



# Project Management in Academic Libraries: A Case Study of Retrospective Conversion and Serials Automation Projects in the University of Botswana

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## ABSTRACT

*Academic libraries have increasingly been involved in managing their resources of equipment, staff and information by making tough decisions in the climate of 'less for more'. ICTs have provided the means to meeting most of these challenges. Librarians have had to recognize that functions such as moving library collections, consortia management, software migration, retrospective conversion of catalogs, and serials automation require management expertise which have often been provided either through contracts or by choosing the 'do-it-yourself' route. In a broad context, a project can be defined as a unit of work that has clearly defined objectives, scope, expectations of results, and deliverables. To produce the deliverables, a project typically involves a project plan, project tasks, responsibilities necessary to achieve the tasks, resources to complete the tasks and time frames to complete them.*

*Describes two projects: the retrospective conversion of the card catalogue, and the serials automation projects at the FET Library which became necessary when the former Botswana Polytechnic Library became a branch of the University of Botswana Library in 1996. Both projects were started as part of the normal duties in the library of six junior staff and two professionals and involved staff training, scheduling of duties, writing of in-house manuals, all based on project management principles. The retrospective conversion project covered an estimated 8,000 records, while the serials covered the 250 titles on current subscription. Identifies constraints such as staffing, training and retraining; equipment malfunction and access to online resources; and conflict of work priorities. The lessons learned from running the two projects are shared with highlights on project management concepts as a means of managing library resources for the optimum benefit of the institution, staff and patrons.*

## 1. INTRODUCTION AND BACKGROUND

With the reality of limited and/or diminishing fiscal and human resources, many library administrators have come to recognize that they must rethink agendas, leverage resources, and create new opportunities in order to accomplish their goals and objectives successfully. The resource squeeze has forced libraries to take remedial measures, the most common being library cooperatives. In fact library cooperation in its many facets has become so topical that the entire double issue of *Library Management Volume 35 Numbers 4/5, 2002*, was devoted to the theme: Collaboration, co-operation and consortia. Academic librarians are adopting newer and more 'non-library' strategies for their operations, with the sole aim of remaining relevant in the changing environment of higher and further education.

Information and Communications Technologies (ICTs), have provided the means to meeting most of these challenges. Librarians have had to recognize that many library functions require management ex-

pertise. One such strategy is the application of project management principles to the execution of 'short-term' engagements or what may be called 'projects'. This article describes two projects that were executed at the Faculty of Engineering branch library of the University of Botswana using project management concepts. Details of the lessons learned are also provided.

In January 1996, the Polytechnic of Botswana was incorporated into the University of Botswana as the new Faculty of Engineering and Technology (FET). It became the fifth faculty besides those of Business, Education, Humanities, and Science. The former polytechnic library became FET branch library of the Department of Library Services. A committee was set up by the Department to arrange for a smooth take over and the provision of the same range and level of services as pertains in the main library. Information resources, especially books and journals, were to be acquired for the degree level courses offered by the new faculty.

One of the major tasks after the takeover concerned the many multiple copies of books acquired by the Polytechnic which was at variance with the Department's policy of acquiring limited copies of particular titles. A second most crucial task was the need to put all the records of the new branch library in the main library's computer catalogue, *Motswedi*, now *Medupe*. It was decided at the take over to stop updating the card catalogue but to add all new materials in *Medupe*. Serials records also had to be reflected in the online catalogue. The Faculty, and for that matter the library, which is about 2 km away from the main university campus was connected to the Campus-wide Network in February 1998.

## 2. RELATED LITERATURE

### 2.1 The Project Management Approach

More and more organizations are adopting project-working approaches for an increasingly diverse range of activities. The increasing pressure on resources has resulted in organizations needing to use their resources most effectively, with clear links between outputs and inputs. Project management is about getting the job done on time, within budget, and according to specifications, says Bushing (2001).

The characteristics of projects, which differentiate them from other activities or undertakings usually centre around four themes. Projects are:

- clearly goal-oriented, usually with very specific objectives
- involve coordinating a number of interrelated activities
- are of finite duration
- are all in some way unique.

