

Lessons learned from the implementation of University Research Grants (2017–2018) at the Royal University of Phnom Penh

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Research is the key to knowledge generation and innovation. It is a key assessment criterion for university ranking systems, which emerged globally in the early 2000s. These ranking systems are used by many national governments to inform the process of allocating public research funds. While this practice is not yet in place in Cambodia, the Royal University of Phnom Penh (RUPP), one of the oldest and largest universities in Cambodia, is attempting to promote a research culture within the institution through the provision of the University Research Grants (URGs). This policy brief illustrates how RUPP has managed the launch, implementation, monitoring, and evaluation of its first URG cycle and share what has been learned.

Keywords: university research grants, research capacity, higher education institutions, university rankings, Royal University of Phnom Penh

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Background

Global university rankings emerged in 2003 when the Academic Ranking of World Universities (ARWU) was released. This was closely followed in the same year by the Quacquarelli Symonds World University Rankings (QSWURs) and the Times Higher Education World University Rankings

(THEWURs) the following year (Soh, 2013). As university ranking systems have become more recognised and influential, university administrators worldwide have developed strategies to improve their performance in these metrics (Grewal, Dearden, & Lilien, 2008). As an example, the THEWURs are global performance tables that assess research-intensive universities across thirteen performance indicators. These indicators are grouped into five areas, including: (1) teaching, or the quality of the learning environment; (2) research, in terms of reputation, public funding received, and productivity; (3) citations, or the influence of research output; (4) international outlook, or the ability to attract students and research collaboration with other countries, and (5) industry income, or revenue sourced from the commercialization of research (THE, 2016). Globally, higher education institutions (HEIs) have adapted their policies and practices based on these rankings to enhance their chances of securing public research funding.

To date, not a single Cambodian university has appeared in the global university ranking system. In Cambodia, academic league tables to evaluate the performance of universities are not yet available. As such, public research funding cannot currently be allocated on the basis of world university rankings. However, Cambodia cannot afford to be left behind. In an attempt to make this transition, a domestic university ranking system based on a non-academic league table has been introduced by an international higher education directory called 'uniRank'. It provides rankings for eligible Cambodian Universities based on valid, unbiased, and non-influenceable metrics from independent web intelligence sources, rather than directly from universities. To be eligible to receive a ranking, universities are required to: (1)

be accredited; (2) offer four-year undergraduate degrees and/or postgraduate degrees as a minimum entry requirement; and (3) deliver predominantly face-to-face courses². In 2018, uniRank provided a non-academic ranking for 52 eligible Cambodian HEIs. Currently, the Royal University of Phnom Penh (RUPP), one of the oldest and largest universities in Cambodia, is at the top of these rankings.

In recent years, RUPP was selected to showcase best-practice performance by HEIs in Cambodia by relevant government agencies in Cambodia, as well as international organizations, such as the World Bank. In response, the RUPP 2014-2018 Strategic Plan established a vision to be a flagship university for teaching, research, and community service. In this paper, I will focus on analyzing the research capacity of the institution. RUPP is widely considered to be the nation's leading HEI, in terms of research outcomes. For example, a recent search for international peer-reviewed research publications including an author with an institutional affiliation in Cambodia in Scopus, a worldwide abstract and citation database returned 2,787 results. Of the publications listed, RUPP is the only Cambodian University in the top 10 in terms of affiliated authors (Chet, Ford, & Ahrens, forthcoming). However, if RUPP, as the leading research institution in the country is to be included in the world university ranking system, significant investments in the research capacity of the institution are vital. This outcome would be a clear indication that Cambodia has made progress in improving its capacity to generate knowledge and innovation within the country and is

²See more detail at <https://www.4icu.org/kh/>

better equipped to address challenges related to improving its socio-economic development indicators.

In 2017, RUPP introduced the first iteration of the ‘RUPP Faculty Research Fund’ pilot, which allocated university research grants (URGs) to faculty members and staff at the university. The five journal articles, published in this volume of *Insight: ‘Cambodian Journal and Basic and Applied Research’* represent the research output arising from some of these URGs. This policy paper will draw attention to both the successes and challenges faced when implementing this initiative in terms of the allocation and administration of the fund.

