency in Cambodia". We interpret his reflections, however, as suggesting that without a deeply held and compelling vision of Cambodia's future and belief in the indispensable role of education in shaping it, there would be little political will to pursue educational reform. From our discussions it appears that educational reform, including the strengthening of research capacity in universities, will require the kind of impetus that is manifested, for example, in pro-investment policies.

8 DEVELOPING MORE FACULTY-INITIATED, UNIVERSITY-SUPPORTED RESEARCH

With the near absence of state funding for university research, Cambodian researchers based in universities have been involved as collaborators or consultants in projects funded by donors, aid agencies, international non-governmental organisations (NGOs), and foreign universities. This also allows lecturers to earn additional income to supplement their salaries without additional part-time teaching and to remain active in research activities at the same time. This has been a way of breaking out of the vicious circle of low teaching salaries, long teaching hours, and low levels of research activities. That said, it is questionable whether this contributes to the building of sustainable research capacities within Cambodia's universities in the long run. The role that Cambodian universities play in the constellation of knowledge production in the country is arguably modest, even though they play a major role in addressing the demand for undergraduate education. This raises further questions about how research capacity can be further developed to be on a par – and in collaboration – with other research institutions in government, civil society, and the private sector.

The extent of reliance by Cambodia on foreign funds to support research is an issue that needs to be addressed. Here, it is worthwhile to consider the situation in Africa, where the decrease in government spending on research has meant increased reliance on external funding; it is estimated that external funding accounts for 76 percent of the research undertaken in the University of Ghana (Benneh 2002: 8). Funding, as Benneh (2002: 256) points out, may unduly influence the area of research as “problems whose solutions may be critical to the improvement in the quality of life of the poor in Africa may not attract the attention and funding they deserve because they are of little interest to researchers in the north”. In addition, he cautions that “unless the terms of agreements are well negotiated to confer equal benefits to all parties concerned, including equal access to the use of the research data and joint publication of results, the intellectual property rights of local researchers may be violated”.

Consider also the view offered by David Court, former Rockefeller Foundation Representative in Nairobi: “One has resources, the other would like them. In order to gain access the applicant can hardly avoid adjusting the manner of his approach to accord with the known or perceived preferences of the donor in a process of self-restriction and hence reduction of freedom,” and “changes in donor interests are bound to provoke a corresponding response by scholars leading them to take on topics which are of lower personal or institutional priority than those on the external agendas” (quoted in Zelaza 2002: 14).

Many universities report affiliations and collaborations with overseas universities and international NGOs, but little is known about the depth and quality of such collaborations, and whether they actually lead to any strengthening of research capacities in these universities. Hence, it is important to consider the efforts of the DRF in including Cambodian university institutions and researchers in its growing network and to take an interest in the strengthening of capacities in Cambodian universities.

9 STRENGTHENING RESEARCH CAPACITIES: RECOMMENDATIONS

In this final section, we offer a broad perspective on “how the DRF can, both in its first three years and beyond, contribute even in a modest way in terms of networks, human and financial resources, opportunities for capacity building and collaborative research partnerships, to improve research and research capacity in universities”.

A. Clarifying What is at Stake and Championing University Research

To begin with, we refer to the pervasive phenomenon of foreign-funded research, including short-term contract research, in Cambodia, which has also been found in other developing countries where low-salaried academics find it more worthwhile to undertake such research rather than university research that offers little or no financial incentives. The result is “a situation where institutional research capacity did not take root even when there were individual researchers” (Sanyal & Varghese 2006: 10). This is one starting point for strengthening research capacities in Cambodia: it will not do just to have more and more foreign-funded research projects and more individual researchers per se. What matters – and may be compromised – is a vibrant culture of research and a supportive environment for university research to take root in Cambodian universities in the longer run.