Most of us are familiar with the traditional concept of projects - such as construction projects, ranging from small ones, e.g. building a conservatory, to massive undertakings like the building of the Channel Tunnel. We have seen the advance of projects into areas such as software development, development of new products, and the implementation of new systems and organizations. The application of project management principles to academic libraries have occurred in such mundane functions as consortia formation, library software migration, automation of library circulation, cataloguing, serials functions, and in moving library collections. Bushing (2001) includes as possible projects: building a new library, revamping materials processing, creating a shared bibliographic database, reorganizing the library structure, and weeding the collection.

Every project has a life cycle, which is commonly described in four phases: project conception/definition, planning and resourcing, implementation, and termination. Project conception (what is to be done) includes objectives, outputs and success criteria. Planning and resourcing (how it is done) is concerned with preparation of project plan including details of tasks and activities, time scales, resources (cost, staffing, equipment), responsibility, team processes, and personal skills. Implementation (carrying out the work) covers monitoring progress against the plan in terms of time and cost, and taking steps to keep the project on course. It includes handling performance problems, training and retraining, motivation, and reward. Termination or rundown (project draws to a close) ensures that objectives have been achieved, outputs delivered, and the success criteria met.

One distinct attribute of a project which serves to differentiate it from normal work is the project team. Frame (cited in Bee & Bee, 1997) describes a project team as 'a collection of individuals who work together to attain a goal'. Geddes, Hastings and Briner (cited in Bee & Bee, 1997) describe project team working as 'organisational team working' and distinguish it from more traditional team working models by means of the following:

- team members are brought together for a specific project
- team members seldom work full time on the project
- non-hierarchical team members may be under the control of the project leader
- cross functional members frequently consist of members drawn from across different parts of the organization.

## 2.2 Retrospective conversion

Retrospective conversion (or recon) is the conversion of a library's existing bibliographic records from manual to machine-readable format according to specified policies and standards (Beaumont & Cox, 1989). Recon is not cataloguing or recataloguing although sometimes the latter may be necessary or useful to make changes to older headings, class numbers, and so on.

Libraries have three options when they convert from cards to machine-readable form. They can convert in-house, outsource the conversion to a vendor, or use a combination of the two. Whether performed in-house or outsourced, conversion involves the use of a bibliographic source database against which the library matches its manual records. Each option has advantages and disadvantages related to cost, staffing, time, and record integrity. Advantages of in-house recon cover quality control, which remains in the library; work done as staff, time, and funds allow; using existing staff; staff familiarity with library policies and standards and their ability to solve problems as they arise.

Disadvantages include high internal staff costs; additional staff, equipment, and space requirements; expense and time spent in hiring, training, and managing of project staff; interference of the recon project with staff's regular workload; effect of the vagaries of the external resource database on the project results. In-house conversion often leads to staff frustration as they see other duties as 'intrusion' into the time set aside for the project. In addition staff turnover, local hiring freezes, and changes in administrative priorities could modify costs and allow the project to drag on, or worse, to prevent it from being completed.

One very important task of the project manager is the preparation of a policies and procedures manual, which will serve as a record of the decisions that have been made and as a user manual the day-to-day

operations of the project. Details of the procedure manual include: reasons for, and benefits of catalog conversion; data entry procedures; proofreading and quality control; troubleshooting and problem solving; handling exceptions; scheduling and staffing on each shift; communications with appropriate units in the library as well as library management. The manual has to include quality control measures such as level of editing and authority control, and post conversion cleanup which involves checking incorrect call numbers and conflicts between authority records and bibliographic records.

## 2.3 Serials Management and Control

According to AACR2 (cited in Pearce, 1992) a serial is a publication issued in successive parts, usually having numerical designation and intended to be continued indefinitely. Pearce, for library purposes, defines a serial as any item which lends itself to serial treatment in a library. Serials subscription is a long term commitment in terms of purchasing cost, staff time, binding, preservation and storage of back issues. New technologies further complicate decisions relating to acquisition, processing, and accessing serial material, resulting in fundamental changes in the selection and management of serials collections. There are new titles emerging, and their subscription costs, particularly in scientific and technical fields, are escalating rapidly. (Law, Weedon, & Sheen, 2000; Lynch, 1991; Pearce, 1992; Tinerella, 1999). The costs of checking in, binding, and housing (physical storage space) these journals are also increasing.

