



Problems and Prospects of Digital Library Services in Jawahar Navodaya Vidyalayas with Special reference to North East India

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Abstract:

Due to the technological advancement libraries need to change their approach towards digital environment to cope up with the growing desires of users. The present study focused on the existing scenario of Jawahar Navodaya Vidyalaya libraries under the Shillong region in respect to digital library services along with the problems and resolutions. The product of this study may be supportive to gain the knowledge about digital library services and to recognize the problems and solutions to effectively implement the digital library system in Jawahar Navodaya Vidyalaya as well as other libraries. The study may also be useful to make suitable plan and policy to develop existing library systems towards digital world to fulfil the changing needs of the users. The study had been adopted for a descriptive and analytical survey along with the observation method. Findings of the study revealed that out of 68 JNV libraries, not a single library provided digital library services to their users till now, although 13% libraries were in under processing conditions due to lots of difficulties. The result concluded that the Jawahar Navodaya Vidyalaya libraries needed more Government administrative and financial support to upgrade their contemporary systems.

Keywords: Academic library, Digital library services, Digital libraries in North-East India, Jawahar Navodaya Vidyalaya, Problems of Digital libraries.

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Introduction:

At present the world is in the modern age of information. Today information and its correlated technologies are playing important roles in socio-economic developments. For considering of these technological advancements a lot of libraries in the western countries were capable to digitize or computerise their entire library system with great success. In India various well-known digital libraries had projects, entitled National Digital Library (NDL) IIT Kharagpur, Digital Library of India, E-Shodhsindhu, Kalasampada, Shodhganga and National Mission for Manuscripts (Mahesh & Mittal, 2008).

Libraries had shared their resources for many decades through formal and informal concurrences using traditional means. With the developments of Information Communication Technology (ICT), things have dramatically changed. In this era of information outburst and of the ever increasing desires of the clientele, no library in the world is self sufficient to meet the requirements of its users. This dependence has given rise to the concept of digital library and resource sharing (Khot & Chavan, 2015). More libraries have been automating their catalogues and acquiring resources in electronic form, and getting connected with other networks. This has resulted in easy accessing of the resources from the remote nodes adding a new dimension to the nature of these library services.

The role and responsibilities of residential schools and their libraries are different from other school libraries as it is the only source to access information in that particular campus and students are not allowed to go outside (Wicaksono, 2021). Therefore librarians need to provide all information in an effective way to satisfy the needs of the users. The most important role of Jawahar Navodaya Vidyalaya (JNV) libraries are to help the users to know the whole world with the application of ICT and internet facilities (Navodaya Vidyalaya Samiti, 2020).

Digital library is an online assortment of digitized documents, texts, images, videos, audios, data and other digital resources accessible through the internet. Digital libraries also called digital repository or internet library. Digital libraries are built around the internet and web technology; hence, they need to follow the internet standards and protocols so as to determine interoperability, portability, modularity, scalability and seamless accessibility (Chalukya, 2019). IFLA/ UNESCO Manifesto stated that “A digital library is an online collection of digital objects, of assured quality, that are created or collected and managed according to internationally accepted principles for collection development and made accessible in a coherent and sustainable manner, supported by services necessary to allow users to retrieve and exploit the resources.” A typical digital library in a distributed client-server environment comprises of hardware and software elements at server side as well as the client’s side (Chalukya, 2019). Digital library is popularly viewed as an

electronic version of a library. To some extent, it simply means computerization of traditional libraries (Mishra, 2016).

Advantages of Digital Libraries

Multiple access, easily accessible, time saving, no physical boundary, universal accessibility, 24*7 availability, reduce library cost, quality preservation, unlimited storage space, highly increased accessibility, simple process of information retrieval, user friendly, flexible, wide area usage, conservation and preservation process is very easy, convenient access of high quality information, multiple referencing, reduce physical space of libraries.

Disadvantages of Digital Libraries

It needs ICT based trained staff, copyright issue, bandwidth issue, preliminary cost is high, interoperability between systems and software, lack of standardization of digital materials, possibilities of virus affect and quick destroying of digitized materials, health hazard.

