Researchrepository@GBPUAT

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Abstract

The G.B. Pant University of Agriculture and Technology, Pantnagar (GBPUAT), a pioneering State Agricultural University (SAU) is a prominent Institution creating new knowledge through its teaching, research and extension activities. The research conducted in GBPUAT, Pantnagar is controlled and monitored by the Directorate of Experiment Station (DES). In view of the policy initiatives of research funding agencies like ICAR, DBT, DST, UGC and AICTE etc., funding research at Pantnagar, it has become the necessity to create Institutional Repository for providing Open Access to public funded research. The Researchrepository@GBPUAT, Pantnagar has been conceptualized as primarily the research repository, archiving research output of the university.

Keywords: Institutional Repositories, Open Access Policy, Public Funded Research.

Introduction

The basic objective of open access has been to provide immediate, digital, online access to peer reviewed research articles. The Instituional Repositories are one of the impotant channels of Open Access providing easy access and wide visibility to the scholarly contents most importantly the peer-reviewed research articles. The research funding agencies world over have adopted mandatory open access policies requiring the articles resulting from public funded research to be made available in open access. In India the major research funding agencies like ICAR, CSIR, DST-DBT, etc. have adopted open access for most of their publications and funded research. These open access policies have been quite successful in the development of instituional repositories in the constituent instituions as well as enabling open access to published reults of public funded research. This paper has conceptualised a research repositories for the G.B. Pant Univrsity of Agriculture and Technology (GBPUAT), Pantnagar considering its research system.

Institutional Repositories

Institutional Repositories are one the most preferred routes for providing open access to scholarly output of an Institution. The Institutional Repositories are multidisciplinary archives contrary to the subject based repositories or Central Repositories. One of the most cited definitions of Institutional Repository is given by Clifford Lynch[1]. He has defined IR as "a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members." Therefore institution and its community members are central to the concept of Institutional Repository. The Wikipedia Contributors[2] have further clarified the concept of Institutional Repository by defining Institutional Repository as an online locus for collecting, preserving, and disseminating in digital form -- the intellectual output of an institution, particularly a research institution.

Gibbons[3] has defined the IR on the basis of some common features and functions which together distinguishes IRs from other such type of services. These distinguishing features and functions include Digital Scholarly Contents, Institutionally Defined, Community Controlled, Institutionally Supported Cumulative and Perpetual, Open Access and Interoperability, Content Submission and Management System.

Intuitional Repositories enhance access and visibility to the scholarly output of the institution showcasing the entire academic and research output in the archive. The easy access and worldwide readership helps in increasing the citation and impact of Institutional research. The archives are also important means for providing long term preservation to the research output of the institution. The repositories provide global presence and enhance Institutional prestige. The greater awareness about the Open Access to public funded research has made most of the research funding organizations like CSIR, ICAR, DST, DBT, UGC and AICTE etc. to adopt mandatory policies for the creation of institutional repositories and compulsory deposit of scholarly research articles resulting from the funded research in these repositories. At present 68 repositories are listed in the OpenDOAR[4] from India.

Research at GBPUAT, Pantnagar

The G.B. Pant University of Agriculture and Technology[5], Pantnagar is one of the pioneering State Agricultural University (SAU) established in 1960. The university has its vast campus and farm spread in thousands of acres. The academic research and extension activities of the university are being organized

through following Colleges, Directorates including Directorate of Experiment Station.

The Directorate of Experiment Station (DES) came into existence with the existence of university under the integrated system of teaching research and extension for carrying out need based research. Directorate of Experiment Station coordinates, facilitates and monitors research activities in different disciplines of science and technology. This unit is responsible for the processing, budgeting, evaluation and monitoring of research conducted under various research projects and other research programmes in the university.

The Experiment Station is involved in the overall administration and management of following Research Canters of the University.