Creating an effective and efficient system needs resources, imagination on the part of the librarian and an understanding of the users (Pearce, 1992). Issues in serials collection management pertain to selection, acquisition, control and cataloguing, each with its attendant problems. Unlike monographs where selection may be guided by reviews there is likely to be no reviews for serials. Selection is commonly based on limited evidence such as user recommendation or on seeing a specimen issue.

Libraries have a pressing need to provide access to their journal collection through their catalogues. And the many routines associated with serials control and management have been rationalized by the use of the computer. However automating these functions do not provide a panacea to the problems which derive from the very nature of this kind of publication.

## 3. PROJECT 1: RETROSPECTIVE CONVERSION

**Project conception** Our reasons for the recon project were to provide an online catalogue, and improve circulation services and access to the library's collections. As a branch library one benefit of the project is to make our records accessible on the main library catalog. In addition the recon project would allow our library to share its records with SABINET (Southern Africa Bibliographic Network) and OCLC, and improve on our inter library loan functions.

We adopted an in-house conversion with the 'book in hand' rather than use the catalog cards. This helped to withdraw materials that we did not need, pick those requiring binding, and those we needed to transfer to the main library. The 'book in hand' method also served as an inventory of the stock to ensure the items we planned to convert were still on the shelves and still important to the library. Consequently, we did a comprehensive weeding of the stock in 1997, which resulted in the withdrawal of about 7000 volumes some between 4 and 6 multiple copies. Close to 2000 volumes were also withdrawn after this major weeding exercise.

In some cases there was need for some recataloguing and reclassification in order to conform to standards adopted by the main library. We did not need to set our own standards as we had to follow specific cataloguing practices of the main library that covered level of fullness of the cataloguing record, use of AACR2, MARC format, LCSH, and Dewey. A further advantage of the in-house conversion was that we had more control over the project and the content of the records, were aware of problem areas and could fix them immediately or set them aside for detailed solution. We also had an accurate day-by-day count of the progress of project.

**Project planning and resourcing** Well before connection to the campus network in 1998, implications for library procedures had been worked out. These included bar-coding of the estimated 8,000 books, the streamlining of book selection procedures, staffing, and improved information services to customers. Equipment installation and staff training for recon were completed in December 1998. Unlike the main library, which set up a separate team to handle this exercise, the FET project team was made of the same staff that had to work part-time on the project. Apart from the two senior staff, all six junior staff are grouped in pairs on weekly morning, afternoon and weekends shifts.

**Project implementation** The project started in January 1999 as part of the normal staff duties. In August 1999 the project leader was seconded to the Automation Unit of the library, leaving the other senior staff to take over the project. This was the first blow which effectively slowed down the progress on the project. The estimated 8,000 records were scheduled for completion in December 2000 with help from the recon team of the main library. In brief the process went through four steps: checking if the record exists in *Medupe*; exporting from SABINET/OCLC; importing records into *Medupe*; and editing the appropriate fields. The detailed procedure is provided in the Appendix.

The recon project was suspended during October-December 1999 because the library was preparing to migrate to a new library management system, the Innopacă. FET library migrated to the Circulation module of Innopacă in February 2000 and the recon project resumed in March 2000. During the stoppage period only brief records of books borrowed were captured in the system. When the project resumed, full bibliographic details of 'books on the fly' had to be entered in the system. A staff member from the Technical services unit of the main library was seconded to the project between March and mid July 2000. Statistics for March to July 2000 was 1034, cumulating to 3298 from the start of the project in January 1999. The detailed statistics are provided in the Appendix.

Another handicap of the project came in August 2000 when four of the six junior staff members were transferred to the main library. This almost brought the project to a halt since the two who were left and the only senior staff could not cope with the work. In September the four replacement staff were trained and the project resumed in October 2000 after the re-installation of SABINET/OCLC and the Innopacă cataloguing module. Again in July 2001 we could not access SABINET/OCLC due technical reasons. In September 2001 two FET were retrained on SABINET, but due to network problems the training was not completed. The effect was the suspension of the importation of records from SABINET/OCLC. Progress was reduced and limited only to books whose records could be found in *Medupe*. A few records had to be created entirely from the scratch. The combined effect of these constraints was the slow down of output and the dragging the project over 4 years.

