



RESEARCH POLICY

FACULTY OF DOCTORAL STUDIES & RESEARCH

INTRODUCTION

This document has been prepared by the Faculty of Doctoral Studies & Research (FDSR) and it briefly outlines the current research policies of RK University. FDSR facilitates research activities across RKU and primarily provides support to all the doctoral students and faculty researchers.

RESEARCH PROMOTION/MOBILIZATION

FDSR organizes various training workshops and seminars to maintain an atmosphere conducive to research activities. RK University, with significant support from FDSR, organized its first *International Conference of Research & Entrepreneurship* (ICRE 2016) and co-hosted the *International Conference on Transformations in Engineering Education* (ICTIEE 2017). Nobel Laureate, Dr. Alan J. Heeger (and two other dignitaries from MIT), delivered pre-recorded video addresses during ICRE 2016. Several eminent pedagogical researchers from India and abroad visited the RKU campus during ICTIEE 2017.

FDSR scrutinizes applications for institutional research funding (seed money) and makes specific recommendations as and when required. FDSR actively encourages all the researchers to file for patents by organizing patent drafting workshops from time to time. A research committee consisting of research coordinators helps facilitate some of these activities. FDSR also provides the necessary support for scholarly communications (manuscripts, replies to journal referees, grant applications, etc.) by providing customized recommendations to various researchers. Various training workshops/seminars are organized to facilitate all of these activities. FDSR had organized a special Nobel Laureate research seminar during the year 2017. Nobel laureate Dr. Ada E. Yonath delivered an inspiring talk to RKU's students and researchers. FDSR also maintains a resource center webpage that gets updated with useful links, presentations, and instructional videos from time to time. In order to ensure quality, researchers are asked to screen their manuscripts for plagiarism online. RKU has purchased access to URKUND for this specific purpose. Researchers are also given free access to premium

e-journals and to premium software programs (such as grammarly.com's MS Word add-in) to facilitate various research-related activities (drafting grants, theses, etc.).

RESEARCH PUBLICATIONS & AWARDS

FDSR only recognizes journals with well-established metrics (journals with a *Thomson Reuters Impact Factor* or *SCImago Journal Ranking*) and encourages all the researchers to publish in these journals. Specific research achievements (grants, industry support, publications in journals with well-established metrics, etc.) get prominently highlighted on the FDSR webpage.

RESEARCH FACILITIES

BACKGROUND

Research constitutes the structural backbone of any university program. Universities with modern research facilities are able to attract and retain high quality academicians, teachers, and researchers. Over the past three decades, universities in Asian countries such as China have invested heavily in upgrading their research infrastructure, owing to which they have started making meaningful contributions to the world of research. According to the *SCImago country ranking algorithm*, (<http://www.scimagojr.com/countryrank.php>), which is similar in nature to the *Google PageRank algorithm*, China now has the second highest *h*-index of any Asian country (*h*-index = 495, meaning that 495 Chinese publications have each received at least 495 citations) and is surpassed only by one more Asian country (Japan). With an *h*-index of 1,648, the United States is still the undisputed global leader in research. India appears right below the Russian Federation in the above list, at the 22nd position.

BENEFITS DERIVED FROM RESEARCH EQUIPMENT UPGRADES

The self-study manual published by the National Assessment and Accreditation Council (NAAC) (<http://www.naac.gov.in/docs/University%20Manual%20-%2020.6.13.pdf>) provides useful guidelines for universities across India. As per the NAAC requirements, universities are expected to invest significantly in their research infrastructure. Out of the seven outlined criteria, criterion no. 3 (*Research, Consultancy, and Extension*) has been assigned the highest weightage.



Figure 1. Diagram depicting how RKU is expected to benefit from the research equipment upgrades and from the *Bioresearch & Characterisation Centre*.

As depicted in Fig. 1, the research equipment upgrades and the newly established *Bioresearch & Characterisation Centre* are expected to bring in the following important benefits:

1. A boost to RKU's *h*-index and national ranking: The *Hirsch index* or *h*-index is one of the quantitative measures of research productivity and research impact. An individual has a *Hirsch index* corresponding to "h" when he/she publishes "h" articles, each with at least "h" citations. Individuals, institutes, and even countries have their own *h*-indices. These indices keep changing with time, as individuals and institutes get more and more publications and citations. Higher *h*-indices are indicators of higher productivity and higher impact. Research upgrades result into high-impact publications, which in turn fetch higher number of global research citations. This provides a major boost to the *h*-index of the institute (and to the *h*-index of the respective country). Investing in cutting-edge instrumentation can therefore help any institute increase its national (and global) ranking in the long run. Such an infrastructural investment also brings in several additional benefits (as discussed in the section below).

2. Increased extramural funding: It is a known fact that universities with a decent research infrastructure are more likely to get research funding.

3. Increased faculty retention: In order to retain the best faculty in every school, it is imperative that we provide them with the necessary research infrastructure. This not only keeps them motivated/engaged, but also instills a sense of belonging. Training and retaining experienced faculty members then becomes an easy task.

4. More placements in multinational companies (MNCs): Recruitment experts working in MNCs carefully survey the research facilities listed on the university website before approaching newly established universities for recruitment drives. The listing of sophisticated instruments on the university website fetches good rewards for the training and placement office. Students who receive training on sophisticated equipment get easily hired by MNCs.

5. Revenue generation (and ROI) through consultancy services: Owing to the fact that there are very few universities/colleges/institutes with decent research infrastructure in the entire Saurashtra region, RKU can play a leading role in this particular area by offering fee-based scientific consultancy services (by extending the modern research facilities to academic, government, and industrial researchers for a fee). Our infrastructural investments will certainly start paying rich dividends in the next 3 to 5 years. The current demand for modern instrumentation is quite high in the Saurashtra region.

6. An increase in the number of quality admissions: It is a known fact that universities with sophisticated research facilities witness an increase in the overall quality of its applicants over the years.

CONCLUDING REMARKS

FDSR is currently providing a lot of support to all the doctoral students and researchers from across the campus by implementing the aforementioned research policy.

RKU has recently approved research facility upgrades worth approx. half a crore (during the academic year 2016–2017). The Faculty of Doctoral Studies and Research continues encouraging researchers to apply for extramural funding by extending the necessary help as and when required. The recently established *Bioresearch & Characterisation Centre* is expected to provide great research and training opportunities to all the current/future students, doctoral researchers, industrial researchers, and (internal/external) faculty members.