

Stock Verification using Barcode Technology and KOHA LMS: Practical Experience at St. Xavier's College Central Library, Kolkata

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Abstract:

Library collection needs to be updated to serve the user community. For this libraries are purchasing books or non-book materials and sometimes they may accept book donations from the external or internal environment. But it must be checked whether this collection is intact or diminished in any way such as book theft or any other natural reasons like damage, etc. Here lies the need for stock verification. Stock verification is an annual phenomenon at St Xavier's College Central Library. This procedure at St. Xavier's College Central Library involves data capturing using barcode scanner, matching the scanned data with the library database and generating report using koha LMS which is explained here. The library conducts stock verification of library collection every year during summer recess in the months of May – June. Traditional methods of stock verification and their limitations are also explained in the paper.

Keywords: *Barcode Technology, Stock Verification, Koha LMS*

1.0 Introduction:

Previously most of the libraries were considered as a storehouse of books. The books in the libraries were kept under lock and key and were not issued for loan; these were used only for reference at the reading section in the libraries. Consequently the chances of book loss were very rare in those cases. As St. Xavier's College Central Library provides open access service to the user community at both the lending as well as reference section. Naturally the loss of books is expected to happen. To know the number of books lost and to take adequate precautionary measures, it is necessary to do periodical stock verification. In this paper the term 'stock verification' is interchangeably used for 'stock taking', 'physical verification or checking', 'stock inspection', and 'inventory taking' etc. Before stock verification, the borrowers are required to return their borrowed books and the library is kept temporarily closed to the user community. Collection is verified with the help of library management software Koha and barcode technology. Koha has been used in this library since 2014 for library automation, however, LibSys was previously used as library automation software. The library starts the stock verification process starts with the capturing of data with the help of barcode scanner. Then the scanned data are tallied with the library database and a list of missing books is prepared and placed to library committee for taking decision on the matter, e.g. writing off lost materials or going for any further replacement. Stock verification of books is a regular activity, which needs to be done every year.

2.0 Objective and Scope of the Study:

The present paper describes traditional methods of stock verification and their limitations with emphasis on the stock verification process followed at St Xavier's College Central Library using

bar code technology with library management software Koha. Total library collection at this library comprises of books (lending and reference), CD-ROM and reports. For the purpose of stock verification all the categories of library collection except CD-ROM are taken into consideration. As the library's total collection is 65,000 *plus* and the available time is short, we consider only section wise (i.e. call number wise) stock verification.

2.1 Stock verification and its advantages:

Stock verification helps in

1. Identification of lost books, long overdue books in the library.
2. Identification of books which need binding or replacement.
3. Identification of titles which are slow moving or old edition or old syllabus related.
4. Thorough dusting and cleaning of shelves and books.
5. Increasing more acquaintance among library staff with library collection.
6. Rectification of records such as catalogue, shelf list regarding lost books, withdrawn books, damaged books etc.
7. Identification of titles which need to be rectification in their barcodes or spine labels.

3.0 Traditional methods of stock verification and their limitation:

Libraries perform the periodic stock verification by applying any one of the following traditional methods:

1. **Using manual accession register:** In this method library staff calls out the accession number of the books from the shelves and another staff ticks the same accession numbers in the accession register by using pencil. Then a list of titles is prepared which are not ticked in the register. In this method there are chances of accidentally putting tick mark on wrong accession number. This method is time consuming and laborious.
2. **Using shelf – register or shelf list:** Stock verification using shelf list gives more reliable figure of missing books. Since more than one team can be involved simultaneously under this method, it is comparatively less time consuming and more accurate.
3. **Using sample stock verification method:** In this method few class numbers which are most circulated are chosen randomly on the basis of sampling.
4. **Using numerical counting of books on the shelves:** In this method only counting is done for the books lying on the shelves along with the issued books. Then the resultant figure is compared with the manual accession register. The difference denotes the number of missing books. However, verification under this method fails to identify the actual books titles which are missing from the collection. It cannot help in replacing the exact titles which are missing.

The manual methods of stock verification are cumbersome, time consuming and more library staff needs to be involved, whereas stock verification using barcode technology where data capturing process is involved becomes more accurate and time saving.

4.0 Stock verification at St. Xavier's College Central Library:

4.1 Methodology:

Earlier, manual stock taking was done where each and every book's details had to be manually entered into accession registers. Now with the introduction of barcode technology, it is very easy for the library staff to just place a scanner on the barcode, which denotes accession no of the concerned item, the scanner automatically passes the scanned information to the library database. During stock verification in the central library following processes were taken into consideration:

1. Shelf rectification must be done properly before stock verification.
2. Putting verification date at the inside back cover to ensure that the document was physically verified.
3. Checked-in items during stock verification period were also verified before shelving.
4. Barcode scanner is used for capturing bar-coded accession number of the document
5. After data capturing stock verification report is prepared using report generation tool of Koha LMS

4.2 Precondition for Stock Verification:

1. Circulation work is totally stopped and issue records are frozen during this period.
2. The verification work is not done in broken stages.
3. Entry of staff other than verification team to the stack area is totally restricted.
4. Shelf rectification should be completed before stock verification.
5. Ensuring that all issued books are returned before stock verification and library is temporarily closed to the user community.

