



Original Article

International Journal of Educational Research and Technology

P-ISSN 0976-4089; E-ISSN 2277-1557

Int. J. Eud. Res. Technol: Volume 4 [4]December 2013: 77-83

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ISO 9001: 2008 Certified Organization

Website: www.soeagra.com/ijert/ijert.htm

## Intra-Institutional Intellectual Output Management: A Proposal for Building An Institutional Repository System In Kendriya Vidyalaya Libraries

Ramasamy, K<sup>1</sup> and Padma, P<sup>2</sup>

1. Dept. of Lib. & Information Science, Madurai Kamaraj University, Madurai  
& Librarian, Kendriya Vidyalaya, Madurai

2. Dept. of Library and Information Science, Madurai Kamaraj University, Madurai  
Email: ramasamy1975@gmail.com

### ABSTRACT

*The growing need for collecting, digitizing, organizing, preserving and disseminating the intellectual output of one's own institution is felt and realized by one and all in this digital era. A thorough planning is required to set in force the Institutional Repository work for an organisation. This paper attempts to propose a model for building a SIRS – School Institutional Repository System with a special reference to the Kendriya Vidyalayas. This paper describes the need for KVIRS (Kendriya Vidyalaya Institutional Repository System), the contents of the KVIRS, management pattern, input model, software requirements, hardware requirements, digitization process etc. including the technical steps needed to be planned. This paper elaborates the modus operandi of pilot running, executing, improving and final-running of a SIRS of Kendriya Vidyalayas, a model which can be adopted in any school environment.*

**Keywords:** Institutional repository, Kendriya Vidyalaya, Intellectual output, Local resources, Tacit knowledge, Digitization, Folksonomy, Enrich.

Received 29/10/2013 Accepted 03/12/2013

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### INTRODUCTION

Intellectual output of each and every institution is worth preserving. If there is an outlet to utilize this indigenous output among the same fraternity situated across the country, then it is worth thinking. Library co-operation, resource sharing and library network and library consortia – all mean the same – sharing the resources, services and expenditure among the participating units for the mutual and maximum benefit of the users. Self-archiving, Indigenous/local collection building and institutional repository – all mean the same – building a collection of locally generated intellectual output in a logical way to serve the users of the same campus for the maximum utilization. Taping the tacit knowledge of the organization / personnel has become a specific domain institutional repositories. This paper discusses a proposal on building institutional repositories of the brand-1 educational institution of our country viz. Kendriya Vidyalayas. The paper proposes the formation of KV-IRS (Kendriya Vidyalaya – Institutional Repository System - a SIRS) and its planning, implementation and evaluation.

### INSTITUTIONAL REPOSITORIES

An institutional repository is the collective intellectual output of an institution recorded in a form that can be preserved and exploited.

“Institutional Repositories are digital archives that capture, organize, preserve and disseminate the intellectual assets of a single institution or a group of institutions by forming a global system of distributed and interoperable digital libraries.”

#### Contents in IR

Institutional Repositories may contain a wide range of intellectual assets such as preprints, working papers, articles, course material, handouts, theses and dissertations, monographs, institute journals, standards, reports, proceedings and notes and the like. The resources could be in any format – so it be text, audio, picture, video, database, hypertext or multimedia.

#### The potential uses of an IR

The institutional repository of any organization serves its clientele with multi-purposes. They are, inter alia, (Barton and Waters, 2004)

- Scholarly communication
- Management and storage of learning materials, Electronic publications and research collections
- Preservation of digital research work
- Building institutional profile by showcasing its research work
- Providing an institutional leadership role for the library
- Research assessment
- Encouraging open access and
- Housing digitized collections.

### **SIRS (School Institutional Repository System)**

SIRS is the old concept in the new environment .

It is the application of the concepts of institutional repository – conceiving, building and maintaining the indigenous intellectual assets – in a school environment.

It is a system of interconnected operations, methods, methodologies and people in a school working towards the fulfillment of the common objective i.e. collecting, digitizing, organizing, storing, disseminating and preserving the intellectual thought content of the students and the staff and the management team.

### **Kendriya Vidyalayas**

Kendriya Vidyalays are the premier brand-1, pace-setting educational institutions in the Country, administered by the Kendriya Vidyalaya Sangathan (KVS), New Delhi, an autonomous body under the Ministry of Human Resources Management, Govt. of India. There are more than 1200 Kendriya Vidyalayas all over the country in defence, project and civil sectors. They follow same syllabus, same pattern of examination and same method of evaluation in same uniform.