On the one hand, as we have seen, there are “structural” factors affecting research capacity (especially low salaries and the absence of a professoriate system) in Cambodian universities. These obstacles cannot be addressed without higher education reform at the national level. On the other hand, university research is driven by personal commitment and is collaborative in nature, involving a whole range of local and international institutions. It is, therefore, worth clarifying what is at stake in strengthening research capacities in Cambodia’s universities beyond the academic interests, social aims, or material interests of any one party. In our view, the stakes – at least in this phase of the country’s development – are not primarily in relation to Cambodia’s standing in the global knowledge system. The world higher education ranking system has been dominated by the developed nations such as the USA. Japan, China and India have been attempting to enter the higher ranks in the competition among what Altbach (2004b) calls “winners and losers in Asian higher education”.

It is well worth asking whether Cambodia should “play the game” or develop its own game and its own rules. This is not to say that Cambodia’s universities should abandon striving to meet regional and international standards in university teaching and research and remain “peripheral” and lose out in the global academic status quo. Instead, we suggest that the positioning of Cambodia’s universities in the global knowledge system – and the motivation for strengthening research capacities – has to be carefully defined. Meek and Suwanwela (2006:12) have pointed to the interest in or even obsession with the idea of a “world-class research university” among many Asian countries: “The future of the economies of some nations will depend on the decision taken concerning how research is to be organised, who is to do it, and what its role in society

is”. The same decision has to be made in Cambodia, but on a different basis from that of those countries which are aiming to emerge as top winners. What then are the stakes for Cambodia? Chamnan & Ford (2004: 357) provide one answer:

The rewards could be significant... if at least a few centres of research could be established to cultivate the most creative minds and encourage innovation. The contribution of such centres would be greater than the new or indigenised knowledge they would create. A small cadre of Cambodian researchers could catalyse new teaching styles and modes of thinking in higher education that would be transferred to secondary and eventually to primary education. Without this creative input at the top, the higher education system is likely to remain of low quality, dependent on foreign textbooks and technical expertise, and unable to produce the highly skilled human resources necessary for industrialisation. The rewards can also be tangible. Some of Cambodia’s regional neighbours, faced with the same need to diversify funding sources, are generating significant revenue from research contracts.

Put another way, if research is not integral to the core mission of Cambodia’s universities, a vicious cycle would persist:

- There would be a lack of research-based teaching and new and innovative curriculum content.
- There would be a decline in the quality of university teaching and the quality of graduates who would be ill-prepared to meet the challenges of an industrializing knowledge-based economy.
- There would be a decline of faculty competence in supervising student research and advancing graduate education, hence limiting the pool of graduates who take up academic careers at universities.
- Universities would have no visible role in civic engagement and policy making, adding little or no independent critical thinking in debates on national development.
- There would be a continued “brain drain” of faculty researchers to the private and public sectors and difficulties in attracting newer generations of faculty.
- There would be no long-term re-investment in improving quality academic culture in universities, hence short changing masses of young adults in their quest for higher education.
- Universities would not be able to attract external grants and strategic industry and international partnerships.

We recommend that these stakes should be clarified at every level of policy discussion involving all the relevant institutions, including the various ministries and the universities concerned. Without a sense of the stakes involved, concerted efforts in strengthening research capacities cannot be initiated and sustained. In particular, there must be champions – in government, academia, industry, and civil society – who can articulate the potential consequences of not addressing current challenges and the urgency in formulating a newer and more coordinated approach.

B. Planning for a Differentiated Higher Education Sector

In commenting on the race among universities to become “world-class” research universities, Meek and Suwanwela (2006: 12) note that it would be impossible for any nation to fund all HEIs so that they become research-intensive universities; even in the USA, out of about 3,200 HEIs, “only the top 100 receive 80 percent of research funds allocated by either private government or private philanthropic foundations”.

The higher education sector in Cambodia is already a differentiated one. Our survey of the 15 universities indicates that the overall system will evolve in terms of different kinds and levels of research capacity in different universities. One possible Cambodian national strategy is to identify flagship institutions such as RAC and RUPP as comprehensive universities, and specialised universities e.g., ITC, UHS, and RUA, and to make selective investments in strengthening research capacities in areas that they already have a competitive advantage in. This is akin to the strategy adopted in Thailand, where HEIs are classified as research universities, teaching universities and community-oriented institutions (Suwanwela 2006: 208). However, it would be important to stress that all universities need to include research as part of their core mission – though not all should be expected to deliver the same amount of research output or the same kind of research deliverables. Established and up-and-coming institutions will “all rise with the tide” with new attention paid to research and research-based teaching, but weak and profit-oriented “degree mills” with no interest or motivation in developing research capacities will face natural attrition.