JNV is a residential school system situated at rural areas of India. The main function of JNVs is to identify talented children from village or rural areas and providing them the best educational facility with free boarding and lodging. JNVs established in 1986 by the Government of India for the student's age of 11 to 19 years. JNVs are run by an autonomous organization (Navodaya Vidyalaya Samiti, New Delhi) under the department of Ministry of Education (MoE) and Department of School Education and Literacy, Government of India. JNVs exist in all the states of India except the state Tamil Nadu. JNVs are affiliated to CBSE (Central Board of Secondary Education), New Delhi with VI – XII standard. Total 8 regional offices of Navodaya Vidyalaya Samiti (NVS) established in different states and UTs of India, as- Bhopal, Chandigarh, Hyderabad, Jaipur, Lucknow, Patna, Pune & Shillong. As per the policy of Government of India, one JNV is to be established in each district. Therefore 661 (638+23=661) JNVs have been sanctioned in 638 districts of India. Additional 23 JNVs have been sanctioned in 23 districts which include 10 JNVs in SC & 10 JNVs in ST having large concentrated population and 3 JNVs i.e. Senapati-II in Manipur, Ukhrul-II in Manipur and Ratlam-II in Madhya Pradesh as a special case. (Navodaya vidyalaya Samiti, 2020).

The present study focused on the problems and prospects of digital library services in JNVs under the regional office of Shillong. This region included 8 North- eastern states of India (Navodaya vidyalaya Samiti, 2020). The study may be helpful to determine the needs of digital library services in JNVs and also useful to construct suitable plan and policy to overcome the existing problems and efficiency, to execute the digital library system in JNVs to meet the increasing information desires of the users.

Statement of the problem:

Academic library as heart of any institution provides priceless information to their users and also help out the teaching learning process for the growth of nations. Due to the technological revolution needs of the

people are changing rapidly. Therefore librarians should be ready to take new challenges to satisfy the continuously changing needs of the communities. Thus the role of librarians should be dynamic with the knowledge of ICT. To satisfy the needs of the modern users the librarians have to change their traditional library environment to digital system. This study therefore investigated the present scenario of digital library system in JNVs through the following investigations:

- The current status of digital library system in JNV Shillong region.
- The awareness about digital library among the library professionals of JNV.
- Perception regarding problems and key solutions of digital library in JNV.
- How many JNV had adopted the digital library system?
- How many JNV librarians support to implement the digital library system in JNV School?

Objectives of the study:

1. To identify the present scenario of digital library services in JNV libraries, Shillong region.
2. To know the perception of JNV librarians regarding the digital library system.
3. To reveal the obstacles to implement digital library system in JNVs.
4. To ascertain the solutions from respondents to overcome the problems.
5. To make suggestions to defeat the problem and enhance library services efficiently.
6. To inspire JNV librarians to upgrade their traditional library system to digital shape.

Significance of the study:

On account of above objectives, this study targeted towards a significant role of the libraries of JNVs (Shillong region) in respect of digital library services. Identify the problems and barrier in the way of implementation of digital library services in JNVs as a prime necessity in digital age. The findings of the study lead towards the suggestions to construct appropriate plan and policy to upgrade the present system of the libraries. Hence from the study ways may come to change the environment and bring new technology in the libraries.

Literature review:

Sahayam & Rathnasabapathy (2021) performed a study among the students of India to know the digital divide in school education system during COVID 19 pandemic situations. In that study qualitative case study method was used. This study mainly focused on digital education along with digital divide. The findings of the study revealed that during COVID 19 lockdown period technology assisted digital based learning system to proliferate but still now digital divide is existing between the large numbers of under privileged people. Authors had illustrated some important reasons for digital divide such as, lack of awareness about technological devices and internet connectivity, electricity failure, poor internet connectivity in hilly and remote areas, lack of ICT training among educators and learners, lack of economical support to women to access technological devices. Authors suggested that there was an urgent need of suitable plan and policy to deal with current educational issues.

Wicaksono (2021) carried out a study in Brebes Boarding school Vocational high school to know the digital library information system of this school. The main aim of the study was to intend a digital library application for students as well as teachers which can access via internet and without visit physically to the library. In this present study author showed several stages of this design method. For this study quantitative descriptive method was used. Author concluded that digital library application could be easy and useful for all the types of library users to acquire information with the help of internet.