Allocation of the University Research Grants

During the 2017-18 academic year, RUPP hosted 17,644 students, either by scholarship or payment of a fee. RUPP is unique in Cambodia in terms of offering a broad range of degrees and other professional programs in science, engineering, information technology, and the social sciences and humanities. The teaching and research profile related to these course offerings has enabled the institution to attain full membership of the ASEAN University Network (AUN). Currently, of the 1,023 staff members at RUPP, over 88% hold a Bachelor’s Degree, close to half hold a Masters qualification, and 78 have a PhD (see Table 1). RUPP also draws on the expertise of adjunct faculty members working in local and international universities and NGOs, as well as government ministries. The ‘RUPP Strategic Plan 2014–2018’ envisions the institution as a leading research hub and think tank in Cambodia. The university is committed to establishing an enabling environment for a research

culture to develop within the institution and this is reflected in university policies.

Table 1. Qualifications of teaching and non-teaching staff at RUPP.

Staff Category	Non-degree	BA/BSc	MA/MSc	PhD	Total
Government staff	28	55	331	41	455
Local contract staff	91	239	157	21	508
Expatriate staff	-	29	15	16	60
Total	119	323	503	78	1023

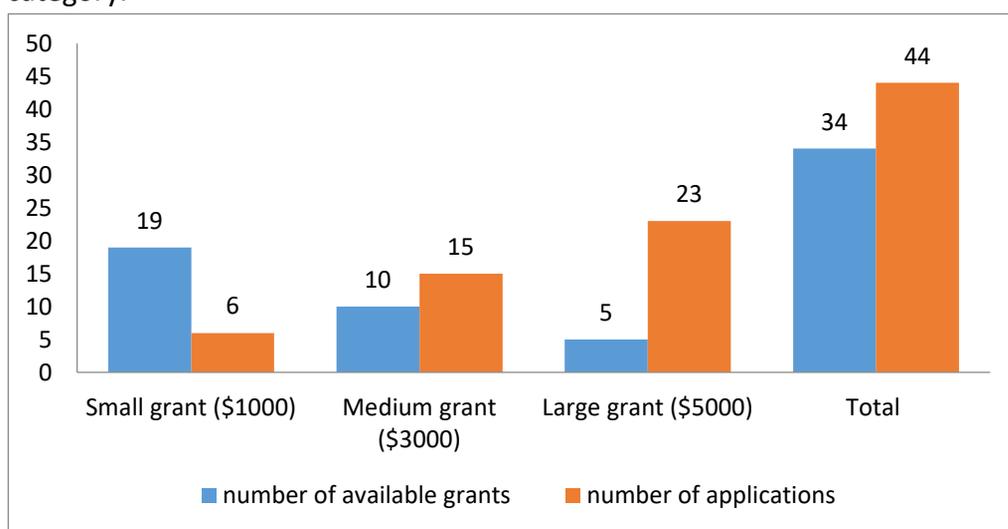
Source: RUPP Personnel Office (2017)

A key component of these policies was to pilot the RUPP Faculty Research Fund. This pilot was intended to provide URGs to faculty members to conduct and publish research in national, regional or international journals. The allocation and administration of the grants was overseen by a Research Committee chaired by the Vice Rector of Research, as well as the Head of the Research Office and a Deputy. The committee comprised eight other members representing each of the main Faculties/Institutes of the university. In total, 80,000 USD was allocated by this committee through the Research Office. Three categories of URGs were allocated: five large grants of 5,000 USD; ten medium grants of 3,000 USD; and nineteen small grants of 1,000 USD. The remaining budget was allocated to facilitating research workshops to administer the funds.

The Research Office developed financial and administrative procedures and guidelines to govern how the URGs would be allocated to both teaching and non-teaching staff. University staff were informed of the nature of the grants, how to apply, and the financial and administrative requirements for

grant recipients during two workshops held on-campus. They were also offered further opportunities to consult with the Research Office when preparing their application. In total, the URGs attracted 44 applicants: 23 for the large grants; 15 for the medium grants; and 6 for the small grants (Figure 1).

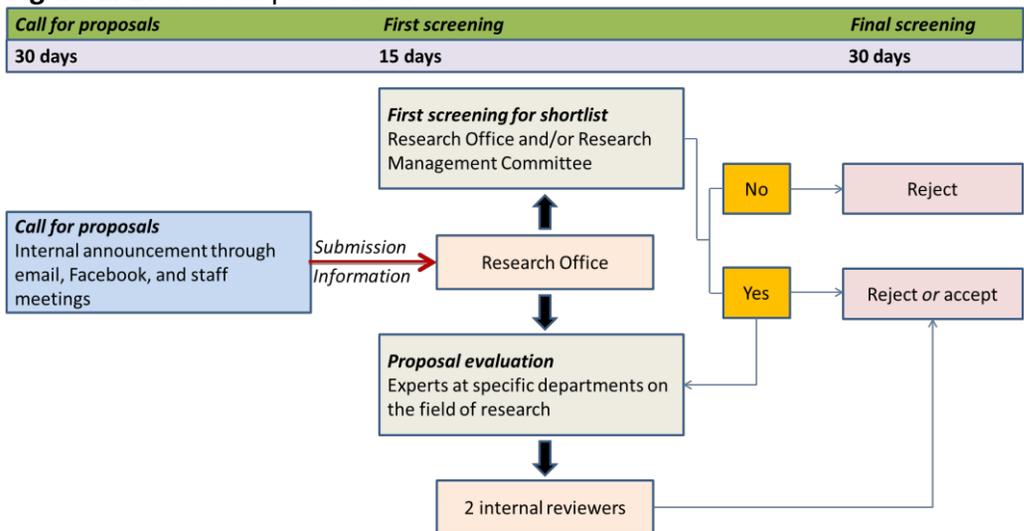
Figure 1. Number of available grants vs. number of applications by grant category.



