

# Library Automation in School Libraries in Kolkata: A Need-Based Analysis of the Present Scenario

## Abstract

School library is a part of an academic institution and closely relate to parent organisation. It is a place for social interaction where students are involved to engage in innovative, curious and problem solving activities. It helps to promote reading habits of the users. It is an essential and integral part of school education system. Library automation is very much important to provide the better services for maximum satisfaction of their users and it helps to achieve the self-movement process. Only 115 (one hundred fifteen) schools in Kolkata have been selected for this study. Out of which, 35 (thirty five) schools are affiliated to CBSE board and 63 (sixty three) schools run by ICSE/ISC board and remaining 17 (seventeen) schools fully controlled and affiliated to Department of Education, Govt. of West Bengal, have been selected for discussion. This study highlights the present scenario of library automation system in school education at Kolkata, West Bengal.

**Keywords:** Library Automation, Objectives, School Library; Present Position, West Bengal; Kolkata

## Introduction

We are in the era of Information Technology. Information is growing very fast. Digital Technology and its application are more essential for changing our life. With the help of technological advancement, a revolutionary change is revealed in our modern society. Information Communication Technology (ICT) means "the integration of computing networking and information processing technologies and their application". It is a process that shows the different technologies i.e. online and offline mode, electronic system, e-communication system, digitisation process, virtual system, cloud computing, internet and networking system.

Due to advancement of computer technology, a high take change has been achieved in functioning of the school libraries and its services. It is an important factor for school library automation that includes computerised acquisition, storing, processing and dissemination of information. When school library accepts the automation system for its services, it can easily provide right information to right user at right time at right place.

Recently, Govt. of India and other statutory bodies are in favour of introducing automation system in school libraries and they also provide links to subject directories, E-books, E-journals, E-databases etc. By the way, school libraries in West Bengal are trying to move into automation system through computer for users' satisfaction. Consequently, school libraries can build their E-collection hugely and make them available to its users in electronic format. Thus, implementation of library automation in school library is the need of the day.

## Library Automation

The word "Automaton" has been derived from Greek word "automose" to mean self-movement position. In 1936, firstly it was introduced by D. S. Harder with General Motor Company in the U. S. A. to mean automatic handling of parts between progressive production processes. Automation is a technology of automatic process which includes the handling method, process and design of particular materials and those are integrated with this system. It also helps to achieve the self-movement process.

## Conceptual Framework

The Encyclopaedia of Library and Information Science says "Automation is the technology concerned with a design and development of



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the process and system that minimise the necessity of human intervention in their operation.”

According to Waster's Dictionary, automation is “the technique of making an apparatus, a process or a system operates automatically”.

According to J. H. Sharma, “automation helps in solving the problems of staff, storage, reduces mistakes, quickly of tasks is better and economy in time is archived”.

Swihart Stanley S and Hefley Bery has been defined the term library automation as “the processing of certain routine clerical function in the library with the assistance of computer or other mechanised or semi automatic equipment”.

Therefore, “Library automation refers to the phenomenon of mechanisation of traditional library activities, such as, acquisition, cataloguing, circulation, serial control etc.” It is the process where we try to perform all libraries' housekeeping operations with the help of library automation software in an integrated environment and with least human interference

### Reasons for Library Automation

The main objective of a library is to provide better services for the maximum satisfaction of their users. Thus, manual housekeeping operations have been shifted to library automation process. The following reasons are associated with the library automation-

1. Increase in library collections i.e. Books; Non-Books- journals, magazines, pamphlets etc.; E-materials- CDs, DVDs, Pen drives etc.
2. Advancement of ICT technology that effects information explosion.
3. Increase multi dimensional demand of the users.
4. Increase operational efficiency of the library.
5. Provide new services which are otherwise not possible.
6. Reduce the time for manual process.
7. Inability to explore unlimited literature.
8. Advancement of new technology.
9. Improving the quality of library services.
10. Improving the easy access to information in the world.
11. Enable easy communication with other libraries and professionals.
12. Share the library resources through library network among the other libraries.

### Library Automation Software

Library automation software is made to handle housekeeping operations such as acquisition, cataloguing, circulation and other services. Some features are included in this software packages i.e. **i)** able to perform digital version viz. e-book, e-journal etc., **ii)** able to exchange the digital information through network of library, **iii)** maintain standardisation viz. MARC-21, UNIMARC, Z39.50 etc.