Research Centres (Main Campus):
1. Agroforestry Research Centre
2. Breeder Seed Production Centre
3. Fish Seed Hatchery and Instructional Fish Farm
4. Horticulture Research Centre
5. Instructional Dairy Farm
6. Instructional Poultry Farm
7. Medicinal and Aromatic Plants Research and Development Centre
8. Model Floriculture Centre
9. Mushroom Research and Training Centre
10. Norman E. Borlaug Crop Research Centre
11. Organic Farming Research Centre
12. Pantnagar Centre for Plant Genetic Resources
13. Research Laboratories located in subject matter departments at main campus, Pantnagar
14. Sugarcane Seed Production Centre
15. Vegetable Research Centre

Research Centers (Off Campus)
1. Horticulture Research Sub Centre, Kotdwar, Pauri
2. Institute of Biotechnology, Patwadangar, Nainital
3. Jyotiram Kandpal Hill River Valley Integrated Agricultural Research and Extension Centre
4. Pantnagar Rural Bioresource Centre, Khanna Farm, Bhagwanpur
5. Research and Training Station, Pauri
6. Research Station, Majhera, Nainital
7. Research Station, Sui-Lohaghat, Champawat
8. Sugarcane Research Centre, Kashipur

The experiment station publishes research reports and research highlights and Interntional Journal of Basic and Applied Agriculture (formerly Pantnagar Journal of Research), a prestigious peer-reviewed journal. The research paperas from the research conducted in the Pantnagar are processed for publication in national / international journals. The Directorate of Experiment Station is the nodal agency for controlling the research at GBPUAT, Pantnagar.

Policy Initiatives of Funding Agencies

The research is conducted in wide range of disciplines in science and technology receiving funds from various agencies like ICAR, AICTE, DST, DBT and UGC etc. The funded research has the obligation to fulfill the policies of respective funding agencies.

The major funding is done by the ICAR which has adopted a policy, ICAR Open Access Policy[6] for the public funded research. This policy requires to immediately deposit the final author version of scholarly research articles accepted for publication and produced from the research conducted at various ICAR establishments in the Institutional Repository. the 2nd revised draft of Open Access DBT and DST Policy[7] rqeuires to deposit the full length scholarly article and its metadata and supplementary material in the online Institutional Repository. The institutions which are not having IR may deposit their article in the central repositories. More importantly authors are required to mention the grant number at the end of full text scholarly article as the acknowledgment. AICTE has also made the provisions for the payment of author charges for the publication of research article in open access in its TEQUIP-II Grant.

All the funding agency encourage authors to publish their research articles produced from public funded research in Open Access Journals or the journals supporting self-archiving, however no research funding agency restrict the freedom of author to publish articles in the journals of their choice. Therefore repositories play a very significant role for providing open access to public funded research.

Considering the open access policy initiatives of major research funding agencies, it is appropriate time for GBPUAT, Pantnagar to frame its open access / self-archiving policy for filling its proposed Researchrepository@gbpuatpantnagar

Institutional Mandate

The Budapest Open Access Initiative (BOAI) started with this initiative in 2002, has special significance to Open Access. Reinforcing the importance of its Open Access policy the Budapest Open Access Initiative[8] recommendations for next 10 years has made following recommendations. The BOAI Recommendation 1.1 states *"Every institution of higher education should have a policy assuring that peer-reviewed versions of all future scholarly articles by faculty members are deposited in the institution's designated repository".*

The research conducted in at GBPUAT Pantnagar has the obligation to fulfill the policy requirements of the funding agencies. As an Institution devoted to academic, research and extension the university may frame its mandatory policy for the immediate deposit of final author version of peer reviewed

research articles resulting from public funded research as well as the research conducted within the institution utilizing the university research infrastructure in the Institutional research repository proposed to be created immediately upon the acceptance of the research paper. The mandate may include mandatory deposit of all the research reports, research journal, research data and other scholarly research contents in the repository for providing Open access as well as long term preservation. A standard one year embargo period may be accepted but the embargo period acceptable to funding agency will supersede the institutionally defined embargo period. The provision of compulsory mention of a unique code given by DES to each sanctioned research project at the end of the research article as an acknowledgement will the most effective means of controlling the compliance of Institutional Mandate as provisioned in DBT-DST Open Access Policy.

The Researchrepository@GBPUAT

Researchrepository@GBPUAT has been conceptualized as the Institutional Repository for primarily the research output of the University. Free Open Source Software (FOSS) are the most preferred choice for the proposed online digital repository. The FOSS have distinct advantages over commercial software having very low implementation and maintenance cost. The vendor services are also available for the implementation of repository using FOSS. A strong community support for the software keeps adding new features to meet the changing needs of the users and administrators. EPrints and DSpace are most widely used open source software of choice for the implementation of proposed research repository.

