

# Institutional Repository: A Novel Outlook To Preserve And Disseminate Knowledge In Higher Education

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**Abstract:** The Institutional Repository (IR) is a very vital tool which can serve as an engine to change the academic functioning of any Institution significantly. It is now need of an hour that Information Center and Libraries of educational institutions need to be established as per the end users' requirements.

In the current circumstances, IR is forming a necessary component for information and knowledge sharing in the scholarly world. In addition, it also facilitates in showcasing scholarly and research output to the wider community and in turn, provides a help in institutional advancement and outreach to a large extent. In this paper, an attempt has been made to discuss the effective implementation of IR at Anjuman-I-Islam's Kalsekar Technical Campus (AIKTC), New Panvel Maharashtra. The sole purpose of creation of IR is to collect, carefully preserve & disseminate the knowledge & technical know-how to wide spectrum of human resources. This significantly acts as one of the effective tools to result in to scholarly communication and preserve institution's knowledge. The Knowledge Resources & Relay Center (KRRC) takes immense pride to host the repository and work for the dissemination and preservation of knowledge resource of AIKTC community.

**Keywords:** Open Source, Digital Library, Institutional Repository, Open access.

## 1. Introduction

Academic libraries cater to the need of creating and managing the institutional repositories which focus on preserving and more importantly, disseminating the scholarly material produced by the faculty and the learners. This comprises of article pre-prints, manuscripts, technical reports, conference proceedings, data sets, software, as well as thesis and dissertations. Electronic submission, storage, and dissemination of student theses and dissertations have been increasing more commonly in universities and colleges. For libraries, ETDs (Electronic Theses and Dissertations) are the starters for an institutional repository program, and represent an opportunity to engage graduate

learners and their faculty members (Welburn and Fyffe, 2008).

Roosendaal and Geurts (1997) took note of significant functions of this process of scholarly communication i.e., registration, identifying the 'owner' of the intellectual property, certification, establishing the quality of the research, awareness, making the research open to others and archiving, long-term conservation to make the literature accessible to the future needs of the concerned people. Institutional repositories act as an exact way of disseminating research, managing academic resources output of the institute. More vitally, it has enormous potential to be an innovative format of scholarly communication (Lynch, 2003).

Though institutional repository bears an objective of collecting, preserving and disseminating specialized literature, the current depositing estimates unfortunately gives the statistics that only between 15% and 30% of eligible scholars and researchers deposit their work in institutional repositories (Cullen & Chawner, 2011).

Institutional repositories are collections in the form of digital property which capture and conserve the intellectual output of faculty members (Sharma, et al.,2008). Institutional repository nowadays plays a significant and key role in the world of open access. The institutional repository must cater to the need of preserving the intellectual output of learners, faculty members and associated staff. An institutional repository is a bunch of provisions that an institute offers to all stakeholders for the dissemination resources in the digital form (Mandhirasalam and Srinivasaragavan, 2014). This is the right place where one can self-archive one's own Research Papers, CD's Content, Question Papers, Syllabus, Project Reports, eCourseware.

The institutional repository is strategic approach academic library service in the current scenario (Alvite and Barrionuevo, 2011). Ware & Mabe (2009) stressed upon the fact that the institutional repositories in academic libraries are the vital tools for academic publishing and a

novel strategy of innovation of scholarly communication. Formation of repositories acts a much needed solution in order to provide e-resources amidst the expensive subscription. It may be an alternative to curtail the library's budget in providing highly valued resources through the commercial online databases subscription (Young, 2009; Mossof, 2015). Stanton & Liew (2011) and Ogbomo & Muokebe (2015) brought it to the light that the awareness and the attitudes of the institute lecturers are the vital & essential factors that contribute to the successful functioning of institutional repositories. Jain et al. (2010) attempted to put forth the benefits and difficulties of setting up an IR, and librarians' and authors' roles in the effective management of an IR. Strength and advantages of DSpace can only be optimized through effective IRs, and it tries to recommend that an IR be considered as the principal benchmark of digital scholarship. Sharma et al. (2008), extensively provided the literature on the contents of IRs and skill required for the implementation of the Institutional Repository. Further, authors discussed the benefits, standard, sustainability & funding, legal considerations and current scenario of the IR in the Indian context. Authors also discussed the Open Source Software and Commercial Digital Repository Software; about the softwares that are readily available to create and maintain institutional repositories. Khan and Das (2008) stressed that the current status of IR in India by its collection type, subject coverage and the total number of digital repository collections available to the academic community as open sources. Ivwighrehweta (2012), analysed the challenges of institutional repositories development in few academic institutions in Nigeria. Five research questions were raised and the descriptive survey design was employed for his study. Vishala and Bhandi (2007), discussed about an overview of IR and its benefits to the institutions and also described the role of the library in building an Institutional Repository. Richardson, and Wolski, (2012) thoroughly made an analysis of the current literature on the topic and shared their experiences about a number of initiatives, particularly in Australia, which include repositories within the learner lifecycle. The paper culminates with an important note about how repositories could be better utilised to cope up with the requirements of the learners in higher education.