### Objectives of the Study

1. To show the state-of-the-art situation of the libraries in schools in West Bengal especially in Kolkata.

2. To discuss the automation system in school libraries.
3. To highlight the policies and initiatives of library automation system in school level from different levels like national as well as state.
4. To discuss the different positions in Govt. and Non-Govt. school level libraries.

### Scope and Coverage Area of This Study

Only 115 (one hundred fifteen) schools in Kolkata district have been selected for this study. Out of which, 35 (thirty five) schools which are affiliated to CBSE board and 63 (sixty three) schools which are run by ICSE/ISC board and remaining 17 (seventeen) schools fully controlled and affiliated to Department of Education, Govt. of West Bengal, have been selected for discussion. The CBSE and ICSE/ISC schools are fully run by private management/trustee board. This study represents the present scenario of library automation in school level at Kolkata, West Bengal.

### Methodology

At first, I have been defined the meaning and concept of library automation and use of library automation software in detailed. Secondly, the area of study at different stages and arrangement fields has been selected. Then, I have followed the survey method on the basis of questionnaire and interview. A well- articulated questionnaire has been designed and the questionnaires were served among the school libraries in Kolkata, followed by both structured and unstructured interview method. While asking, I followed some unstructured questions as per situation. Specific observation was taken for this study. The datum was collected by these process and these were analyzed. 115 questionnaires were served to school authorities as well as school librarians but only 108 (94%) (i.e. CBSE (33), ICSE/ISC (63), WBBSE (12)) schools responded and these were taken into consideration for this study. The analyzed data have been presented in tabular forms followed by critical discussion. Lastly, the study has been incorporated with different findings and suggestions and also with conclusions.

### Review of The Literature

Broadly-Preston and Lobo (2011) described that the role and function of school libraries is closely related with its parent organisation. It is a vital part to the services of school libraries. Automation is the best process that provides better services to the users.

Loertscher (2008) analyzed that the school library is a learning centre. It is a place for social interaction where students are involved to engage in innovative, curious and problem solving activities. A group of study place are extended with the help of social benefit where students and teachers are meeting in informal way. ICT technologies are much benefited for this situation.

Annath and Preveen (2007) has emphasised that the quality of products and services are long-term effects to grow students learning habits. School library provides possible effect to the learners through ICT system. It helps to acquire high academic achievements and future success.

Krashen (2004) studied that libraries are only possible source of learning materials that provide better services to the learners.

Kathuria, Kiran (e-PG Pathshla), according to his opinion, school library should be automated with the help of e-resource materials. OPAC and Web-OPAC are regularly updated. The technological advancement through ICT is more important part in the field of school libraries. The products and services are more advanced with the help of ICT. So, automation process should be accepted and applied in the school libraries. (<http://www.fglibrary.co.uk/gallery/furniture/?childrens-furniture> <http://cbse.nic.in/LIBRARY-1-99.pdf>)

According to IFLA guidelines (2<sup>nd</sup> revised edition), the suggestions are the collection development of school library should be based on digital devices. ICT should attach in the house keeping operations. The librarian and other staff must be updated to handle modern technologies. It also suggested that library automation is the best and perfect process to provide better services to its users. (<https://www.ifla.org/files/assets/school-libraries.../ifla-school-library-guidelines.pdf>)

## Library Automation at School Level in West Bengal

The school library is a part of an academic institution that helps the students as well as teachers simultaneously, with the information they want, supply both print and non-print materials to the users and promote reading habit of the users. It is an essential and integral part of school education system. The education commissions, the Central and the State Govt., SSA and RMSA and others, pointed out that most of the government schools especially aided as well as sponsored school libraries have not been introduced library automation system. It is more or less same in West Bengal. But it is different in CBSE and ICSE/ISC affiliated schools. The libraries of private affiliated schools in West Bengal are well arranged. The computer and ICT technologies have been arranged for these libraries. But in some cases, there are no full time librarians. Teachers or any other authorised persons are working as librarian. They have no knowledge in LIS. Apart from this, there is no specific rules and job specification for full time librarian. They have to perform variety of non-library works like attend the classes, organise special classes, organise cultural programme etc of the schools. The following table highlights the information regarding network system in schools at Kolkata.