Varnaseri & Bayati (2020) conducted a descriptive survey study on University of Tehran to know the evaluation possibilities to build digital libraries in university level. The main purpose of the study was to show the necessities of digital library in university to fulfil the student's needs. The study investigated the university library facilities as- network, technical equipment, budget, manpower to convert digital library and students using skills. For this study questionnaire method was used to collect data from 17 faculties and 75 students. A SPSS 22 version was used for data analysed. The result revealed that availability of technical infrastructure was adequate and student's skill was sky-scraping to use digital library however the lack of economic support was the main obstacle in the way of digital library.

Mishra (2016) described the definition, issues and challenges of digital libraries. In this study, author also discussed about the advantages and disadvantages of digital libraries. Author suggested that before implemented digital libraries in library and information networks, our country's law need to change to protect copyright act and prevent the data corruption.

Khot & Chavan (2015) explained the concept of digital library with the help of meaning and definitions in simple way for users grasps. Authors also focused on the barriers and issues for execution of digital libraries in this technological era. They also discussed some factors and advantages of digital libraries in this study. Authors suggested that appropriate efforts can overcome these barriers and helps users and library professionals to effectively use digital libraries.

Mahesh & Mittal (2008) investigated a literature review based study on 63 published articles about digital libraries to examine and understand the enlargement and improvement of digital library inventiveness in India and its current status. The review based study was limited in the area of LISA, LISTA and Emerald database up to 2007. The main objective of the study was to measure existing digital library systems and to upgrade it according to the needs of user. The result found that most of the articles draw attention towards developing digital libraries and digital resources. And few studies focused on the digital library management and the issues of copyright. Not a single study concerned about the policies and security of digital library and digital right management.

Kumbargoudar et al. (2006) commenced a research study to discuss the socio-economical dilemmas of India to improve digital libraries. Authors also talked about various projects and policies of state and central

government to enhance the usability of information technology in administrative purpose. The result showed that in India there is sluggish development of digital libraries relevant to other developed countries. Authors suggested, digital library must be used for all round development of people and people also must have the skill to use information and communication technology and digital libraries for their own development. And they also recommended that government should give their efforts for this regards.

Sreekumar & Sreejaya (2005) conducted a study on the topic digital library initiatives along with the issues in India. The study disclosed various types of difficulties, obstacles and problems involved in design and improvement of world standard digital libraries in India. The study also focused on the initiatives adopted by various Indian organizations to enlargement of digital libraries. This study also created a centre of attention on modern trends and scholarly knowledge management.

From the above literature review, it was observed that plenty of of authors conducted the study on digital library services and problems in different types of libraries. However very few study performed on JNV libraries.

Methodology:

This research study was based on descriptive and analytical survey along with observation method. The study was limited in the area of Jawahar Navodaya Vidyalaya, under the regional office of Shillong, North East India. To complete the study primary data were collected from JNV librarians with the help of questionnaire method and secondary data were collected from associated library web pages. Moreover correlated literature reviewed also prepared to get idea and gain knowledge from previous study. Out of 100 JNVs in the region of Shillong 68 JNV librarians provided their helpful information. Collected data were tabulated and scrutinized with the use of Microsoft excel and check list method.

Scope of the study:

The study was undertaken to explore the problems and prospects of Digital Library services in JNVs, Shillong region.

- The study had broad scope to give the idea regarding Digital Library services.
- It had wide scope to discover the barriers of JNV libraries to implement digital library services.
- The study may help to know the impact of digital library services in academic as well as public libraries.
- This study was useful to make proper planning and strategies to develop JNV library services in digital environment.
- This study also had wide scope for further conducting research in global perspective.

Data collection and analysis:**Table 1: Distribution of JNV libraries under different State and District regional office of Shillong**

| Sl. No. | State | District | Total No. of JNV Libraries |
|---------|-------------------|------------|----------------------------|
| 1 | Arunachal Pradesh | 18 | 18 |
| 2 | Assam | 28 | 28 |
| 3 | Manipur | 11 | 11 |
| 4 | Meghalaya | 12 | 12 |
| 5 | Mizoram | 8 | 8 |
| 6 | Nagaland | 11 | 11 |
| 7 | Sikkim | 4 | 4 |
| 8 | Tripura | 8 | 8 |
| | Total | 100 | 100 |

Table 1 showed State and District wise distribution of total JNV libraries in the Shillong region. The table revealed that total 100 JNVs are established in 8 North-eastern states under the regional office of Shillong. It was found that maximum numbers of JNV libraries were situated in the state Assam i.e. 28. Followed by Arunachal Pradesh with 18, after that Meghalaya with 12 then Manipur & Nagaland both has 11 JNV libraries then Mizoram and Tripura both with 8 and the state Sikkim has 4 JNV libraries.