Repository will archive various acceptable contents in wide variety of file formats. The most preferred preservation formats are PDF and XML while the display formats may include other popular file formats like MS Word etc. These contents are required to be represented through a standard Metadata Schema. The unqualified Dublin Core (DC) is the minimum metadata requirement for OAI-PMH compliance of the repository. The resource discovery or content search ability is enhanced using standard vocabulary. The AGROVOC may be the choice for standard vocabulary of agricultural terminology.

Repository Contents

ICAR Open Access Policy has recommended all type of publications like research articles, conference papers/conference proceedings, book chapters, annual reports, newsletters, bulletins, summary of the completed projects, and other grey literatures available which is required to be placed under open access.

The proposed repository has primarily focused on research output of the institution. Therefore the contents of the research repository will include the entire research output of the institution including the following

- ➢ Peer reviewed research articles
- ➢ Working Papers
- ➢ Conference Papers / Conference Proceedings
- ➢ Research Reports/Technical Reports
- ➢ Books/Book Chapters
- ➢ Patents
- ➢ Data sets

Submission Procedure

The faculties and researchers involved in public funded research will be authorized to submit their research output in the research repository after proper registration. Aauthorized persons may deposit in the repository themselves or through a mediated deposit involving repository administrator may be preferred. Therefore authors may directly submit their articles together with minimum required metadata immediately after the acceptance of article for publication in research journal. Alternatively authors may e-mail the article to the DES authorizing DES to deposit in the research repository on the behalf of author/s as the mediated deposit. Authors are advised to check the copyright policies of publisher for self-archiving. It will be mandatory for authors to mention the Institutional Mandate with the copyright transfer agreement. University Library along with Copyright Cell of the university will mediate for any copyright assistance to authors. The metadata enrichment and finalization will be the sole responsibility of the University Library.

IR administrator will check the file format ensuring standardized metadata, subject headings, clearance of copyright obligations, quality checks and compliance of other policy requirements at the deposit stage. A detailed guideline for depositing a article will be available on the Home page of the repository. Once the document is uploaded in the repository by administrator, authors will be informed through e-mail.

Advocacy

The Pantnagar News is the regular publication of the university is one of the mouthpiece for documenting and propagating all the events and activities occurring in the campus. This will be a most suitable means of communicating regularly and educating the academic and research community of Pantnagar about the developments of the repository. International Journal of Basic and Applied Agriculture interdisciplinary peer reviewed journal published thrice a year for communicating original research findings of the research conducted in the university. The repository advocacy contents will directly reach to the research community through this in-house publication of Pantnagar University. The University Website, Websites of various constiuent colleges, University Library Web Page and the Repository Home Page will be the online locus for the advocacy of the repository. All the conferences, workshops, training programmes and other academic events will be one of the

important forum for the advocacy and publicity of the repository. The one to one communication and other informal means of communication will play their role in further advocacy and publicity of the repository.

Sustainability

Sustainable model of the repository will depend upon the adoption of comprehensive policy framework and ensuring its compliance. The regular monitoring of repository usage and content deposit will be the key factor in the evaluation and monitoring of repository. The usage statistics on daily, weekly and monthly basis will help administrators to analytically display the contents most downloaded/used. The further impact of the repository may be evaluated using citation statistics of each item in the repository. Such a citation report communicated to authors will further encourage the deposit of contents in the repository. The registration of repository in various repository registries and related sites like OpenDOAR, ROAR, OAI, ROARMAP and various harvesters like OAIster, BASE, Scientific Commons and CASSIR will enhance the visibility of repository as well as the accessibility of its contents.

Conclusion

The proposed repository will be a tool for the DES to organizing institutional research and provide open access to public funded research output of the university. The increased citations and thereby increased impact of the Pantnagar research will further enhance the prestige of the university. The university has extensive research activities in all the departments funded from various research funding agencies. This repository will visualize the entire research output of the university showing its depth and diversity. The university has sufficient infrastructural facilities for the creation of repository, with enormous research ouput, certainly making a case for the research repository system.

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