NLIST in Provincialized Government Colleges of Assam: An Assessment

Manendra Kumar Singh[1] and Bhabananda Das[2]

[1,2]Mizoram University

Abstract : The present study aims to evaluate the utilization of NLIST services within provincialised colleges in Assam. A total of 17 colleges were randomly chosen for data collection. The questionnaire has been designed in a descriptive format, covering ICT infrastructure, authorities' support, reasons for opting for NLIST e-resources, challenges in seamless user services, and the frequency of significant efforts by college libraries. Personal interactions performed by the researcher following the distribution of the questionnaire among librarians of selected colleges. Findings revealed deficiencies in ICT infrastructure, slow internet speeds, and insufficient authority support regarding budget allocation and availability of skilled staff. The study identified lower costs of e-resources, NAAC evaluations, and the NEP 2020 as primary factors which are strong reason identified behind opting NLIST resources. Emphasizing the critical necessity for improved high-speed internet access to fully leverage e-resources, despite 70.57% of college librarians conducting awareness and training programs, 52.94% expressed the need for further orientation, workshops, and training sessions. It underscores the importance of awareness initiatives in Higher Education Institutes across Assam. To optimize the impact of the NLIST project, the study suggests conducting publicity and marketing campaigns aimed at college awareness to attract more institutions to benefit from the initiative. The research unveils a substantial gap in NLIST resource utilization in Assam's colleges, indicating the urgent need for corrective measures to match with those in other Indian states.

Keywords: NLIST, E-resources, Library Consortium, Provincialized College, E-Shodhshindhu.

1.   Introduction

NLIST (National Library and Information Services Infrastructure for Scholarly Content) is an e-resource initiative launched to address the gap in e-resource availability among colleges and higher education institutions of India [1]. The project, inaugurated in the year 2010, by the Ministry of Human Resource Development (MHRD) India, to facilitate e-resources access among government or government-aided colleges under the UGC 12B & 2(f) Act. The non-aided and private colleges can also become beneficiaries by paying annual charges [2]. The project focused on four key components: subscribing and providing access to selected e-ShodhSindhu e-resources for technical institutions (IITs, IISc, IISERs, and NITs) and monitoring usage; selected INDEST e-resources for universities; government/government-aided colleges; and serving as a monitoring agency among colleges for evaluating, promoting, and imparting training [3]. Since 2014, the N-LIST program has been integrated with e-ShodhSindhu Consortium as a college component and it provides the membership information about the colleges [4]. The colleges (excluding Agriculture, Engineering, Management, Medical, Pharmacy, Dentistry, and Nursing) can access e-resources under the N-LIST program. Provincialized Colleges of Assam are the primary beneficiaries of NLIST, where 229 Provincialized colleges in the state currently active as registered members under the project and similar discussed in the study N List program in affiliated colleges [5]. In study Malipatil (2020) highlighted the role of INFLIBNET for college library which are government-aided and administered by public bodies under state guidelines [6]. The role of library professionals is crucial in implementing the project at beneficiary institutions, and the project's success relies on their efforts. To understand the perception and level of benefits, the optimum utilization of e-resources available through NLIST among provincial colleges of Assam must be addressed. This study explores the ICT facility, the level of support by the college administration, reason behind choosing NLIST e-resources, current problems encountered by colleges, the level of the user awareness program, and efforts taken by the college library to strengthen the services among library users.

2.   Literature Review

Through his research, Patil (2022) unearthed that the NLIST program has significantly improved the standard of education and research across the nation, particularly within colleges, by leveraging e-resources. [7]. Pradhan (2022)