**Table-1. Information regarding Network System in School Libraries**

| S. No.     | Networking System    | CBSE (33)        |                | ICSE/ISC (63)    |                | WBBSE (12)       |                |
|------------|----------------------|------------------|----------------|------------------|----------------|------------------|----------------|
|            |                      | Number of School | Percentage (%) | Number of School | Percentage (%) | Number of School | Percentage (%) |
| <b>1</b>   | <b>Network</b>       |                  |                |                  |                |                  |                |
| <b>1.a</b> | LAN                  | 27               | 82             | 56               | 89             | 5                | 42             |
| <b>1.b</b> | MAN                  | 0                | 0              | 0                | 0              | 0                | 0              |
| <b>1.c</b> | WAN                  | 0                | 0              | 0                | 0              | 0                | 0              |
| <b>2</b>   | <b>Connectivity</b>  |                  |                |                  |                |                  |                |
| <b>2.a</b> | Dial Up              | 6                | 18             | 3                | 5              | 2                | 17             |
| <b>2.b</b> | ISDN                 | 0                | 0              | 0                | 0              | 0                | 0              |
| <b>2.c</b> | Wi-Fi                | 18               | 54             | 43               | 68             | 1                | 1              |
| <b>2.d</b> | Dongle               | 3                | 0              | 10               | 16             | 3                | 25             |
| <b>3</b>   | <b>Other Network</b> |                  |                |                  |                |                  |                |
| <b>3.a</b> | CALIBNET             | 0                | 0              | 0                | 0              | 0                | 0              |
| <b>3.b</b> | DELNET               | 0                | 0              | 0                | 0              | 0                | 0              |
| <b>3.c</b> | E-mail               | 27               | 82             | 56               | 89             | 5                | 42             |
| <b>3.e</b> | FTP                  | 0                | 0              | 0                | 0              | 0                | 0              |
| <b>3.f</b> | Telnet               | 0                | 0              | 0                | 0              | 0                | 0              |

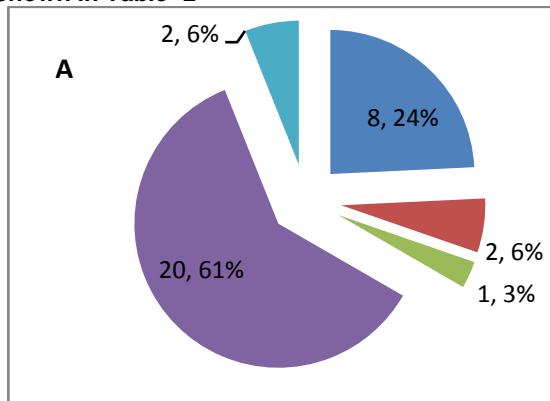
It is revealed from the Table-1. most of the school libraries, affiliated to CBSE and ICSE/ISC are interested to accept Networking system within its LAN Network with the connectivity of Wi-Fi and Dial Up connection from that of Govt. affiliated school libraries in Kolkata. It is found that 56 (89%) ICSE/ISC affiliated school libraries used LAN Network, but in case of CBSE affiliated school libraries, it is only 27 (82%). In case of WBBSE affiliated school libraries, only 5 (42%) school libraries used LAN with the

different connectivity viz. Dial Up, Wi-Fi and Dongle. Wi-Fi is the common connectivity used in these libraries. E-mail is another common way for easiest communication method which has been accepted by all libraries. It is clear that school libraries are going to accept the modern technologies and they have changed traditional platform with the help of technological advancement.

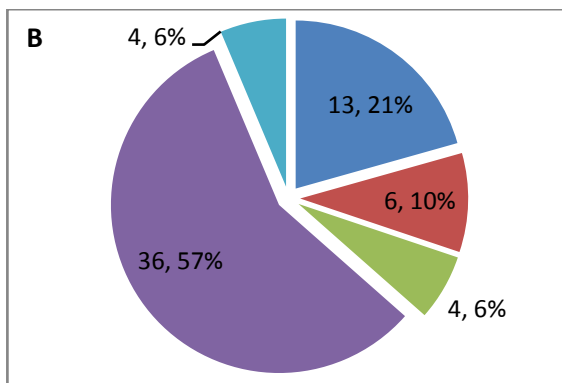
**Table-2. Information Regarding Software Used in School Libraries**