Recon was suspended again in October 2001 until re-training of FET staff on SABINET was done in February 2002. The project resumed in June and to date (December 2002), 1750 records have been converted leaving 1012. Two staff members are working on it and the new deadline for completion is February 2003.

#### 4. PROJECT 2: SERIALS AUTOMATION<sup>1</sup>

**Project conception** We inherited a manual serials control system on the incorporation of the Polytechnic library into the University library system. Under this system, records of receipts were kept by the Visible Strip Index, which was arranged alphabetically by title. The physical arrangement of current and bound journals was also alphabetical by title. This was changed to alphabetical by title but arranged by each of the four teaching departments. Journals whose subject was common to all the departments were put into a general category.

The serials computerization project is very closely related to, and was concurrently executed with, the book recon project. In fact the book project preceded the serials project and the latter gained much from the skills we acquired on the earlier project. In January 1999, the library subscribed to 269 journals. These titles were rationalized with input from the four departments of the Faculty. We dropped 61 titles from the list and took on 29 new ones, reducing the list to 237. The list has grown to the current 250 journal titles. The objective of the project

was to change over from the manual records and receipts system to an automated one. As output, all serials on subscription were to be put in *Medupe* where they are accessible to all users of the university libraries. What we needed to do was to classify all the titles as well as provide subject indexing terms for them.

**Project planning and resourcing** The skills required were to be found among staff of the branch library since library management was not in a position to provide extra staff for the exercise. First and foremost staff needed to understand that the project could be done without help (in the form of extra hands) from the main library. This had to be done with the justification that skills learned and applied would lead to personal development and growth.

Once this hurdle was overcome, detailed tasks and activities, time scales, resources (staff time and equipment), responsibility, team processes, and personal skills required were discussed with all staff. Management was informed about staff preparedness and in July 2001, one senior and one junior staff were trained as joint project leaders on Millennium/Milser, the serials module. The remaining staff were trained by the two and further training was offered by the Automation Unit of the library and also by staff of the Technical Services Department. In addition, the skills of importing records from SABINET/OCLC, which were learned from the book recon project, were put to good use.

**Project Implementation** The project was divided into four steps as:

- check for record in *Medupe* using either the title or ISSN as the access point
- edit existing record by adding missing fields and/or items record(s) including frequency, abstracting services, subject terms, class number, call number, ISSN, and other local fields
- create new bibliographic records for journal titles that do not appear in the cataloguing module by importing from SABINET/OCLC or using template. A bibliographic record had to be created first in the Cataloguing module, then an item record was created in Milser before journal issues could be received.

Check-in for titles that had been entered in the cataloguing module by the main library started on July 31 2000. Records could not be imported because of the incorrect installation of SABINET/OCLC, but this was corrected and re-training of staff was done in September 2000. All titles had to be checked in the Innopacă Cataloguing Module. Those not found were searched and imported from SABINET/OCLC. New records had to be created for those without marching records after checking from both bibliographic utilities. Professional staff were responsible for the final editing, including adding subject terms, class and shelf reference numbers. By December 2000, we had imported or created 90 out of the 250 records in *Medupe*.

There was a backlog of new journals in January 2001 because a virus infected the only system that has the Millennium serial program and journals could not be checked in or received online. The virus was cleaned and operating system loaded on January 11th 2001. SABINET/OCLC, Innopacă Cataloguing module, and *Milser* were loaded on 19th February. A backlog of about 165 issues that came through in December and January was cleared by mid February. Journals are supplied by a local vendor who brings them in batches as and when they are available. Issues are then received as they come in especially during the less busy hours of the day. In most cases the receiving is done in between staff shifts as at that time we have two extra hands before the end of normal office work at 16:30hours.

**Project rundown/termination** Records for all the 250 journal titles on subscription had been entered in Innopacă serials control module by July 2001. The physical arrangement of the current journals had to be changed from alphabetical by title to class number. The shelf labels were changed to the individual journal titles and their shelf-reference numbers.