further investigated and highlighted how the facilities and services offered by the NLIST program significantly contribute to advancing academic research. He emphasized the online interlibrary loan service, catering to special requests from bonafide users [8]. According to Bansode & Burugale (2019) NLIST is becoming a prominent consortium for academic communities engaged in education and research activities [9]. The study by Latheef & Thiruvengadamami (2018) indicated that while 90% of member institutions have subscribed to NLIST e-resources, there is a need for increased awareness to enhance utilization [10]. In study Kaushal (2017) unveiled that users rely on NLIST e-resources to stay updated on their academic activities and gain specific knowledge [11]. Author Narayanaswamy (2016) illustrated that user awareness programs, orientation sessions, and other educational initiatives contribute to effectively utilizing NLIST resources in college libraries [12]. In study, Solanki (2016) disclosed that academic libraries play a crucial role in providing e-resources and internet facilities, acting as a boon for students and faculty to elevate the higher education system [13]. As noted by George, Pillai & Aparna (2015) Librarians have taken significant steps to address issues related to the inflation of e-resources at national and international levels among the academic community by offering NLIST e-resources [14]. Kumar (2013) emphasizes that the NLIST program is a noteworthy initiative and a revolutionary step towards providing scholarly e-resources to colleges and universities, proving to be a boon for library users in the country [15]. NLIST projects, as highlighted by Mandhirasalam & Srinivasa (2011) effectively bridge the digital divide, transforming the nation into an information-rich society [16]. Kaur (2007) stresses the importance of library professionals being competent in their users' optimum usage of subscribed e-resources [17]. This review indicates the lack of study on present study NLIST in Provincialized Government Colleges of Assam.

3. Objectives of the Study

After a deep literature review three most significant objectives have been identified for this study which is given below:

1. To explore the infrastructure facilities available in college libraries and level of authority support in colleges of Assam.

2. To identify the reason behind choosing NLIST services and problem encountered by the college libraries.

3. To disclose the activity and perception of librarian on different types of user awareness program for promoting NLIST services in college libraries of Assam.

4. Methodology

This study employs a descriptive survey methodology to evaluate the status of NLIST services and usability among 17 selected colleges of Assam. The current information on NLIST program has been retrieved from the INFLIBNET website statewide college beneficiaries list [18] and relevant literature reviewed which are available on the present study. To gather data, a closed-end questionnaire was meticulously designed and disseminated among librarians of randomly chosen 17 colleges which are currently member and accessing NLIST e-resources. The questionnaire has been structured to capture insights on collage infrastructure, authority support, reason of choosing NLIS, problem in NLIST services, need and frequency of awareness program, and current efforts which taken to enhance the NLIST access. The collected data further organized into tables, and graphs through MS Excel for comprehensive analysis and visualization of the findings. This approach aims to provide a detailed understanding of the current state of NLIS program, librarian involvement and the overall implementation of the NLIST service in the selected colleges.

5.   Discussion and analysis

5.1 ICT Infrastructure facilities in colleges

To ensure effective participation in NLIST basic infrastructural facilities like computers, Internet connection (LAN, Wi-Fi) and power backup required in the colleges. These facilities are paramount in accessing project resources and ensuring the successful implementation of the program. The Internet speed is a fundamental and important requirement for rapid access and utilization of e-resources.

5.1.1.   Computers use in accessing NLIST   e-resources

Access to e-resources in college libraries is influenced significantly by the quantity and quality of nodes for accessing e-resources. The survey revealed that 58.82% of college libraries use more than 10 computers to access NLIST resources. 17.65% revealed that they use 3 to 5 computers to access the NLIST resources. 23.53% opined that they use 2 to 3 computers to access the NLIST resources. No library is found that use single computer and 5 to 10 computers to access the NLIST resources.

Table 1: No. of computers used in accessing NLIST resources

No. of Computer	Frequency N=17	Percentage
1 computer	0	0
2 to 3 computers	4	23.53%
3 to 5 computers	3	17.65%
5 to 10 computers	0	0
More than 10 Computers	10	58.82%

Source: Author Survey

5.1.2 Networking facilities Available in colleges

Networking is the basic facility of connecting, sharing, and distributing e-resources in the college campus and beyond, and it has a significant impact on the access of e-resources. The study examines network facilities such as LANs and WiFi available at colleges and found that 100% of college libraries have LANs. The LAN facilities available college campus is 52.94%. Wifi facilities availability both in college campuses and libraries is 82.35%. No single college was found without LAN and WiFi facilities.