What kinds of investments can the state make in a differentiated higher education sector? A few lessons can be drawn from the experiences of neighbouring countries. In the Philippines, a number of areas have been prioritised for research under the ten-year National Higher Education Research Agenda (Salazar-Clemena 2006: 191). In Indonesia, research funding is provided on a competitive basis, but measures are taken to ensure that universities and researchers “compete among similar levels of competence” (Koswara and Tadjudin 2006: 144). For example, the research grants that are made available for the period from 1990 to 2000 includes a Young Researcher scheme that offers smaller research grants to promising researchers – doctorate holders and staff from the four established universities in the country are not eligible to apply.

For Bernardo (2004: 2, cited in Meek and Suwanwela 2006: 15), radical attempts to build the research base of higher education in developing countries may be simplistic in light of basic issues such as quality, access and efficiency; what is required is a “realist response” that considers differences in the capacities of various universities and their abilities to participate actively in knowledge development. As Bernardo (2004: 2) puts it, “probably in these countries most higher education institutions would not have the ability to develop the research culture or environment needed to effectively participate in the knowledge development process... [but] selected institutions can grow to fulfill the more complex high-end research functions of a university”. Bernardo calls for *strategic* interventions, some of which may take the form of national policies that support research collaborations with more developed countries that have “sustained long-term impact”. Cambodia need not follow the initiatives implemented by other countries to the letter, but it needs to evolve its own “realist response” that acknowledges the different research strengths and foci of different universities.

The issue of language is brought into relief in discussing locally-oriented research, and this is especially so in Cambodia when Khmer continues to be the dominant working language in universities. While some may see this as an obstacle in disseminating research findings to international audiences, it may be necessary, appropriate or even strategic for some research projects – especially those that aim at formulating “local solutions” to “local problems” – to be conducted and disseminated in Khmer. This raises the question as to whether there exists a tension between localisation and internationalisation in research. It is also important to see the two-way interchanges between local and international research. There may well be locally-generated research that has wider theoretical or comparative relevance (e.g., in agricultural and environmental studies). At the same time, such research also benefits from knowledge of academic literature from international sources.

Clearly, policy changes will have to be made at the national level since the public universities are governed by ministries and the private universities are monitored by MoEYs. Ultimately, at the highest levels of government, there must be political will to make fundamental changes in planning and developing the HEI sector – just as political will is evident in the government’s pro-investment policies. In the interest of strengthening research capacity in universities as a top priority, a thorough review of the state of public and private universities in a differentiated higher education sector should include fundamental issues that have been highlighted in this study, especially the following:

- a. *Talent development of newer generations of Cambodian academics and researchers, including revision of academic salaries, developing academic professionalisation, and addressing brain drain.* As discussed, it should carry out what was stated in the ESSP (2005: 14): “Develop criteria for university teachers’ status / title based on qualifications, experience and capacity”. It could be argued that academic professionalisation is an inevitable development, not a matter of *whether* it will happen but *when* and *how*. This will not happen automatically; it requires careful long-term planning, and in close cooperation with university leaders who are appointed and recognised on the basis of excellent academic and administrative leadership.
- b. *Budget allocation for university research, including funding for developing research capacities, facilities, and faculty-initiated projects.* This should be in line with a review of the financing of higher education, including the identification of current gaps in research funding – especially for the more research-oriented public universities.