### **Possibilities of developing KVIRS (Kendriya Vidyalaya Institutional Repository System) - A SIRS in KVs**

The amicable situation prevailing in KV lets us think the strong possibility of creating a school institutional repository system by name KVIRS. To mention a few, inter alia.

- The multi-faceted, multifarious learning environment of the KV offers viable possibility to create a SIRS. The activities, programmes, function, competitions, celebrations, events, and variety of courses being held
- The rich teaching-learning resources available
- Innovative ideas / programs being implemented
- The up-to-date, modern infrastructure facilities made available
- The sincere, dedicated teaching faculty ready to co-operate and encourage the novel initiatives
- The creative, participatory students community
- The increasing digital-content creation/management activities of the KV

### **OBJECTIVES OF THE PROPOSED KVIRS**

The need for giving birth to a SIRS in Kendriya Vidyalayas is justified on the grounds of the following reasons.

- ✓ 365 X 24 X 7 Availability of local resources
- ✓ Resource Sharing among KVs
- ✓ Speedy delivery of indigenous intellectual output
- ✓ Supplementing and complementing the resources already available
- ✓ Aware of what kind of projects / programmes / events / celebrations / innovative ideas roam around in various departments
- ✓ Digital preservation of e-campus activities
- ✓ Organisation of e-question bank ( Classes I to XII)
- ✓ A single window image gallery of the School
- ✓ A portal for displaying the creative ideas of the students and the staff
- ✓ To bring out the tacit knowledge

### **Mission Statement**

Building a system for storing and sharing local resources effectively and efficiently.

### **Operational Stages in Building KVIRS**

The conceiving and building of KVIRS needs a thorough inspection and introspection in the Kendriya Vidyalaya concerned. The various steps involved in the task of building KV IRS may be briefed as follows.

#### **1. Planning**

It involves all the pre-launching activities which may include: What to include, who will include, which model of consortium to follow, which personnel to do what work, where to have the server, which software to use, which scheme of classification to use, access pattern, what kind of training is needed etc.

## **2. Pilot-run**

Once the KVIRS is ready, it is to be pilot-tested to check for the problems, areas need to be strengthened, ideas to be incorporated, fix the issues etc. before the final show to go.

## **3. Implementation**

The real operation of the KVIRS in full swing is to take place next.

## **4. Evaluation**

When the KVIRS goes on, periodical evaluation should be taken up by the way of user surveys, utility surveys, feedback analysis and user statistics, so as to enable the authorities concerned to take corrective promotional steps at the earliest.

## **Requirements**

### **1) Agreement of Mutual Consent**

A MOU will be signed by all the major departments giving their consent on sharing their IR on a common platform in the form of an IRS. This will include all the terms and conditions of creating and running the IRS.

### **2) Common Server / Hired Server**

The KVIRS needs either to install a common server at Library concerned or any one of its computer labs with high end speed and memory or hire a powerful server from the reputed web hosting services.

### **3) Open Source Institutional Repositories Software**

There are various types of Digital Library softwares available for the use.e.g.,

1. DSpace (Digital Space)
2. GSDL (Green Stone Digital Library)
3. eprint Archive
4. Fedora: An Open Source Digital Repository Management (Fedora Itore)
5. Ages Digital Libraries Software (My Ages)
6. AGES Software,
7. CDSware: The CERN Document Server Software
8. Ganesha Digital Library version 3.1 (GDL) and
9. Libronix Digital Library System,

A software from the aforesaid list can be selected to be used in common by all the IIMs in assigning metadata for the inputs and in deciding upon various searching utilities like search indexes, search methods, browsing classifiers etc.

### **4) Standard folksonomy by the faculty and students of KV**

Since the fraternity of the school is the target audience of the proposed KVIRS, the students, faculty, visiting staff and library staff of the KV may be asked to create tags for various digital contents. Even the project is on, the members can be encouraged in collaborative-tagging – the scheme allowing many users to create tags for the digital contents placed in a single platform.

### **8) Classification Scheme**

It is proposed to use DDC (Dewey Decimal classification). The KVIRS Technical Experts Committee may design its own classification scheme too.

### **9) Copyright Policy**

A clear cut copyright policy is to be laid down. It should indicate what are the copyright issues in IR, how these issues will be handled in KVIRS, who posses copyright, breach of copyrights etc.

### **10) Metadata Standards**

The way the digital content is going to be described in the collection, what values are to be assigned to the content etc. need to be decided here. There are many metadata standards available in the market. The one being suggested for KVIRS is DC (Dublin Core) Metadata Standard. Even the 15 core (primary) elements will be sufficient to begin with.