5.1.3 Types of Power Back-up facilities in Colleges

Assam is an underdeveloped state where load shedding is more common, and access to power supply is not satisfactory for continuous access to e-resources in college libraries. This survey tries to explore the power back-up facilities available in college libraries of Assam. Online UPS, solar batteries and power generators are the most reliable continuous power supply tools to access NLIST resources, but the survey revealed that only 47.06% online UPS, 17.65% solar batteries and 11.76% power generators

have power supply. Colleges are unable to collect due to the high cost of these devices for reliable uninterrupted power supply.
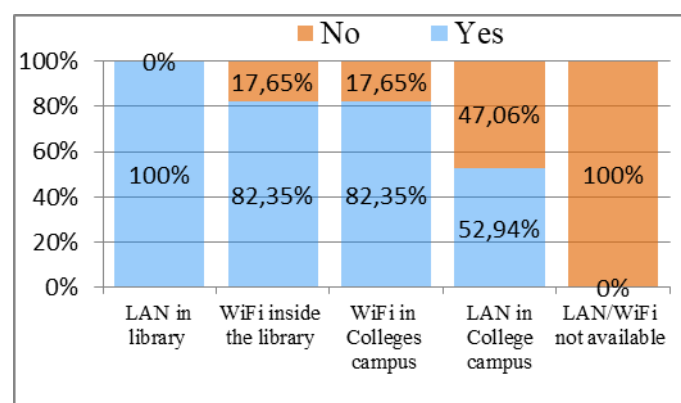

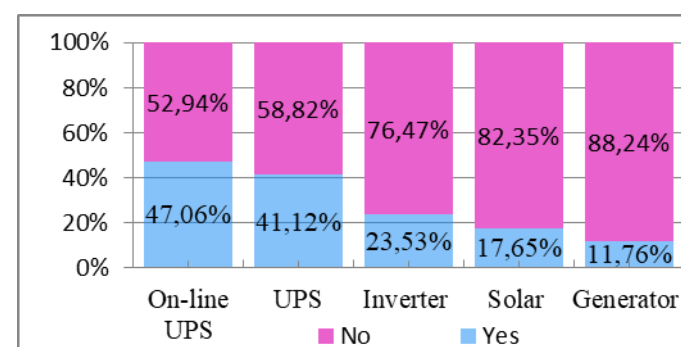Fig 1. Status networking facilities in colleges

Fig 2. Status Power backup facilities in colleges

41.12% and 23.53% of the colleges use UPS and Inverter respectively but not reliable in uninterrupted power supply.

5.1.4 Internet Connectivity Available in Colleges

Internet connectivity is the fundamental tool for accessing e-resources. Speed and access rates generally depend on different types of Internet connections, and these surveys examine the type of Internet connectivity available in colleges. The survey found that colleges are using internet connectivity of Broadband (58.82%), Fiber optic (11.76%) and other Connectivity (29%). Although fiber optic network is reliable in terms of service and speed, but the service facility of this network is not available in the majority of areas where the colleges are located.
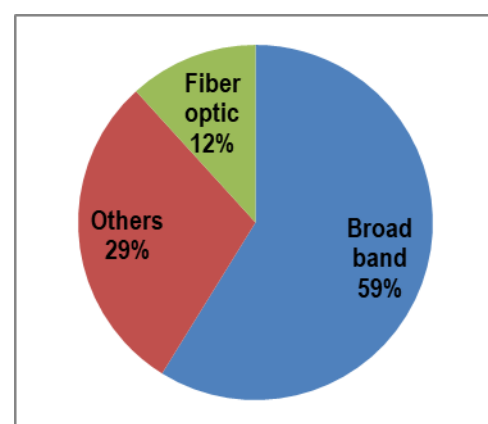
5.1.5 Users Satisfaction Level on Internet Speed

The views of the users on the benefits of the ICT infrastructure available in the colleges are reflected in the level of user satisfaction and therein lies the efficiency of the project. Internet speed is quite important for quick retrieval of required information and quick access to NLIST resources. The results of the survey are plotted in the graph and Fig 4 that 23.53% are highly satisfied, 29.41% are moderately satisfied, 23.53% are satisfied, 17.65% are somewhat satisfied, and 5.88% of colleges are not satisfied with the currently available internet speed.