Table 2: JNV Library Services (General)

| Sl. No. | Library Services | Yes | No |
|---------|--------------------------|-----|----|
| 1 | Audio- Visual resources | | √ |
| 2 | Circulation service | √ | |
| 3 | E-resources | | √ |
| 4 | Inter Library loan | | √ |
| 5 | Internet/ Wi-Fi facility | √ | |
| 6 | Membership service | √ | |
| 7 | OPAC | | √ |
| 8 | Reading room facility | √ | |
| 9 | Reference service | √ | |
| 10 | Reprography service | | √ |

Table 2 demonstrated various general library services of JNV Shillong region. The table showed, out of 10 general services JNV libraries provided only 5 types of services i.e. circulation service, Internet/Wi-Fi facility, membership and reference services along with reading room facility.

Table 3: JNV Library Resources

| Sl. No. | Library Resources | Yes | No |
|---------|-------------------|-----|----|
| 1 | Computers | √ | |
| 2 | CD/ DVDs | √ | |
| 3 | Dailies | √ | |
| 4 | General Books | √ | |
| 5 | Magazines | √ | |
| 6 | Periodicals | √ | |
| 7 | Reference books | √ | |

Table 3 provided information about JNV (Shillong region) library resources. It showed that all JNV libraries have the collection of computers, CD/DVDs, dailies, general books, magazines, periodicals and reference books.

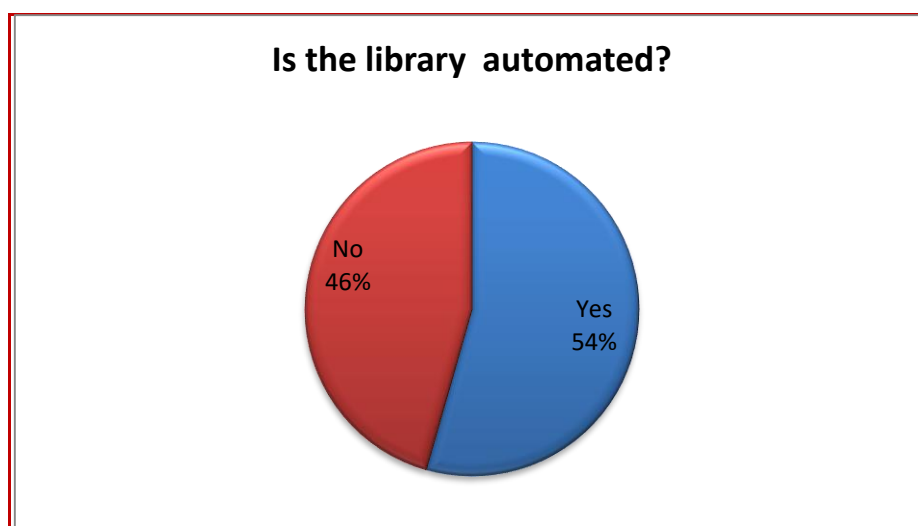
Figure 1: How many JNV libraries are automated?

Figure 1 revealed that out of 68 libraries 54% (approx) i.e. 37 JNV libraries were automated and remaining 31 libraries i.e. 46% (approx) were followed the traditional process only.