| SI No. | Name of the software | A) CBSE (33)     |                | B) ICSE/ISC (63) |                | C) WBBSE (12)    |                |
|--------|----------------------|------------------|----------------|------------------|----------------|------------------|----------------|
|        |                      | Number of School | Percentage (%) | Number of School | Percentage (%) | Number of School | Percentage (%) |
| 1      | LibSys               | 8                | 24             | 13               | 21             | 0                | 0              |
| 2      | Koha                 | 2                | 6              | 6                | 9              | 0                | 0              |
| 3      | Library Manager      | 1                | 3              | 4                | 6              | 0                | 0              |
| 4      | Ms-Office            | 20               | 61             | 36               | 57             | 5                | 42             |
| 5      | Other                | 2                | 6              | 4                | 6              | 1                | 1              |

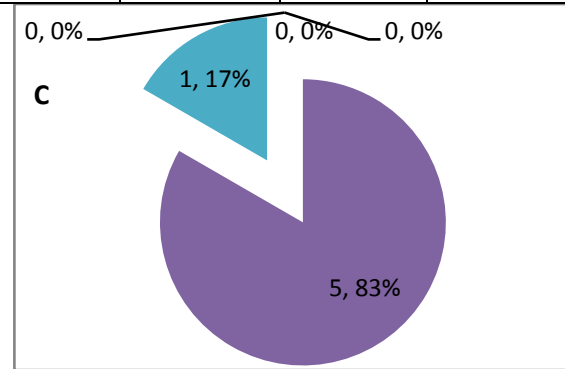
**Fig.- 1 Pie chart for Percentage (%) Represented of Software Used in Libraries Following The Data Shown in Table- 2**



**(A) CBSE (33)**



**(B) ICSE/ISC (63)**



**(C) WBBSE (12)**

A good number of Library Management Software (LMS) are available in the market like LibSys, Koha, Soul, D-Space etc. Some school libraries use LMS in their housekeeping operations. Because, cost regarding installation, maintenance, AMC is very high. So automation process is limited in functioning of school libraries. The Table-2 and Fig.-1 show that 20 (61%) CBSE affiliated school libraries use MS-Office Software for its in house jobs. 8 (24%) CBSE and 13 (21%) ICSE/ISC affiliated school libraries use LibSys Software. Open Source Software-Koha is used by 2 (6%) CBSE schools and by 6 (9%) ICSE/ISC Schools. It is also pointed out that, no WBBSE affiliated school libraries use LMS for libraries, but 5 (42%) school libraries use MS-Office software for library operations in Kolkata. The position of use of automation is better in case of private/trustee board than govt. controlled schools.

**Table-3:- Information Regarding Number of Schools for Housekeeping Operations through Automation System**

| Housekeeping Operations   | CBSE (33) |      |                 |           |       | ICSE/ISC (63) |      |                 |           |       | WBBSE (12) |      |                 |           |       |
|---------------------------|-----------|------|-----------------|-----------|-------|---------------|------|-----------------|-----------|-------|------------|------|-----------------|-----------|-------|
|                           | LibSys    | Koha | Library Manager | MS-Office | Other | LibSys        | Koha | Library Manager | MS-Office | Other | LibSys     | Koha | Library Manager | MS-Office | Other |
| <b>a) Administration:</b> |           |      |                 |           |       |               |      |                 |           |       |            |      |                 |           |       |
| i) Activities related to: |           |      |                 |           |       |               |      |                 |           |       |            |      |                 |           |       |
| Office work               | 0         | 0    | 0               | 20        | 1     | 0             | 0    | 0               | 32        | 1     | 0          | 0    | 0               | 5         | 0     |
| Letter writing            | 0         | 0    | 0               | 20        | 1     | 0             | 0    | 0               | 32        | 1     | 0          | 0    | 0               | 5         | 0     |
| Report writing            | 0         | 0    | 0               | 20        | 1     | 0             | 0    | 0               | 32        | 1     | 0          | 0    | 0               | 5         | 0     |
| ii) Account work          |           |      |                 |           |       |               |      |                 |           |       |            |      |                 |           |       |
| Budget preparation        | 0         | 0    | 0               | 0         | 0     | 0             | 0    | 0               | 0         | 0     | 0          | 0    | 0               | 0         | 0     |
| Receipt of services       | 0         | 0    | 0               | 0         | 0     | 0             | 0    | 0               | 0         | 0     | 0          | 0    | 0               | 0         | 0     |
| iii) Other works          |           |      |                 |           |       |               |      |                 |           |       |            |      |                 |           |       |