Fig 3. Status of Internet Connectivity

5.2 Level of Authority Support

Support from authorities or management is crucial for any project success. The policies have no uniformity across the colleges due to the College Provincialization Act, Assam 2005. The analysis in Fig 5 indicates that college authority often (5.88%) and always (82.35%) support
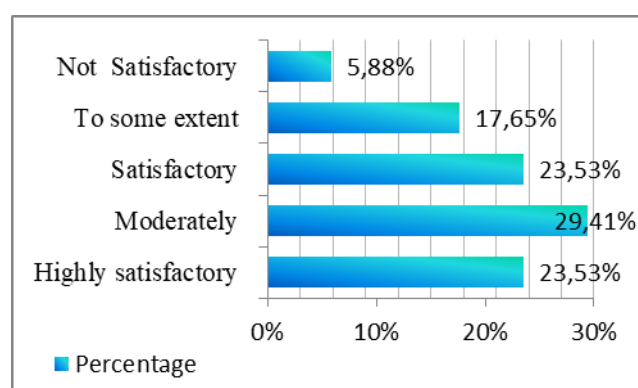

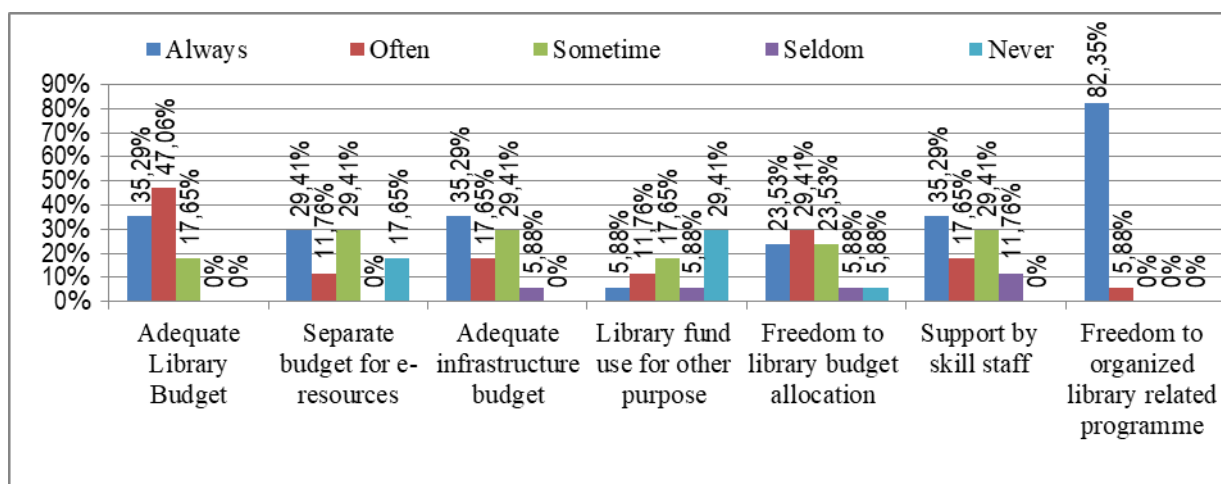Fig 4. Status of the satisfaction level on speed

Fig 4. Level of authority support for NLIST program

organizing library-related programs, but complete freedom is not endorsed. Regarding library budgets, (35.29%) always, (47.06%) often, and (17.65%) sometimes provide adequate funding. Allocating separate budgets for e-resources are allowed by (29.41%) always, (11.76%) often, and (29.41%) sometimes, while (17.65%) never support it. Infrastructure budgets receive backing from (35.29%) always, (17.65%) usually, (29.41%) occasionally, and (5.88%) seldom. Using library funds for other purposes is accepted by (5.88%) always, (11.76%) often, (17.65%) sometimes, and (5.88%) rarely, with (29.41%) opposing it. Support for the librarian's freedom to allocate the budget are (23.53%) always, (29.41%) often, (23.53%) sometimes, and (5.88%) seldom, while (5.88%) never support it. College authorities consistently (35.29%) and usually (17.65%), sometimes (29.41%) assist in providing skilled staff for library services, and (11.76%) of authorities do not help by providing skilled staff.