## **Other areas of Concentration**

### **1) Mode of Input and Output**

It is recommended to follow centralized input and decentralized output. The data will be fed into the database in a single focal point and will be made available at many decentralized intranet points. The data can be viewed and downloaded by all the users. But the addition, modification and deletion need to be done only at the single focal point by the Project co-ordinator. The withdrawal of an item from the core database needs an authentication by a member of the KVIRS Coordination Council.

The input to the KVIRS will be screened by the committee before its inclusion. A team of three personnel including the librarian and PGT in computer science will be constituted for the purpose.

## 2) Management Pattern

- KVIRS co-ordination council to look after the overall management of the SIRS. This will be the decision-making body.
- There will be a Technical Expertise Crew – to take care of the technical issues and challenges in building and maintaining the consortium.
- There can be a separate Finance Crew consisting of members drawn from all the six IIMs to handle the financial issues.

## KVIRS Co-ordination Council

- The Principal is the President of the council.
- The librarian of the concerned KV will be the chief-coordinator of SIRS.
- The Post graduate teacher in Computer Science will be the joint-coordinator.
- All the departmental heads will be the members of the SIRS ( The head of the department of science ( Physics, Chemistry, Biology, Mathematics and Computer Science), Social Sciences (Accountancy, Commerce, Economics), Humanities (History and Geography), Special Teachers ( Drawing, work experience, Music and Physical Education) , Primary section, and Administrative Staff.
- Apart from the departmental heads, the in-charges of various clubs/ activities also will be the members of the council. ( Scouts, Cubs, NCC, Nature, NAEP, Maths club, Readers Club etc.)
- There will be three student co-ordinators preferably draw class XI.

## 3) Grouping the Contents of KVIRS

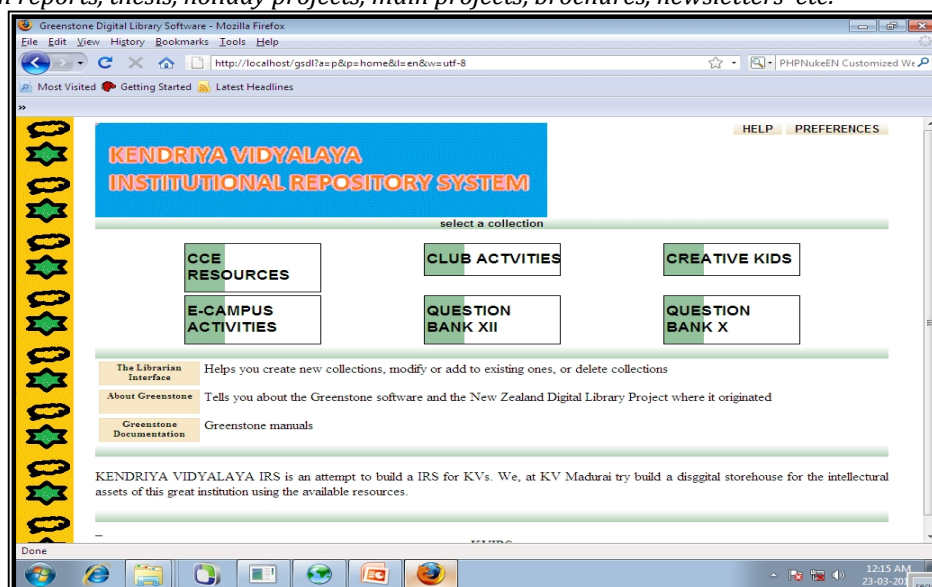
The grouping of the digital contents may be done on any convenient base.

- a) On the basis of major subjects offered in the KV concerned such as English, Hindi, Sanskrit, Maths, Science and Social Science.
- b) On the basis of departments like science, social science, language, art, physical education, work experience, office etc.
- c) On the basis of events – CCA competitions, External competitions, sports events, NAE programmes, club activities, visits of guest faculties, scout camps, NCC activities, in-service courses, career talks and exhibition, staff/student's speeches and interviews etc.
- d) On the basis of contributors – I-V Students' collection, VI –IX Students' Collection, X-XII Students' collection, PGT Collection, TGT Collection, PRT collection, Office Collection etc.

## 4) Collections that can be include in each Group

The hierarchical tree structure can be adopted in presenting the contents to the users community. Under each grouping - done based on any one of the above - the content to be placed under each group will be based on the format / form of digital content.