As noted earlier, bound journals were arranged by title at the takeover. After classifying them we had to spine label and rearrange by the class number. This phase of the project took about 3 months and required additional shelving for the estimated 12,000 volumes. It involved typing and editing the class numbers, going to print them on a special

machine at the main library, and the actual fixing of the spine labels. This phase was made more difficult by the lack of resources as there was no typist and it was not always easy to get the Faculty pool vehicle for such errands. This last phase was completed in December 2001

**5. CHALLENGES AND LEARNING OPPORTUNITIES**

Constraints recorded by the two projects confirm the experiences of other libraries as recorded in the literature. Especially regarding the recon project, the disadvantages of an in-house conversion were glaring. There were staff turnover, equipment failure, expense of time spent on training and retraining, interference of the project by staff regular work, and change in administrative priorities.

The project management approach was adopted as a means of guiding our activities towards the objective of putting our books and serials records online. That clear objective directed and kept our focus for the 15 months that the serials project had to run. Staffing level was low for most part of the period, especially between January and April 2000 till the appointment in May of one additional senior staff. Within the project period one professional staff went on leave and several of the junior staff had to be transferred to the main library. These transfers often led to work stoppage and/or slow down as the new staff had to be trained in all the steps of the project. There were times when for technical reasons, such as equipment breakdown and virus infection, work had to be halted while we waited for assistance. Furthermore we have only one PC with the Millennium access and therefore two people could not work simultaneously on the project.

The two projects run concurrently in addition to the normal staff duties of serials maintenance, bindery preparations, table of contents copying, and circulation duties. Over the years staff have had shorter vacation periods because the Faculty has a relatively longer semester. It was therefore important to keep up morale and to recognize their achievements. Learning opportunities from the projects were transferable skills, confidence build-up, and job satisfaction which have drawn the staff together even long after the serials project was over. Through this exercise we have learned how to coordinate multiple projects, and most importantly improve upon our interpersonal skills and competencies.

**FOOTNOTE**

<sup>1</sup> This section is an abridged version of a paper presented by AA Lekau & K Darko-Ampem at the Annual Innopacä User Group Meeting, IUG:SA 2001, 6 – 7 November 2001, at Technikon South Africa, Pretoria.

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**APPENDIX**

**1. Statistics on retrospective conversion**

Period	Jan-Sept 1999	Mar-July 2000	Aug-Dec 2000	Jan-Sept 2001	June-Dec 2002	Total
No. of records	2264	1034	655	1285	1750	6988
Outstanding number of records (8000-6988)						1012

**2. Retrospective conversion manual**  
**Steps to follow: processing of 'books on the fly'**

**First step: Checking records in cataloguing module**

- Click cataloguing module
- Login: \*\*\*
- Password: \*\*\*
- Check by title or barcode (prefer title)
- If record shows full record, edit (no need to export)
- If record shows short record, put aside for exporting from SABINET/OCLC
- For short records, note the item number i.e. b1202479X with pencil on the title page of the book.
- Then close the record
- Minimize cataloguing module.

**Second step: Importing from SABINET/OCLC**

Important: Always import titles with short records, confirm this by following the first step.

- Click OCLC
- Go to: search
- Logon, etc
  - Initial: 100-193-811
  - Password: \*\*\*\*\*
- Search
- Query- type ISBN
- Click find, **not** scan
- Go down, cursor last, enter
- Type this exporting message of which you are exporting a record from OCLC
- CTRL D#949\*OV=.b12119301:bn=fet;
- Action
- Export
- After exporting minimize

**\*\*NB \*\*Do not save after importing**

**Third Step: Editing**

- Go to Cataloguing module
- Search by Barcode. You will find the record complete
- Start editing the record

Eg. Class no (082)  
Shelf reference(092)  
Location (940)  
Cataloguer(946)

- Then Click the item
  - Catretro (a box shaped square will reflect showing location, status, barcode, etc)
- Under this you delete:
  - Call no., Barcode, Volume
- Re-enter
  - Barcode
  - Call no
  - Check/confirm Status
  - Location
  - Loan type
- Save

In case a record is in use by the system, go to MEDUPE to release it. First note the record number: .b.....

- Login: \*\*\*
- Password: \*\*\*
- Then
  - A: additional system
  - F: Free record used by system
  - \*\*\*
  - \*\*\* then ENTER

**Step 4: Ground rules**

When through with editing, stick a note of paper "to be checked"

- \*Always stick other notes where necessary like "Exported from SABINET/OCLC"
- "No matching records"
- "To be exported from SABINET/OCLC"
- This helps other staff members taking over duty.

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