5.3 Reason on selection the NLIST program for e-resources

Table 2 indicates the important factors which are influencing the decision-making process of college libraries in Assam when selecting NLIST resources. A total of 41.17% of libraries indicated that the selection of NLIST resources demand influenced by the users. In total, 58.82% of colleges stated that their decision to choose NLIST resources was driven by a commitment to bolster the implementation of the National Education Policy (NEP) 2020, highlighting the

program's alignment with national educational objectives. A significant number 82.35%, of libraries opted NLIST resources to extend their library services and augment their collection, emphasizing the role of these resources in enriching the overall library services. An overwhelming majority of 88.24% colleges selected NLIST resources based on authenticity of the content, highly scholarly academic material, and for the regular NAAC inspection in the colleges. The college libraries align with NLIST resources for accreditation standards and academic excellence. A significant majority, 94.12%, of libraries chosen NLIST resources based on perceived reliability of the content, indicating a high level of trust in the quality and accuracy of the resources. The usability and of e-resources and for the users (100%) college libraries agree on NLIST e-resources, recognizing their ease of use and the chance to offer valuable digital resources to their users against their demands.

Table 2. Reason on selection of NLIST program for e-resources

Reason on selection	Frequency N=17	Percentage
Usability of the resources	17	100%
To provide e-resources to users	17	100%
Reliability of the resources	16	94.12%
Under the college budget	15	88.24%
For NAAC inspection purposes	15	88.24%
Scholarly academic contents	15	88.24%
For the growth of library collection	14	82.35%
To extend the library services	14	82.35%
Lower price of E-resources	11	64.47%
It supports information requirement of NEP2020	10	58.82%
To fill the users demand	7	41.17%

Source: Author survey

5.4 Problems Encountered in providing the NLIST Services

The success of project execution heavily depends on how the challenges encountered during the execution. Data revealed in table 3 indicates that majority of the library (70.59%) facing problem of slow internet speed,
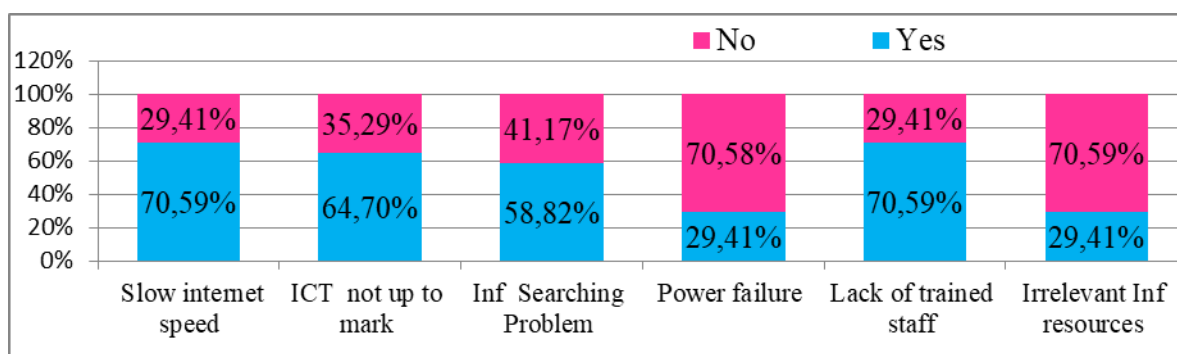

Fig 5. Problems encountered to provide the NLIST services

insufficient ICT infrastructure (64.70%), and difficulties in information search (58.82%). Some libraries (29.41%) encountering the problem of power failure which force to stop the access of information by the users. The trained staff always required for the smooth services specially where the technical aspect involve. The data shows that (70.59%) running with the shortage of the expert staff which impact the NLIST access in the library. Nearly (29.41%) library profession believes that resources available with the NLIST platform not fully relevant for their library users which needs to be address by the NLIST service provider.