Shahin and Gaonkar (2016) made a detailed study of the web performance of AIKTC institutional repositories and analysed the performance in archiving and sharing based on the Ranking Web of Repositories (RWR) was also analyzed. The main objective of ranking and registration was to promote the development of open access by providing timely information about the growth and status of repositories throughout the world.

Cho (2017) carried out a practical analysis of the procedure of institutional repositories in Asian countries listed in Open Directory of Open Access Repositories (DOAR) and Ranking Web of World Repositories (RWWR). The author

brought it to the light that IR in Japan, Korea, India, Taiwan, Indonesia, China, Turkey, and Malaysia showed comparatively enhanced levels of maturity in offering IRs.

Open DOAR has been monitoring the world-wide OA repositories for more than a decade. Open DOAR provides a quality-assured listing for the world-wide audience (Seo, 2018).

## 2. Case study:

Anjuman-I-Islam's Kalsekar Technical Campus (AIKTC) having three-degree level schools located at New Panvel is recognized by the Directorate of Technical Education (Maharashtra), approved by All India Council of Technical Education (AICTE), New Delhi and affiliated to University of Mumbai. The AIKTC houses state-of-the-art infrastructure and instructional facilities for undergraduate learners in various functional areas of specialization, viz, School of Engineering & Technology (Civil, Computer, Electrical, Electronics & Telecommunications and Mechanical), School of Pharmacy and School of Architecture. The Knowledge Resources & Relay Center (Central Library) takes paramount pride & privilege to host the repository and work for the dissemination and preservation of knowledge resource of AIKTC community. The Campus constantly thrives to mold the learners into a complete Human Resource which could meet the professional expectations of the industry, in particular and the society, in general. It also instils higher capabilities among the learners to face the challenges of ever changing technological world. Fig 1 shows location map of AIKTC.

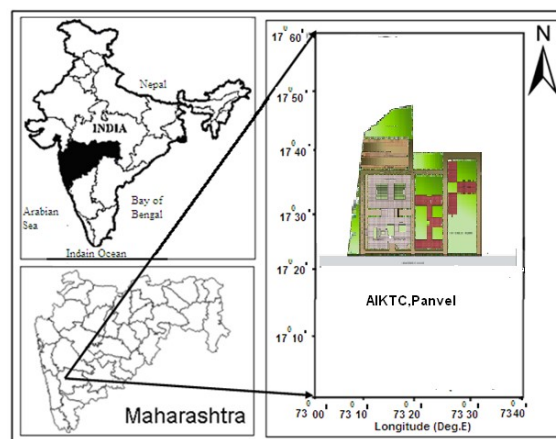


Fig 1: Location map of AIKTC, New Panvel

## 3. Need for institutional repository(IR)

The Research Promotion Cell of AIKTC strives hard to nurture research culture in the institute by a way of promoting research in newly emerging and challenging areas of engineering, architecture, and pharmacy. It consistently encourages the Undergraduate and Postgraduate learners to sneak into research in newly emerging frontier areas of the institute including multidisciplinary fields. This facilitates in improving the

global research capability of budding technocrats through the acts of participating in conferences, seminars, workshops, project competition, etc. Many research scholars do not easily give free access to their research output to the colleagues in any organization. IRs provides scholars with a common & much needed platform so that everyone in the institution can contribute scholarly material in order to promote cross-campus interdisciplinary research. Few of the long term objectives for having an institutional repository are to provide open access to institutional research output by self-archiving it, to create global visibility for an institution's scholarly research, and to store and preserve other institutional digital assets, including unpublished or otherwise easily lost ("grey") literature such as thesis, working papers or technical reports. AIKTC library plays a significant & key role of supporting higher education and research by creating IR where AIKTCians can store their academic materials such as published papers, ppts, lecture notes, handouts, learning resources, question papers, etc. on a digital platform.