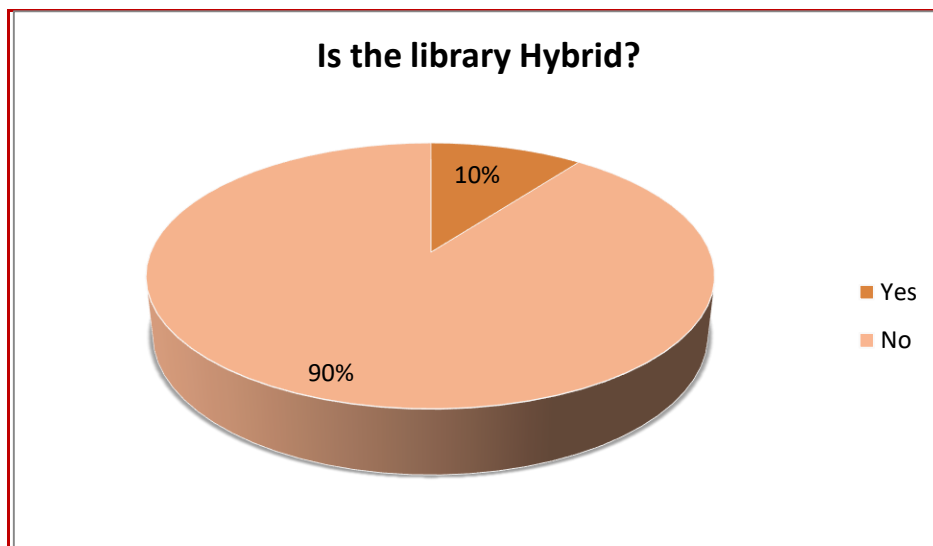
Figure 2: How many JNV libraries are Hybrid?

Figure 2 disclosed out of 68 JNV libraries only 7 libraries i.e. 10% (approx) libraries were Hybrid libraries and remaining 90% libraries were followed traditional process.

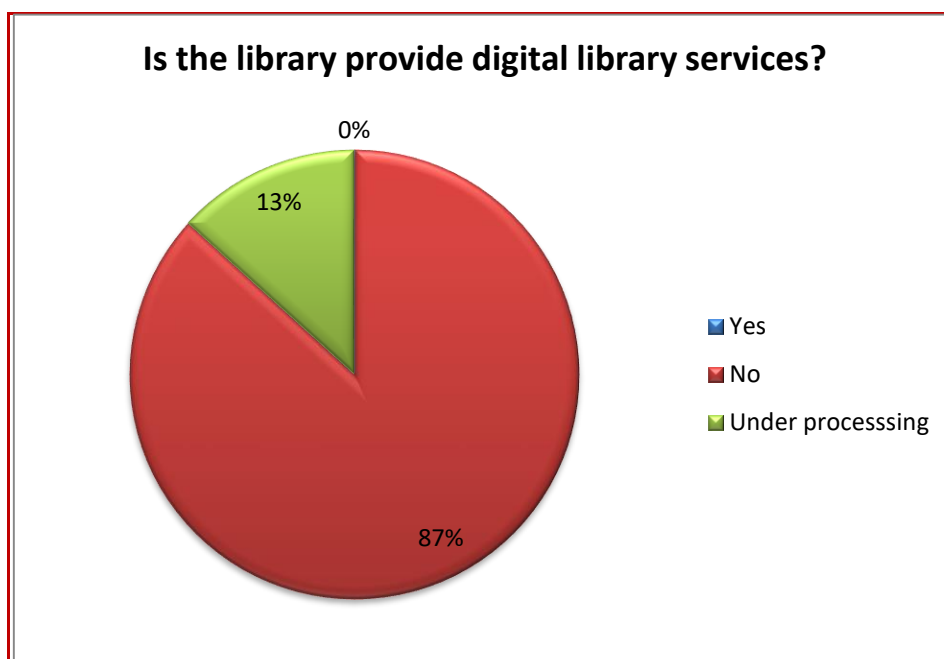
Figure 3: How many JNV libraries provide Digital library services?

Figure 3 showed, out of 68 JNV libraries not a single library had digital library section or no one library provided digital library services. Only 9 i.e. 13% (approx) libraries were in under processing condition.