5.5 Needs for awareness programs in colleges

The survey indicates a significant growth on uses of NLIST e-resources through awareness programs in colleges. Majority of librarians strongly agree with the positive impact of training and awareness initiatives through orientation, workshop, and tutorial, hands-on training, printed materials, social media, college website, library notice board.

Table 3: Needs of awareness & training programmes in colleges

Types of Awareness Programme	Strongly Agree	Agree	No comment	Disagree
Orientation	9 (52.94%)	6 (35.29%)	0	1 (5.88%)
Workshop	9 (52.94%)	4 (23.53%)	0	1 (5.88%)
Tutorial	6 (35.29%)	4 (23.53%)	0	0
Hand-on training by staff	9 (52.94%)	5 (29.41%)	0	0
Printed manual	5 (29.41%)	4 (23.53%)	1 (5.88%)	1 (5.88%)
Tutorial videos	4 (23.53%)	5 (29.41%)	1 (5.88%)	0
Social Media	6 (35.29%)	3 (17.65%)	1 (5.88%)	0
College website	11(64.71%)	3 (17.65%)	1 (5.88%)	0
Library Notice Board	10 (58.82%)	4 (23.53%)	1 (5.88%)	0
Any other, Specify	0	1 (5.88%)	1 (5.88%)	0

Source : Author Survey

The 52.94% strongly agree and 35.29% agree on orientation program to conduct for awareness among users about NLIST resources. Total 52.94% strongly agree and 23.53% agree on opting the workshop method. The 35.29% librarians

strongly agree and 23.53% agree on tutorial methods where 52.94% strongly agree and 29.41% agree on Hands-on training for awareness program. On the use of printed manual, 29.41% librarian strongly agree and 23.53% agree where 35.29% strongly agree and 17.65% agree on social media tools to spread awareness. The highest number of college librarian 64.71% strongly agree and 17.65% agree to use college website where 58.82% strongly agree and 23.53% agree to use the library notice board for awareness program. This broad agreement indicates recognition of the diverse channels through which awareness can be effectively disseminated. College librarians agree that different awareness activities significantly contribute to increase usage of NLIST resource. This alignment emphasizes the varied approaches and platforms that collectively contribute to the success of awareness programs. However, a small percentage (5.88%) of college librarians disagree that awareness activities, such as orientations, workshops, and printed manuals, can effectively increase the use of NLIST resources. This dissenting view suggests the need for further exploration or targeted strategies to address concerns or gaps in the awareness programs perceived by this subset of librarians. In summary, the overall positive response from librarians underscores the value of a multifaceted approach to awareness programs, recognizing the significance of different channels and activities in promoting the use of NLIST e-resources in college libraries in Assam.
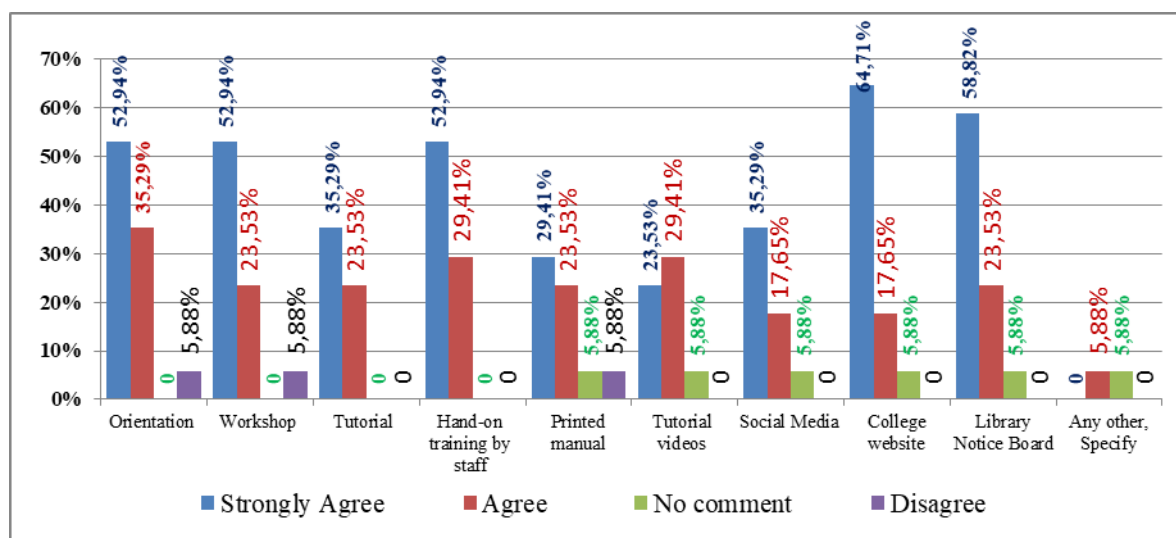