**4. Selection of Software:**

The library has given due preference to utilize an open source software, both for the operating system as well as the digital repository software. Open source software is advisable; however, if Library does not have the technical expertise in-house, a commercial package may be an obvious option. The Library Team carried out comparative studies of the different software options available in Google Group of ILOSC (Indian Library Open Study Circle) and Librarian's WhatsApp Groups. Finally, the team could gather necessary information about the wide range of OSS for repository development. The key players in the field are E-Prints, DSpace, Fedora. Before final selection, the team also went through the Directory of Open Access Repositories (OpenDOAR) and Registry of Open Access Repositories (ROAR), where more than 80 known softwares are utilized for building the digital repositories, and the most registered repositories use DSpace along.

AIKTC was fortunate enough to have an adequate technical support to opt for an open source product "DSpace." This software offered a decent web-interface and also had the functionality to hold various file formats (including image and multi-media).

Installation of DSpace and other components is done by following step by step commands of DSpace installation documentation available at Duraspace in March 2013, an effort is made here to design and develop comprehensive and effective IR taking AIKTC publications as a case study. AIKTC IR launched in July 2013 within Intranet and in November 2014 opens to the public at: <http://www.aiktcdspace.org>.

**5. Collection accessibility:**

Based on the category of collection and the Copyright, the accessibility was decided. Free access was provided to

Syllabus, Question Papers, Project Reports, Thesis, Faculty Learning Materials, Faculty and Students Publications in Open Access (OA) Journals. CD/DVD contents and Faculty publications in paid journals access is confined only to the AIKTC Faculty and learners.

**6. Gathering of content:**

Collection of the faculty publications from all the three schools commenced in the year 2013. Faculty members who already had their publications in OA Journals were identified as significant contributors, as a starting step. This lead to a collection of a set of around 10-15 papers. The service has now being more widely publicized. The service was launched formally in November 2014. Simultaneously, the collection of syllabus and question papers was started. The entire collection as on date is presented in Table 1.

**Table 1: Collection in AIKTC Library**

Sr. No.	Particulars	No.of Items
1	Question Papers	728
2	Staff/Students Publications	141
3	MU Syllabus	25
4	Master Thesis	14
5	CD Library	171
6	Learning Resources (notes, ppts, etc.)	172
7	Students Project Reports	407
8	Others	474

Faculty members were highly encouraged & motivated to deposit their learning resources (ppts, notes, question banks, Audio Video Lectures etc...). However, in certain cases, it was very successful, but few faculty members were found to be unaware about the principles of OA and the benefits of IRs.

**Conclusions:**

KRRC believes in consistently encouraging the AIKTC authors to submit their valuable work to the Repository or an open access disciplinary repository owing to the fact that an open access largely helps in broadening, disseminating, increasing the use, citation, and impact, and maximizing the return on investment in research. However, as a matter of fact, convincing the academicians about the benefits of an IR seemed to be the project's major challenge. Many academicians were of the opinion that due to the paucity of time; they might not easily cope up with the need in conformity with repository services. Currently, faculty members are not being asked to self-archive; instead, it is done within the Library itself. This exercise was directed towards a ray of hope that the approach would encourage them to participate without any reservations in mind. Few academicians are gravely concerned about quality issues, or uncertainty of assurance from the library end regarding the possibility of publishers not permitting to deposit their work.

### **Future Scope:**

The pragmatic challenge is to spread awareness and motivate all the AIKTC faculty members and research scholars, regarding the repository system in the AIKTC. The AIKTC repository can be made highly useful & resourceful by encouraging all the faculty members and research scholars & authors to deposit their work viz., teaching materials like Google Classroom, youtube videos, blog, photocopying etc. in the repository.

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