Figure 4: Awareness of respondents about the digital library services

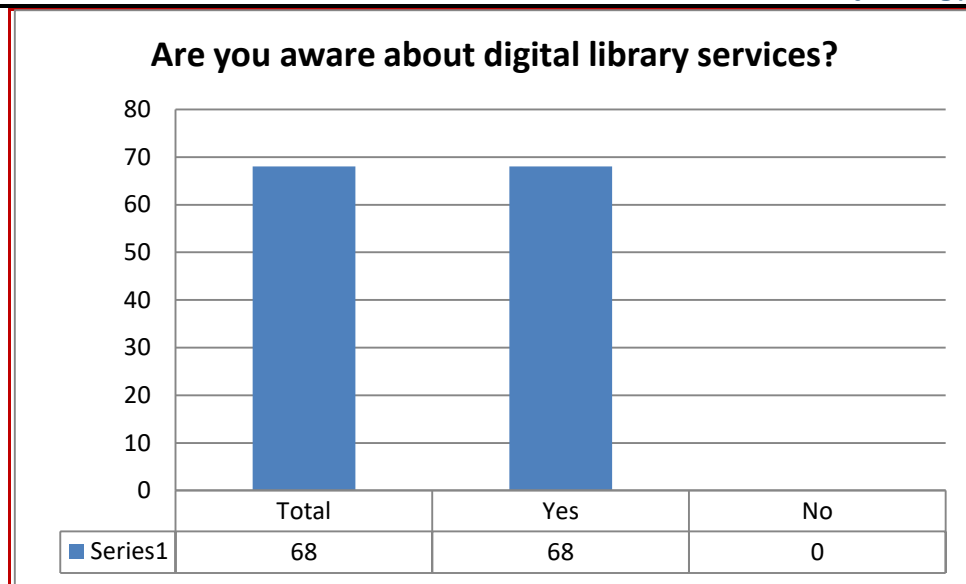


Figure 4 revealed how many respondents / JNV librarians were aware about digital library services. The figure confirms that all 68 respondents had enough knowledge about digital library services.

Figure 5: Use of Library Management Software

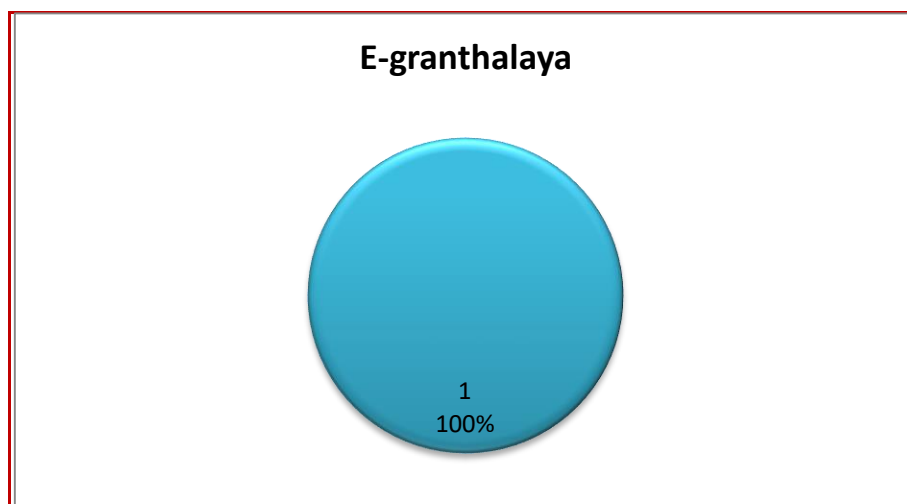
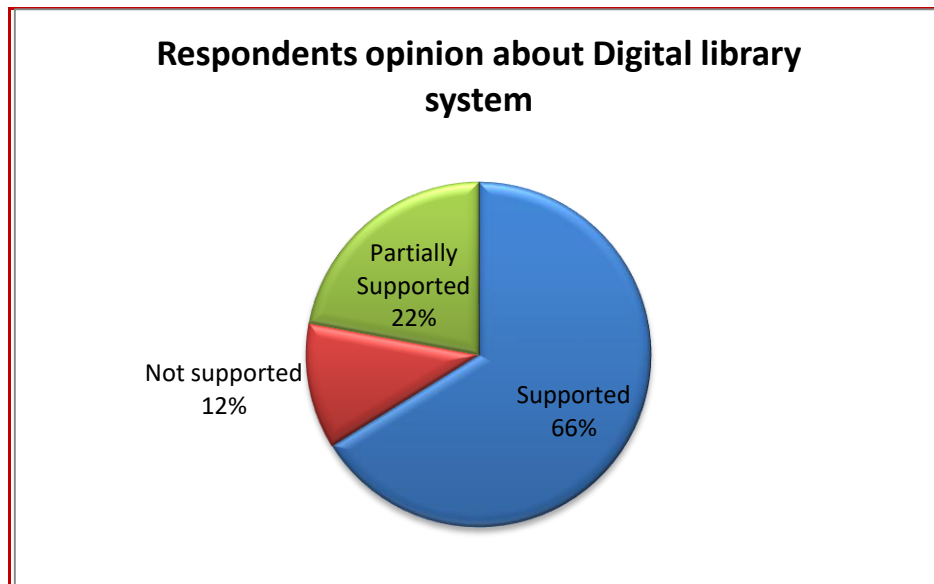