C. Making Research a Core Mission within Universities

Academic leadership and administrative management in universities should be strengthened in order to ensure that research is given priority as a core mission. By developing the teaching-research nexus, and allocating budget and establishing institutional mechanisms for promoting research “from the top”, university leaders tap and encourage the efforts of individual researchers or research units “from the bottom”. In particular, a culture of research within universities depends on institutional factors identified in this study, including the following:

- a. Formulation and implementation of research policy
- b. Establishment of research management systems (including research office)
- c. Recruitment and retention of faculty with advanced degrees

- d. Identification of and support for research-oriented faculty
- e. Moderation of teaching hours for research-active faculty
- f. Attraction and management of sustained research funding from various sources
- g. Expansion of quality postgraduate education
- h. Development of research-oriented undergraduate curriculum
- i. Improvement of research methodology courses (taught by active researchers)
- j. Upgrading of research facilities (e.g., online academic databases)
- k. Extension of international academic exchange and research collaboration.

D. Extending the Development Research Forum as a Working Model

The DRF in Cambodia is still in its first three-year phase (2008-2010) and it has already evolved the basic configuration of a “working model” for research collaboration and capacity building – one that is characterised by multiple levels of engagement with multiple partners. In order to consider how this incipient model can be extended in strengthening research capacities in Cambodia’s universities, it is useful to recapitulate the following features – objectives, milestones, and plans – of the DRF, as quoted directly from points outlined in various sections of its September 2009 brochure:

Box 4: Objectives, Milestones, and Plans of the DRF

- The Forum has gathered together – so far 13 – institutions whose research initiatives have been supported by IDRC, involving government, academics, private sector businesses, civil society, and research organisations; new members are welcome.
- It draws together researchers from diverse backgrounds in order to bring new knowledge to the foreground of development debates and initiatives in Cambodia.
- It builds on rather than duplicates existing research initiatives by all partners.
- It takes advantage of the organisational niches of the main partners.
- It promotes quality in research and focuses on thematic issues -- also reflected in the organisation of its annual research symposia (so far two symposia in 2008 and 2009),
- It helps to strengthen the link between development research and policy implementation and to communicate and disseminate research to government.
- It encourages graduate student participation in seminars, including presentations of research proposals and fieldwork results; there are also plans for research-related internships for graduates.
- It facilitates the formation of special interest research groups, which will meet regularly.
- It will work to integrate Cambodian researchers and research institutions into existing global research networks. To help students in particular to deepen their comprehension and expand their intellectual grasp of subjects related to research, key theoretical and empirical texts will be translated from English to Khmer.
- It will be supported by an ICT platform that will also help its members to develop their ICT activities and capabilities (and provide an opportunity for ICT training and mentoring for smaller organisations); its website allows members to exchange information, disseminate news and keep in contact, and enable high-speed access to online journals and other research materials.
- There are plans for liaison with RUPP’s Department of Environmental Sciences and its Master of Development Studies programme, as well as with RUA’s faculties of Forestry and Fisheries and for supporting seminars at RULE and RUPP’s Development Programme.

We have described the thrust of the DRF initiative as facilitating “multiple levels of engagement with multiple partners”. From the above list of features, we may say that the strengths of the DRF “model” for promoting development research and strengthening research capacities rest on an “ethos” or a number of “core values”, including the following: inclusiveness and diversity, a bottom-up approach, shared ownership and responsibility, voluntary membership and participation, mentoring of younger researchers, community outreach, policy engagement, effective communication and dissemination of research findings, and exchange between local and global research networks.

To begin with, two observations are in order. First, the DRF’s stated objectives and plans are generally well-conceived and are likely to shape the research environment in Cambodia if its work is to be sustained over the years. Second, there appears to be some limitations in what the DRF can do to directly influence the strengthening of research capacities in universities since a number of the obstacles have to be addressed by the highest levels of government, including the allocation of the national budget for higher education in general and university research in particular. It might be said that if the DRF continues to do what it has set out to accomplish, and to do so effectively, then the indirect effects on strengthening research capacities in universities will be manifested in one way or another. However, in addition to what the DRF has done and is planning to do, we offer a few suggestions for extending the DRF model in the years to come with the aim of garnering the active support of academics and universities in institutionalising the work and ethos of the DRF on a more sustainable basis.