4.3 Inventory/ Stocktaking using Koha software at St. Xavier's College Central Library:

Koha's Inventory Tool can be used in any one of the following two methods:

1. By printing out a shelf list or accession register sorted as per call number in which verification team members can mark.

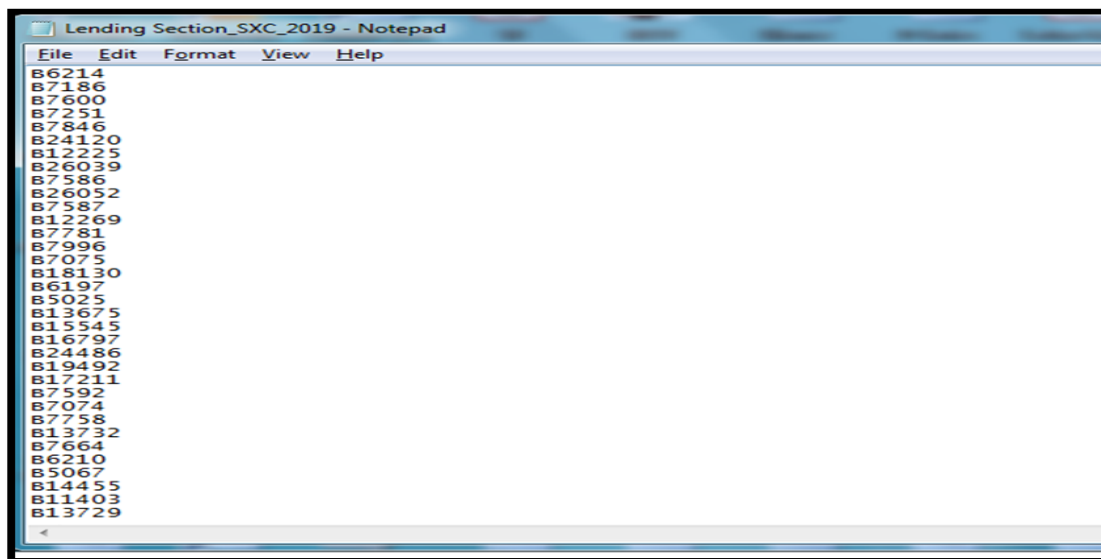



Fig:1

2. By uploading the list of barcoded accession numbers of the scanned items.
- In the stock verification at this library the second method is followed. Notepad file is used for taking barcoded accession no gathered by scanner [Fig:1].

Inventory

Use a barcode file

Barcode file: Lending Sec...C_2019.txt

Set inventory date to: 

Select items you want to check

Library: ☐ Home library ☒ Current library

Library: ▼

Shelving location (items.location) is: ▼

Item callnumber between: (items.itemcallnumber)

...and:

Fig:2

Item statuses

items.notforloan

Damage ☐

For Binding ☐

Missing ☐

Not For Loan ☐

Staff Collection ☐

items.itemlost

Long Overdue (Lost) ☐

Lost ☐

Missing ☐


Replace ☐

items.withdrawn

Withdrawn ☐

items.damaged

Damaged ☐

Inventory date: 

Skip items on loan: ☒

Export to CSV file: ☐

Compare barcodes list to results: ☒

Do not check in items scanned during inventory: ☐

Fig:3

Choose concerned library, shelving location, call number range, item status and when the item was last seen to generate a shelf list.[Fig:2] Alternatively you can export the list to CSV file.

Simply check the box next to CSV file. Choose the text file and the date you want to mark all items as seen and then click 'submit' [Fig:3].

4.4 Data Analysis and Report Generation using Koha software:

Before making stock verification report duplicate accession numbers, if any, should be removed. If any book already declared missing, lost or damaged since previous stock taking and the status should be updated accordingly in the system before preparing this year's report and if the same accession number is also found in the current year's stock verification list, then it is important to check those accession numbers before giving the final stock verification report of the current year to the authority concerned.

After generating stock verification report from Koha software, following decision may be taken for further action:

1. Withdrawn of damaged and page torn books
2. Giving remarks in the shelf list records as lost or damaged
3. Improving safety and security arrangement of the library which is considered as a qualitative measure for sustainability
4. Getting approval of the stock verification report by the library committee.
6. Placing the report to the library book purchase committee for replacement of the lost and/or damaged books.

5.0 Limitation of Barcode Technology:

1. The verifier has to carry the books from the shelves for scanning the barcodes as the scanner and computer has wired connection, however wireless scanner and Tab can be used for scanning barcodes to solve this problem.
2. It takes more time to read barcode from books since it scans only one copy at a time.
3. If the barcodes are already damaged or worn out, barcoded information can neither be read automatically nor verified during stock verification. The verifier should be alert for damaged and duplicate barcodes. After scanning all the barcodes, the duplicate barcodes, if any, should be removed.

6.0 Conclusion:

Stock verification using barcode technology with library automation software is easy to use, reduce the labors, cost and eliminates the typing errors. Since there is no manual procedure involved, the verification report generated by the system is accurate and reliable. During stock verification proper care should be taken for sorting out and keeping aside the damaged books so that after completion of the verification process these books can be placed to the authority concerned for further action. It must be remembered that the stock verification process is a point of time phenomenon and as such it will only portray the Balance Sheet view of the current assets of the organization.

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