The format can be text file, pdf file, image file, access file, excel sheet, ppt/pps file, html file, rtf file, mp3/4, video files etc. The form can be Book Reviews, event proceedings, Interviews, Journal articles, Working papers, term reports, thesis, holiday projects, main projects, brochures, newsletters etc.



The individual digital contents may include a) Question papers – both local and board b) Assignments c) Projects of students d) Special Class XII Board exam projects in Physics, Chemistry, Biology, Computer Science and Accountancy e) Special Class X Board exam projects in English, Science and SST f) Articles / drawings / jokes / poems / reviews of students and the staff g) School programmes / activities / events / camps / celebrations / competitions / exhibitions / talks / interviews / training programmes / in-service courses / cultural events h) e-campus activities i) teaching aids prepared in the school by students and staff j) school magazine / diary / brochure k) Slip test question papers l) The novel teaching / learning ideas / concepts propounded by the school community m) PTA Meetings n) Class magazines o)Winners' Words p)Videos of lively classes / quiz competitions / speeches of guest speakers q) Demos of primary students explaining concepts in various subjects / Activity methods / learning by doing activities r) Club activities s) Exhibitions / book shows and t) School in News .

### 5) Access Pattern

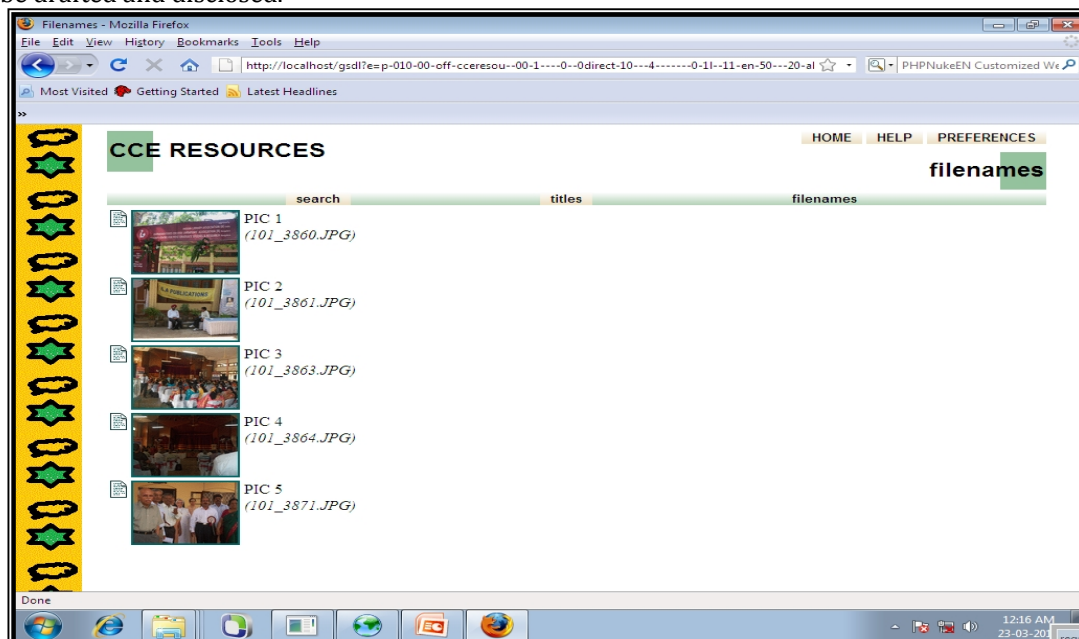
Any member of the school community will be able to use the IR provided he is accessing intranet within the school campus. The students and staff will have the permission only to browse the digital contents. Non-restricted access is suggested. The access points may be the library, computer labs, staff room, office, principal's chamber or any other department with LAN infrastructure.

### What needs to be done at the operational Level?

The KVIRS is based on the principle of co-operation and co-ordination. All for one and One for all is the mission statement of the SIRS. So, every department will have to contribute to its effective functioning. The steps needed to be done in the operational level are as follows:

#### Step 1: Gather

Once the digital contents are collected, the committee has to identify the items to be included in the KVIRS . Only those documents which fulfill the agreed upon conditions need to be added. A clear inclusion policy is to be drafted and disclosed.



#### Step 2: Digitize

The item to be added to the collection may be born digital or born print. If it is born print, then the item concerned is to be digitized using any OCR scanner so as to make the content searchable. This should be a process to be taken up very seriously because the quality of your collection visible to the readers depends mainly on the quality of the digitization.