The DRF has shown that given the challenges faced by universities in developing research capacities, research-oriented institutions in civil society, including NGOs and donor agencies, have contributed to conducting development research and fostering a culture of research in Cambodia. In so doing, academics and universities who have joined as members are plugged into a growing network of diverse researchers and research-related organisations. However, for the reasons discussed in this report, universities should increase collaboration with civil society organisations, state agencies and the private sector more actively and systematically. This can be done with support from donor agencies and development partners who come to be in direct contact with HEIs or through NGOs. In particular, it is important to identify active university-based researchers to lead and consolidate networking between universities and NGOs and donor agencies in activities such as those organised by the DRF. With this in mind, a number of recommendations are suggested:

- a. *Increasing the Exposure of Research through Annual Platforms.* The DRF should consider continuing its annual symposium beyond its first three years. The symposium has expanded in terms of membership, participation and the scope of research, and it appears to be a much needed and much anticipated vehicle for researchers to come together and engage in discussion. A continuation of the annual symposium as a series would help grow a national research community and sustain a culture of research. Universities should play a more significant role in taking turns to co-organise and co-fund the symposium from year to year; this would also engage their lecturers and students in current research and earn them a higher profile as research institutions.
- b. *Building a Network That Facilitates Access, Dissemination and Sharing of Information.* Building upon the idea of an ICT platform for the work of the DRF, and with the participation of university staff, the following clusters of useful and updated information could be organised and disseminated:
 - A Directory of Researchers with information on their affiliation, research interests and projects, and contact details.
 - An Archive of Research Resources, including bibliographies, conference papers (with copyright clearance), and other research-related information.
 - A Repository for Primary Data, including statistics, baseline and longitudinal data on aspects of Cambodian national development.
- c. *Continue Existing Efforts to Establish a Comprehensive Lexicon of Research Terminology.* The DRF could build upon previous lexicon projects led by CDRI in the past. In 2004, the CDRI published an “English-Khmer and Khmer-English guide to technical terms in economics and related fields such as accounting, banking, finance, and development”. In 2006, CDRI published a second lexicon on “peace building” that covered terms used in conflict resolution. Therefore, the DRF could build upon CDRI’s work and marshal greater human and financial resources to initiate and complete a major project in lexicographical research in order to publish a Khmer-English Dictionary of Research Terminology in the Arts, Humanities, Social Sciences, Natural Sciences (including Medicine and Engineering); this would be a significant project in light of the need for Cambodian and foreign researchers to work in at least two languages. Such a project would require the participation of many university researchers and enable them to facilitate the link between local and international

researchers. The Dictionary would also help to standardise and update research terminology over time. Potential collaborators include: RUPP (Institute of Foreign Languages -- IFL), Royal Academy of Cambodia (Linguistics), Centre for Khmer Studies (Siem Reap (which is under the patronage of the Council of Ministers, and the Rockefeller Translations Series (Social Science) project by Men Chean.

- d. *Establish Long-term Goals.* The DRF should work towards a 10-year plan leading to the establishment of an organisation along the lines of a “consortium of partners” – forum for engagement; these partners should include universities, whose presence in the DRF could be more substantial so as to ensure sustainability of research initiatives.
- e. *Work with Stakeholders in the Follow-up of the Scoping Study.* A number of follow-up steps have been brainstormed by DRF partners:
 - Plan dissemination of this report, including offering a Khmer version
 - Develop an agenda paper for DRF (with plan for discussion at the 2011 Symposium and a possible special interest study on academic professionalisation or tenure and university research)
 - Write up this report as an article for the Cambodia Research Journal (which is related to MoEYS and led by H.E.Dr Neth Barom)
 - Develop a process for consultation & discussion with stakeholders (especially policy makers and university leaders, including some experts interviewed for this study, e.g., H.E. Dr Phoeurng Sackona, Secretary of State, MoEYS.