Figure 5 showed the use of library management software in JNV libraries. It was an open ended question for all respondents. It revealed that all 68 (100%) JNV libraries use E-granthalaya library management software.

Figure 6: JNV Librarians perception regarding Digital library systems

Perception of JNV librarians regarding digital library systems showed in figure 6. It interpreted that out of 68 respondents 66% (approx) i.e. 45 respondents strongly supported digital library systems and 22% (approx) i.e. 15 librarians partially supported. And remaining 12% (approx) i.e. 8 respondents not supported this digital library system.

Table 4: Problems faces by JNV libraries and librarians to implement digital library services

| Sl. No. | Problems |
|---------|-------------------------------------|
| 1 | Slow internet speed |
| 2 | Govt. norms and rules |
| 3 | Lack of ICT infrastructure |
| 4 | Shortage of staff |
| 5 | Lack of economical support |
| 6 | Scarcity of technical trained staff |
| 7 | Network connections problem |
| 8 | Unawareness of digital resources |
| 9 | Lack of administrative support |
| 10 | Lack of e-resources |

Table 4 presented a variety of problems faced by JNV libraries and librarians in the way to put into practice digital library services in their existing library system. It was an open ended question for all JNV librarians. The table showed number of problems such as - slow internet speed, govt. norms and rules, lack of ICT infrastructure, shortage of staff, lack of economical support, scarcity of technical trained staff, network connection problem, unawareness of digital resources, lack of administrative support and lack of e-resources.

Table 5: Solutions given by Respondents

| Sl. No. | Solutions |
|---------|--|
| 1 | Government should provide essential facilities |
| 2 | Internet connection should be fast and better |
| 3 | Govt. should be appoint more library staff |
| 4 | Needful equipment must be available |
| 5 | Training for librarians should be arrange |
| 6 | Implementation of suitable ICT infrastructure must be needed |
| 7 | Librarians should be free to express his or her ideas |
| 8 | Library budget should be increase |
| 9 | Librarians should have the liabilities to work with full freedom |
| 10 | Administrative support must be needed |
| 11 | Awareness programmes ought to arrange for users about digital library services and e-resources |

Table 5 displayed a lot of solutions provided by respondents to overcome the problems and execute digital library services in JNV libraries. It showed number of solutions, as – govt. should provide essential facilities, Internet connection should be fast and better, govt. should be appoint more library staff, needful equipment must be available, training for librarians should be arrange, implementation of suitable ICT infrastructure must be needed, librarians should be free to express his or her ideas, library budget should be increase, librarians should have the liabilities to work with full freedom, administrative support must be needed and awareness programmes ought to arrange for users about digital library services and e-resources.

Major findings of the study:

- 100 JNV libraries were incorporated under the Shillong regional office.
- JNV libraries of Shillong region located in various districts of 8 North-eastern states. These are, Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.
- Maximum numbers of JNV libraries were situated in Assam i.e. 28 after that Arunachal Pradesh with 18 libraries.
- JNV libraries provide only 5 types of general services i.e. circulation service, Internet/Wi-Fi facility, membership and reference services along with reading room facility.
- Internet/Wi-Fi facility is available only for JNV teachers and other staffs. Not for students.
- JNV libraries had the collection of computers, CD/DVDs, dailies, general books, magazines, periodicals and reference books.
- According to 68 respondents it is found that each and every JNV library has only 1 computer system.