|                          |   |   |   |    |   |    |   |   |    |   |   |   |   |   |   |
|--------------------------|---|---|---|----|---|----|---|---|----|---|---|---|---|---|---|
| Budget analysis          | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| Managerial activities    | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>b) Acquisition:</b>   | 8 | 2 | 1 | 20 | 2 | 24 | 6 | 2 | 36 | 1 | 0 | 0 | 0 | 5 | 1 |
| <b>c) Cataloguing:</b>   |   |   |   |    |   |    |   |   |    |   |   |   |   |   |   |
| i) OPAC                  | 8 | 2 | 1 | 0  | 0 | 24 | 4 | 2 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| i) Web-OPAC              | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>d) Circulation</b>    |   |   |   |    |   |    |   |   |    |   |   |   |   |   |   |
| i) Issue                 | 8 | 2 | 1 | 20 | 2 | 24 | 6 | 2 | 36 | 0 | 0 | 0 | 0 | 5 | 1 |
| ii) Return               | 8 | 2 | 1 | 20 | 2 | 24 | 6 | 2 | 36 | 0 | 0 | 0 | 0 | 5 | 1 |
| iii) Renewal             | 8 | 2 | 1 | 20 | 2 | 24 | 6 | 2 | 36 | 0 | 0 | 0 | 0 | 5 | 1 |
| iv) Loan                 | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>e) Serial Control</b> | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>f) Reporting</b>      | 0 | 0 | 0 | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 |

The Table-3. shows that-

1. Out of 33 CBSE affiliated schools; only 8 schools use the LibSys software for its housekeeping operations like acquisition, OPAC, cataloguing, circulation. Only 2 schools use Koha software and only 1 school use Library Manager for different activities other than administrative work. MS-Office software is used only by 20 schools for different activities like office work, acquisition, cataloguing, and circulation. Other local software is used by 2 schools for library work other than accounting work.
2. Out of 63 ICSE/ISC affiliated schools; only 24 schools use the LibSys software for its housekeeping operations like acquisition, OPAC, cataloguing, circulation. Only 6 schools use Koha software, but only 4 schools use Koha for OPAC activities. Only 2 schools used Library Manager for different activities other than office and accounting works. MS-Office software used by 36 schools for different activities like acquisition and circulation, but only 32 schools use for office work. Other local software is used by only 1 school for office work and acquisition.
3. 12 WBBSE affiliated schools do not use any software viz. LibSys, Koha, Library Manager etc. for its housekeeping operations. Only 5 schools used MS-Office software for office work, acquisition and circulation. Only 1 school uses other local software for acquisition and circulation.

### State-of-the-art-situation in West Bengal

Govt. of West Bengal in its an official order (no. 423-ES/O/P&B/10M-26/10) engaged the Indian Institute of Management Calcutta (IIMC) to conduct a study on 'Restructuring of School Education System in West Bengal' in August 2010. The study encompassed pre-school to high school education. The study focussed on three aspects of school education-

1. The implication of the Right to Education Act (RET) vies-a-via Sarva Shiksha Abhiyan (SSA) / Rashtriya Madhyamik Shiksha Abhiyan (RMSA);
2. The administrative set up and governance structure of school education;
3. The delivery mechanism and in class room transaction.

The study pointed out that,

1. Every school has library, office room and computer.

2. The school library must have the reference materials mentioned in the text books. Each student will be asked to use the reference materials (this task has to be carefully assigned by the subject teacher so that no two students write the same text) to prepare a write up as an additional learning module for that chapter and reproduce it in the blank pages provided in the text books. This exercise will encourage students to be creative, expose students to reference materials and therefore broaden their horizons. We recommend that schools should be given the option of choosing a particular pedagogy (Active Learning Method or the other alternatives).

Department of Education, Govt. of West Bengal has taken many initiatives to provide E-resources available on web with these openly accessible free E-resources. School libraries can also build their E-collection and made them available to the students who are interested in electronic format.

### E-resources available at secondary level (V-VIII):

| E-resources | Class | books  |
|-------------|-------|--|
| Text books  | V     | Butterfly English, আমাদের পরিবেশ, পাতাবাহার, আমার গনিত |
|             | VI    | পরিবেশ পরিচয়  |
|             | VII   | English, বাংলা, ভূগোল, মাকু                            |
|             | VIII  | Learning English, গনিত                                 |

As per statistics of Department of School Education, Govt. of West Bengal, the following developments were made from May 2011 to 2013.