#### Step 3: Enrich

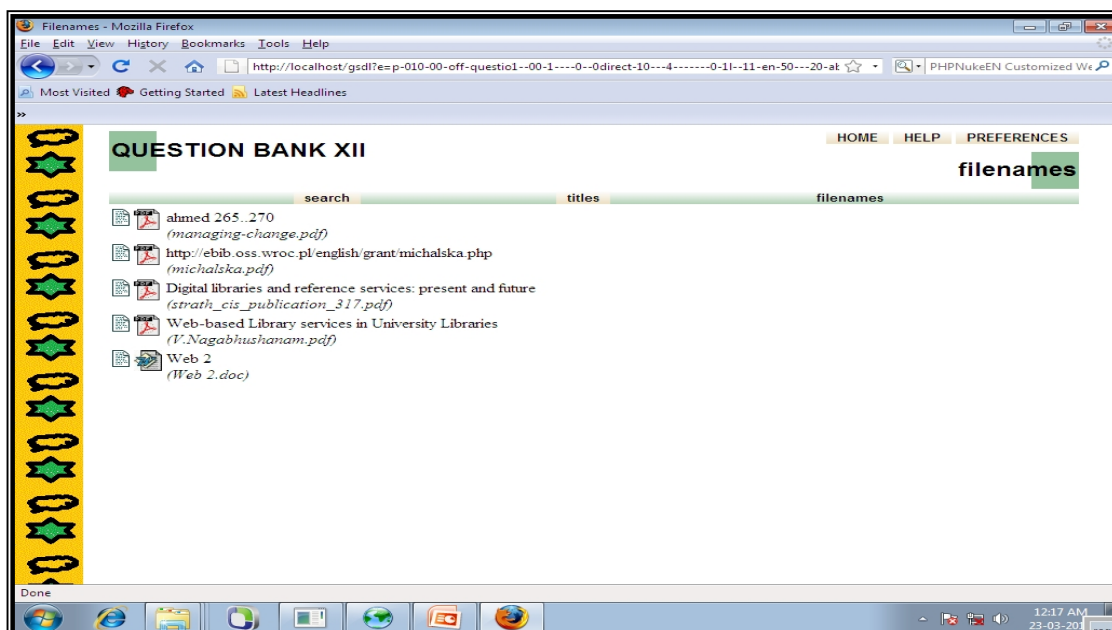
The item is to be assigned with necessary metadata elements using Dublin Core Meta Data Set. The minimum elements are to be assigned and the method of writing the elements can be as per the prescriptions in AACR II.

#### Step 4: Build

It is the process of finally adding the digital content to the common database by the authorized members. This building process also involves deciding upon the search indexes and browsing classifiers that can be used by the school community while searching the digital contents in the KVIRS.

### Step 5: Update

The KVIRS has to update its collections regularly. Whenever any conference/ seminar/ workshop is over, whenever a term is getting finished, whenever an article of the student / faculty is getting published, the same is to be made available into the common database at the earliest.



### Step 6: Weed out

A well laid weeding out (de-selection) policy will guide the libraries to remove the digital contents which have become irrelevant, out-dated and meaningless in the course of time in the lights of time.

#### **National KVS Institutional Repository System : A Future Vision for KVIRS**

In future, the KVIRS can be made available on-line with the help of private web hosting services.

A Cluster level / regional level / national level KVIRS can be formed in such a way that the intellectual assets of one KV can be shared with the other KVs.

A common, national level database can be created taking inputs from all the KVIRSs and a single window approach to access all the KVs can be tried.

Even, a consortium can be formed for such a national level system in the KVS Headquarters at New Delhi. Then, the INIS system of Input and Output can be adopted in future.

### CONCLUSION

“Coming together is a beginning. Working together is progress. Keeping together is success”

- Hendry Ford

The success of any IRS depends on the commitment of the individual members. If every participating member works to his best, the total out put of such a project will be productive and outbreaking. This KVIRS is the blend of two hot topics of the day i.e. School Libraries and Institutional Repositories. This blend will sure light many more such blends to flourish in library arena. This proposed SIRS will definitely play a commendable role in improving the academic output of KVs and increasing their creative output , proving once again that KVs stand next to none in School Education arena. Let’s remember that sustenance is the key issue which will decide the potential and benefits of such an initiative. The role of school librarians of Kendriya Vidyalayas would become more dynamic and significant in this web 2.0 era.

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**Citation of This Article**

Ramasamy, K and Padma, P. Intra-Institutional Intellectual Output Management: A Proposal for Building An Institutional Repository System In Kendriya Vidyalaya Libraries. Int. J. Eud. Res. Technol: Volume 4 [4] December 2013: 77- 83