Fig 5. Needs of awareness & training program in colleges

5.6 Frequency of organizing awareness programs in colleges

The data on conducting awareness program from librarian collected on yearly basis, six-monthly, three monthly, as per requirements, and no comments shown in table 3.

Annual programs are an optimal schedule for colleges as all academic programs of colleges are scheduled annually and the percentage of programs organized annually in colleges is Orientation (70.59%), Workshops (23.59%), Tutorials (17.65%). , hand-on training (23.535), distributed print manuals (23.535) and social media used (11.76%). On the other hand, some colleges prefer six-monthly programs in conjunction with the semester-based academic schedule of colleges and the percentage of programs organized such six-monthly is orientation (11.76%), tutorials (5.88%) and hands-on training (5). .88%) and social media used (11.76%). However, the results of the survey importantly reflect that no records of workshops and printed manuals organized six-monthly have been found. Awareness programs held at three-month intervals are as significant as short-term programs in higher education institutions. Fig 6. reflected that very few colleges prefer awareness programs at three-month intervals and 5.88% suggested that the use of social media, workshops, tutorials and hands-on training programs is effective for colleges. Awareness programs organized according to the needs of institutions and user demand are very important in cost-effective scheduling of programmes. However, 17.65% of the respondents suggested programs such as orientation, workshops, and

Table 3. Frequency on organized awareness program in college (N=17)

Types of Awareness Program	Yearly	Six-monthly	Three-monthly	As per requirement	No Comment
Orientation	12 (70.59%)	2 (11.76%)	0	3(17.65%)	0
Workshop	4(23.53%)	0	1 (5.88%)	3(17.65%)	9 (52.94%)
Tutorial	3(17.65%)	1 (5.88%)	1 (5.88%)	2(11.76%)	10(58.82%)
Hand-on training	4(23.53%)	1 (5.88%)	1 (5.88%)	7(41.18%)	4(23.52%)
Printed manual	4(23.53%)	0	0	3(17.65%)	10(58.82%)
Use of Social Media	2(11.76%)	2 (11.76%)	1 (5.88%)	2 (11.76%)	10(58.82%)

Source: Author survey

distribution of printed manuals according to the needs of the institutions. While 11.76% of the respondents were interested in awareness programs as demanded