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● APPENDIX: GUIDE FOR INTERVIEWS WITH KEY INFORMANTS (FROM SELECTED UNIVERSITIES)

Interviewer(s):	
Date:	

I. Basic Information

Name of Interviewee(s):	
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Background of interviewee(s): *(1 paragraph, including positions held, education, experience, reasons for being chosen, and other relevant information)*

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Name of University:	
---------------------	--

Year of Establishment:	
------------------------	--

Official mission/vision statement of University:

--

Brief history of University: *(1 paragraph)*

--

Total student population:

Male:	
Female:	

Undergraduate programs with highest enrolment (list up to 5):

1	
2	
3	
4	
5	

Information on faculties/departments relevant to Development Research

	Faculties/Departments relevant to Development Research	No. of students	Total no. of academic staff	No. of academic staff with the following qualifications		
				Bachelor	Master's	PhD
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Percentage of academic staff on full-time employment:		%
---	--	---

Average salary range of full-time academic staff:

Lecturer:	US\$	
Senior Lecturer:	US\$	

Average range of per-hour rates for part-time academic staff:	US\$		per hour
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Average number of paid teaching hours for part-time academic staff per week:		hrs
--	--	-----

Percentage of academic staff as full-time researchers (out of total number of academic staff):		
		%

II. Current State of Development Research**A. Leadership's thinking on University's Mission/Vision**

- What does the leadership place emphasis on? (Is research a priority?)

B. Research Policy

- Is there any research policy? (If yes, request interviewee to describe policy and/or provide policy statement)
- Is there a strategy for giving research more emphasis? (If yes, provide details)

- What fields/areas/topics are prioritised for research?

C. Institutional Arrangements

- Is there a University research committee/board/office?
- Are there any research centres in the University? (If yes, list them)
- Describe institutional structure for research (e.g. promoting and monitoring research)
- Describe University's requirements on time allocation between teaching and research
- Describe University's perspective on academic freedom in research

D. Research as Part of Pedagogy/Curriculum

- Does the undergraduate curriculum involve student research? (Describe)
 - Research activities in courses
 - Supervised research projects
 - Research assistantships
- In which year(s) is research methodology taught?
- Are there any research-based graduate programs? (MA, MPhil, PhD, Post-doctoral, etc)?

E. Types of Research Conducted by Academic Staff

- Types of research
 - Donor-driven research: %
 - Faculty- initiated home-grown research: %
 - Government-initiated: %
 - Private-sector commissioned research: %
- Source(s) of funding
 - Donors: %
 - Government: %
 - Private sector: %
 - University (scholarship, fellowship, research grant scheme): %
 - Foreign technical aid: %
- Is there a University policy on external funding for research/consultancy? (If yes, describe policy)

F. Research Facilities (provide details on the following)

- Research libraries
- Access to academic databases
- Others facilities (specify)

G. Research Activities and Deliverables (provide details on the following)

- Workshops, seminars, conferences
- Publications (e.g. books, journals, working papers etc.)
- Outreach activities (public forums, exhibitions, etc.)
- Others

H. Research Partnerships and Exchange Programs (describe the following if any)

- Inter-university collaboration (within Cambodia)
- Inter-university collaboration (with foreign universities)
- Existing partnerships with local institutions
- Existing partnerships with foreign institutions

I. Building Research Capacities (describe the following if any)

- Study/research opportunities abroad
- Professional development for academic staff
 - Training workshops
 - Support for conference participation
 - Research internship/secondment/attachment
- Other schemes/incentives to promote research

J. Quality Assurance (describe the following if any)

- Evaluation criteria
- Peer review mechanisms
- Research ethics (guidelines and procedures)
- Other QA mechanisms

K. Impact of Research

- Public dissemination of research findings
- Audiences
- Language(s) used
- Tangible and short-term impact of research
 - Impact on policy formulation,
 - Impact on public opinion
 - Others
- Intangible and long-term of research
 - Accumulating useful knowledge/data for development
 - Creating awareness of development issues
 - Others

III. General Reflections**A. Interviewees' Thoughts on the Academic/Research Environment/Landscape**

- Current challenges
- New opportunities
- Recommendations for improvement
- □

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