- Out of 68 libraries, 54% i.e. 37 JNV libraries were automated.
- Only 7 libraries i.e. 10% libraries were Hybrid.
- Out of 68 JNV libraries not a single library had digital library section or no one library provide digital library services. Only 9 (13%) libraries were in under processing.
- Out of 68, 100% librarians/ respondents have the enough knowledge about digital library services.
- All 68 JNV libraries used E-granthalaya library management software.
- Out of 68 respondents 66% i.e. 45 respondents strongly supported digital library systems and 22% i.e. 15 librarians partially supported. And remaining 12% i.e. 8 respondents not supported digital library systems.
- Only 1 librarian was allotted for each JNV libraries there is no another supportive staff to smoothly and timely doing all library works. Beside of this, sometimes JNV librarians need to help in teaching –learning process and administrative works.
- A variety of problems faced by JNV libraries in the way to implement digital library services. These are - slow internet speed, limited rules and regulations of Govt., shortage of ICT infrastructures and library staffs, lack of economical support and administrative support, scarcity of technical trained staff, network issues, unawareness of digital resources as well as lack of e-resources.
- Some solutions provided by respondents to overcome the existing situations. As – Government should be provide essential facilities and must be appoint more library staff, Internet connection should be suitable, needful equipments must be available, training for librarians should be arrange, implementation of suitable ICT infrastructure must be needed, librarians should be free to express his or her ideas, library budget should be increase, librarians should have the liabilities to work with full freedom, administrative support must be increase and awareness programmes ought to arrange for users about digital library services and e-resources.

Conclusion:

As we know JNVs are residential schools and students have no scope to go outside from the campus area therefore they are unable to access their desire information from other sources. Subsequently JNV students are fully depends on their libraries to fulfil their information needs. So it is most important for JNV libraries and librarians to change their traditional system to digital library system and help the users how to know about the whole worlds as well as the universe with the application of ICTs and internet facilities. Otherwise JNV students may lack behind from other peoples and may face various problems as social and mental disorder along with digital divide. Therefore JNV libraries need to provide internet facility for their all users and librarians must help to train them to effectively use of this facilities. This action also may help to reduce their aloneness and produce more enthusiastic and talented students. Hence implementation of digital library services is an urgent requirement for JNV libraries. The present study investigated the problems of digital library services in JNVs Shillong region along with solutions. The results of the study showed that JNV libraries provided all essential services along with Internet/Wi-Fi facility but this internet facility only available for JNV teachers and other staffs not for students. Although students also need that service more

not only for their academic achievement but also for the taken as a whole development. JNV libraries have the good collection of printed materials but they have only one computer for each library which is not sufficient to put into practice digital library services and to fulfil the information needs of users. Out of 68 JNVs not a single library provided full digital library services only 9 libraries were in under processing and 54% JNV libraries were automated and 10% were hybrid. All respondents are aware about digital library services and most of the respondent supported to implement digital library systems in JNV libraries. All 68 JNV libraries used E-granthalaya library management software. The study revealed that only 1 librarian was allotted for each JNV libraries that is insufficient to smoothly operating a school library, whenever the library is a residential school library as only source to access information by all teachers and students. The present study detected a variety of problems faced by JNV libraries in the way to implement digital library services such as, lack of economical support and administrative support, slow internet speed, lack of Govt. support, shortage of ICT infrastructures and library staffs, scarcity of technical trained staff, network issues, unawareness of digital resources as well as lack of e-resources. If it is possible to resolve these problems after that application of digital library system in JNVs must be rewarding. On the basis of the whole study it may briefly conclude that JNV libraries need more government and administrative support along with financial support to execute digital library service and JNV librarians also must be upgrade themselves with new trends of ICTs to expand their services and satisfy the growing needs of users.

Suggestions:

Suggestions as solutions given by the respondents have to to be taken seriously for the productively execution of digital library service in JNVs. Some vital suggestions from respondents are stated as, government should be provide more support, essential conveniences and have to be appoint more library staff, Internet connection should be suitable, implementation of suitable ICT infrastructure must be needed, training for librarians should be arrange, librarians should be free to express his or her ideas, library budget should be increase, librarians should have the liabilities to work with full freedom, administrative support must be increase and awareness programmes ought to arrange for users about digital library services and e-resources.

These suggested studies may helpful for Navodaya Vidyalaya Samiti and Department of School Education and Literacy, Government of India to execute proper plan and policy to extend JNV libraries in the direction of digital libraries to meet the ever-increasing needs of modern users.

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