The clear preference of applicants for large grants is considered be representative of the high costs of conducting high-quality research for items such as the purchase of laboratory equipment and a budget for field work. Each applicant was required to submit a proposal including a curriculum vitae and a list of past publications, if relevant. Each research proposal was evaluated by two independent reviewers, with an academic background in either science or the social sciences. Assessment criteria were applied by the reviewers to assign a rank to each application based on a possible score of 100 points. The criteria (Figure 2) were developed by the Research Office and

approved by the Research Committee. Two independent reviewers were used to align with the principles of transparency and accountability and enable staff to participate in the evaluation. It is envisaged that this procedure may be promoted as best practice for other HEIs in Cambodia intending to replicate the RUPP Faculty Research Fund.

Figure 2. Evaluation procedure.



A Research Committee meeting was held to discuss the evaluation of the proposals and select the successful grantees, primarily based on the scores provided. The number of grants awarded in each category needed to be adjusted to account for a mismatch in the number of proposals received for each grant category. In total, 24 grants proposals were accepted, comprising 7 large, 11 medium, and 5 small grants, with at least one large grant awarded to each Faculty/Institute/Office that applied. The distribution of the grants is detailed in Table 2. One of the small grants awarded to the Faculty of Engineering was withdrawn after the results were announced and as a result only 23 proposals were actually implemented.

Table 2. The number of proposals submitted, accepted and implemented by each Faculty/Institute/Office.

Faculty/Institute/Office	Proposed	Accepted	Implemented
Faculty of Science	14	7	7
Institute of Foreign Languages	7	4	4
Facility of Development Studies	6	4	4
Faculty of Engineering	4	3	2
Faculty of Social Science and Humanities	10	3	3
Other offices	2	2	2
Faculty of Education	1	1	1
Total	44	24	23

Administration of the University Research Grants

The Research Office was assigned to administer the URGs based on the monitoring and evaluation framework outlined in Figure 3. Upon being selected, grantees were able to access 30% of the URG to conduct field work or experiments. A second installment of 50% was accessible upon submission of an acceptable progress report, including at least two photographs of the work conducted upon completion. To receive the final payment, grantees were required to submit a final narrative report and a working paper or publish an article in a national, regional, or international journal. The Research Office was responsible for supporting each grantee to progress through each stage of the research project. Payments were managed by the Accounting Office. Each grantee was required to adhere to a deadline for mid-term progress reports of 31 December 2017 and a final narrative report and working paper/journal publication, by 30 April 2018. A

failure to satisfactorily meet these milestones or sufficiently respond to reviewer comments would result in the grant being discontinued.

Figure 3: Monitoring and evaluation framework.