Under Sarva Shiksha Abhiyan, 14829 upper primary schools and 697 schools were upgraded to Higher Secondary Standard along with grant for the library. Presently, Govt. of West Bengal has taken initiatives for development of school libraries with computers and grants. It is trying to reach need-based situation in school level in West Bengal.

### Findings

The study has been incorporated with the following findings-

1. The private affiliated school libraries are in better position than Govt. affiliated schools libraries.
2. There are no sufficient funds for implementation of library automation system in school level both in private as well as government schools.

3. In a few schools there is only one librarian without any other professional staff, even subordinate staff.
4. The libraries of private schools are well organised than libraries of government schools.
5. All ICT Tools face some problems like lack of proper maintenance and supervision, low capacity of network connection, lack of update version of computer machines etc.
6. Presently, the central and the state government are jointly trying to improve the present conditions of the school libraries and are interested to use the open source software like Koha and others.
7. The Government of West Bengal has initiated to open a platform of E-resource where the text book materials are available.

### Suggestions

The study is associated with the following suggestions-

1. Every school needs to appoint a qualified librarian and other LIS professional staff immediately.
2. ICT, modern equipments and tools have to be used in the school level education system.
3. The funds should be raised in regular basis.
4. Open Source Software should be accepted and be applied in the libraries especially at the school level.
5. Positive attitudes of the school authorities towards library automation have to be exercised.
6. Sound technical knowledge and skills in librarianship are highly needed.
7. Special grants from government for implementation of automation process are necessary.
8. All housekeeping operations such as acquisition, circulation, cataloguing, serial control etc. should be done through computer.
9. Network connection should be improved.
10. All information services should be updated with the help of ICT.
11. Up-to-date technologies are to be accepted for providing better services to the users.

### Conclusion

Library automation is essential for development of school library activities as it enables to provide better services to its valuable users. But, at present, implementation of automation system in school libraries is quite difficult. In West Bengal, Govt.

aided school libraries face so many problems regarding library automation, such as a) insufficient funds, b) inadequate skilled LIS professional, c) negative attitude of school authorities about library automation etc. More ever, private affiliated school libraries are well-equipped and well-organised than other govt. controlled schools.

Recently, the Govt. of West Bengal has taken many initiatives for introducing automation system in school libraries. They provide E-resources available on web so that anybody can access them at any time from anywhere. Simultaneously, CBSE and NIOS also provide links to subject directories, E-books, E-journals, E-databases etc. However, school libraries should build their E-collection to make them available to its users in electronic format.

### References

- Kar, Rabindranath (2005). *Management of College Libraries in West Bengal*. Kolkata: WBCLA
- Mukhopadhyay, Parthasarathi (Ed.) (2014). *Conference Proceedings of 2<sup>nd</sup> ABSLA National Seminar towards Library Centric Education in Secondary Level*. Edited by. Kolkata: All Bengal School Librarians' Association
- Pal, Tapas (2016). *Application of ICT in Vivek Sangha Town Library and Vivekananda Pathagarh: A comparative study*. *Proceedings' NCCPUDE-2016*. p. 349-357
- Pal, Tapas (2016). *Modern Library and its New Technology: a great challenge in our digital era*. *Proceedings of ECO-CGL 2016*. Kolkata: Central Government Library Association, p. 39-42
- Prakash, Shiva (Ed.) (2014). *Proceedings of National Conference on Emerging Trends in Libraries & Information Services: ETLIS-2014*. Ranchi : Jharkhand Information & Library Association
- <http://www.fglibrary.co.uk/gallery/furniture/?childrens-furniture> <http://cbse.nic.in/LIBRARY-1-99.pdf> (Accessed on 08-08-2018)
- <https://www.ifla.org/files/assets/school-libraries.../ifla-school-library-guidelines.pdf> (Accessed on 08-08-2018)
- [www.wbsed.gov.in/wbsed/default.htm](http://www.wbsed.gov.in/wbsed/default.htm) (Accessed on 08-08-2018)
- [cbse.nic.in/](http://cbse.nic.in/) (Accessed on 08-08-2018)
- [www.wbbse.org/](http://www.wbbse.org/) (Accessed on 08-08-2018)