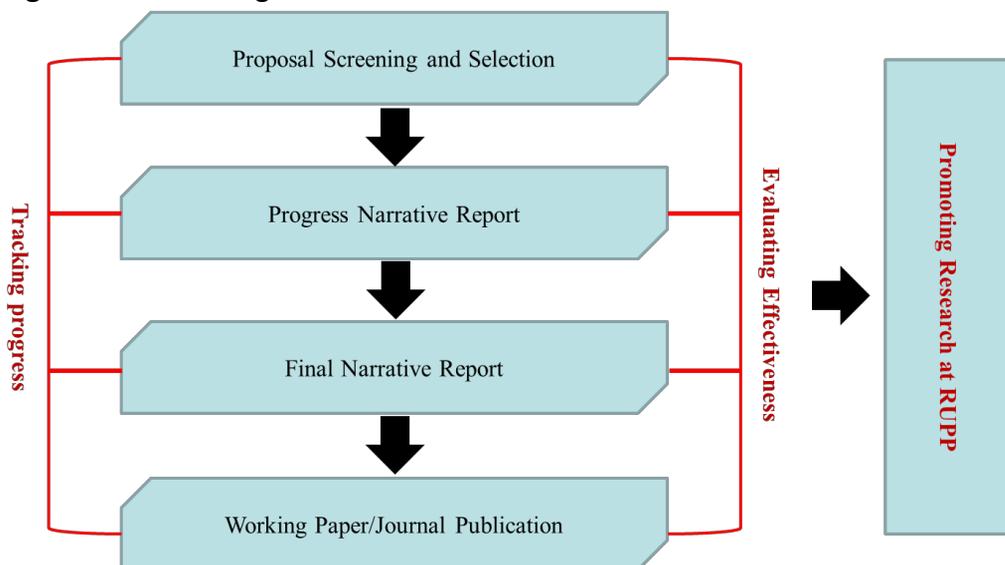
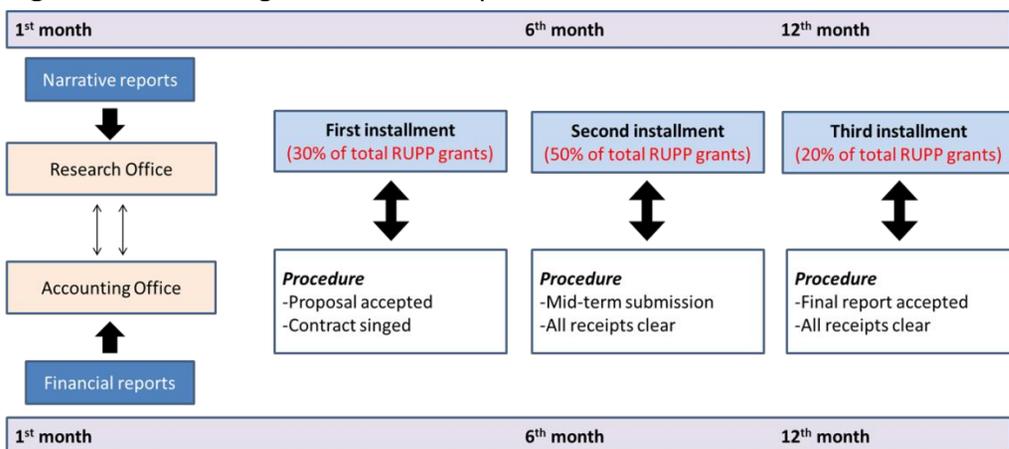


Figure 4. Monitoring and evaluation procedure.



Outcomes from the University Research Grants

Ideally, publication of the research conducted in an academic journal was the intended outcome for each URG. However, there were delays

experienced in completing the field work for 2 of the 23 grants (see Table 3). In response, the Research Committee organized an ad-hoc meeting to allow these grantees discuss their progress and negotiate the acquittal of their URG through a working paper submitted at a later date (July 2018). After one year of the program, 11 academic papers had been published successfully in either a national, regional, or international journal. The output of the remaining ten URGs was compiled as a collection of working papers. The Research Office will continue to support these grantees to revise their work to a standard suitable for publication in a journal.

Table 3. The proportion of URGs which met the stated requirements.

Type of grant	Project	Full acquittal	Achievement
Large scale (US\$ 5,000)	7	6	85.7%
Medium scale (US\$ 3,000)	11	11	100.0%
Small scale (US\$ 1,000)	5	4	93.1%

Table 4. Research published in journals not managed by RUPP

No.	Title, author, and journal	Level
1	Spoann, V., Fujiwara, T., Seng, B., & Lay, C. (2018). Municipal solid waste management: Constraints and opportunities to improve capacity of local government authorities of Phnom Penh Capital. <i>Waste Management & Research</i> , 36(10), 985–992. https://doi.org/10.1177/0734242X18785722	International
2	Chun, B., Hieu, V. N., & Suon, S. (2018) 'Buddhist community work in Cambodia' <i>ASEAN Social Work</i>	Regional

Journal 2(1) pp. 1-11.

- 3 Tao, N., Om, S., & Sot, V. (2018) 'Identifying the optimal mechanisms for the professional development of academic staff at the Royal University of Phnom Penh.' *Cambodia Education Review 2(1)* pp. 4-29. National
- 4 Pang, S., & Khan, C. (2018) 'The Impact of a podcast project on learning outcomes: A case study of two content-based courses' *Cambodia Education Review 2(1)* pp. 31-51. National
- 5 Keuk, C. N., & Monh, S. (2018) 'Reflective practice for pre-service Teachers of English Language: A case study at the Institute of Foreign Languages of the Royal University of Phnom Penh' *Cambodia Education Review 2(1)* pp. 52-80. National
- 6 Soviphea, C., Nget, D., & Somchan, S. (2018) 'Improving student's speaking ability through the integration of Information and Communication Technology in English as a Foreign Language classrooms in Higher Education Institutions. *Cambodia Education Review 2(1)* pp. 81-107. National

To support the publication of peer-reviewed research, 'Insight: Cambodia Journal of Basic and Applied Research' was established in 2018, published by the Royal University of Phnom Penh (RUPP). It is an academic, policy and practice-oriented journal, covering all aspects of engineering, science, linguistics, development and environment studies, and the social sciences and humanities. Manuscripts of academic or applied research that contribute to the social, economic, and environmental development of Cambodia, the

Greater Mekong Sub-region, or the ASEAN, from either Cambodian or international authors are eligible for submission. Manuscripts outlining theories, conceptual frameworks, innovations, best practices and technologies from any discipline are welcomed.

Table 5: Journal articles published by RUPP

No.	Title, author, and journals	Level
1	Phauk, C., Rim, S., Keath, S., Keum, T., Doeurk, B. & Hot, C. (2019) Preliminary research on insect diversity at Kulen Promtep Wildlife Sanctuary, Cambodia. <i>Cambodia Journal of Basic and Applied Research (CJBAR)</i> , 1(1), 16–48.	National
2	Sovann, C.P., Choi, M.D., Thou, S. & Yim, S. (2019) Simulating future trends in stormwater runoff at a university campus related to climate and land use changes. <i>Cambodia Journal of Basic and Applied Research (CJBAR)</i> , 1:1, 49–75.	National
3	Phoeurk, C., Tieng, S., Tan, S., Moeung, S., Cheu, S., Chean, P.R.C., Hay V., Say, C., Lim, L. & Kann, L. (2019) Prevalence and concentration of <i>Escherichia coli</i> and <i>Salmonella</i> species in fresh vegetables collected from different types of markets in Phnom Penh. <i>Cambodia Journal of Basic and Applied Research (CJBAR)</i> , 1:1, 76–96.	National
4	Sreng, S. & Proum, S. (2019) Seasonal variation in the nitrate concentration of groundwater samples surrounding the Dangkor Municipal Solid Waste Landfill. <i>Cambodia Journal of Basic and Applied Research (CJBAR)</i> , 1:1, 97–124.	National

- 5 Khan, L. (2019) An economic assessment of urban National flooding in Cambodia: A case study of Phnom Penh. *Cambodia Journal of Basic and Applied Research (CJBAR)*, 1:1, 125–149.
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However, the journal prioritizes research focused on the content of courses provided by RUPP. The journal is bilingual and authors may submit a manuscript in either in English or Khmer, with the abstract published in both languages. Two issues are published each year: Issue 1 (January – June), and Issue 2 (July – December). Issue 1, Volume 1 features articles arising from research conducted with the support of five of the URGs awarded as part of the RUPP Faculty Research Fund and was published in December 2018.

A critical factor in successful implementation of the RUPP Faculty Research Fund pilot was an allocation of 40% of the total value of each grant as a payment to the researcher. This allocation was vital in enabling grantees to focus on the research activities outlined in their proposal, as they were compensated for time spent away from teaching activities. However, limitations were still experienced due to the need for the grantees to balance teaching schedules with research work. Furthermore, the capacity of some grantees to conduct research to an acceptable standard for journal publication is something that requires more attention, especially in regards to choosing an appropriate research methodology, data analysis, and report writing.

Conclusion

Investing in the research capacity of staff at RUPP was piloted through the provision of URGs. Through this pilot, the university has made progress toward the vision of being a leading research hub and think tank in Cambodia.

Overall, the implementation of the first iteration of the RUPP Faculty Research Fund was successful, with majority of URGs leading to research being published in either national, regional or international journals and the remainder due to be published as working papers compiled by the RUPP Research Office. The findings from these publications are important and will lead to local case studies being integrated into the curriculum at RUPP. Moreover these resources will inform future research, planning and policy development in Cambodia. The diversity of the research output of the 23 grantees is a key strength of the initiative. Additional benefits include the development of a process by which the Research Office, Research Committee, and Accounting Office developed the capacity to manage research funding in line with the criteria applied to world university rankings. The allocation of 40% of the research grant as a payment to the grantee is critically important to the ongoing success of URGs. Enabling RUPP staff to fully integrate research activities into their professional development is consistent with RUPP's strategy. The university aims to allocate more funds in this manner and continue to investing in research capacity of the university.

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