by users of the institutions. Majority i.e. 41.65% of the respondents suggested hands-on training for running and accessing NLIST program according to user demand. However, non-responders against comments in each aspect of awareness programs seem to be significantly higher, but only comments against orientation programs were not found to be null and only hands-on training programs record significantly fewer (23.52%) than positive comments.
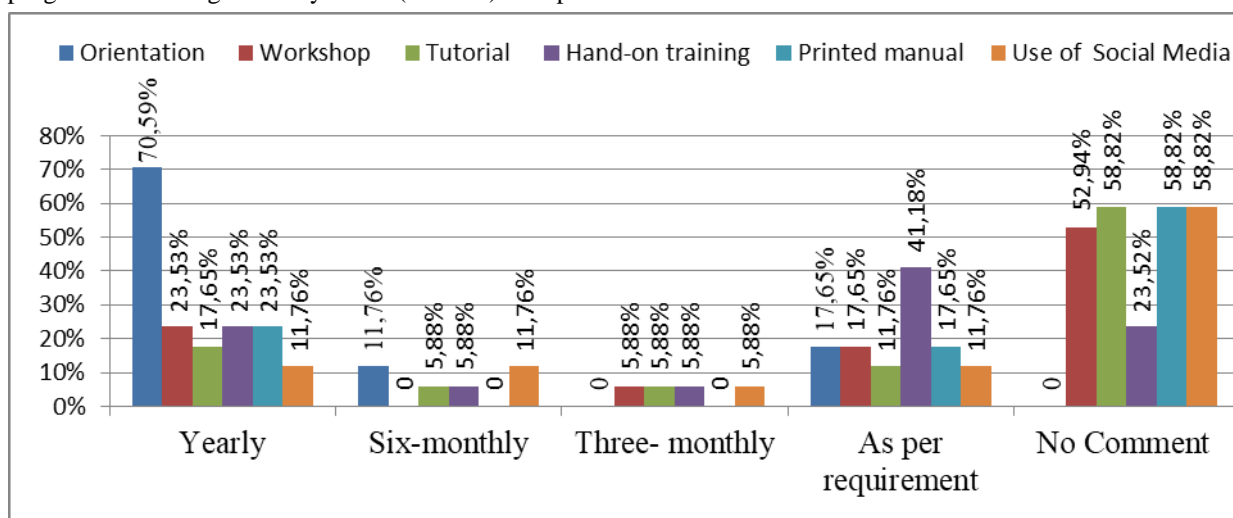

Fig 6**.** Frequency on organized awareness program in college

5.7 Current efforts undertaken to utilize the NLIST Resources

It is evident from the data depicted in figure 6, that colleges of Assam have been actively undertaken, regular awareness program, manual access support, Selective dissemination of information (SDI) on NLIST, Current Awareness service (CAS) on NLIST, through RSS feeding and even e-content by email.

The 82.35% library already taken steps regarding regular awareness program and manual access support, followed by 23.53% through SDI, and CAS, 17.65% by RSS feed. The highest
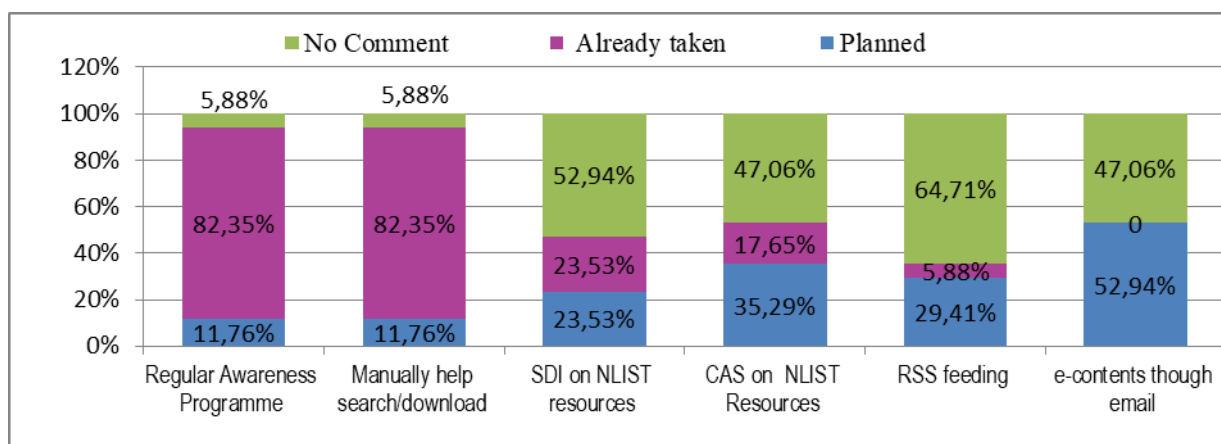
Fig 6. Current efforts undertaken to utilize the NLIST Resources

number of libraries 52.94% planned to provide e-content through email followed by 29.41% RSS feed, 35.29% CAS, 29.41% RSS feed, 35.29% CAS, 11.76% both for regular awareness and manually access support. The highest majority of library 64.71% silent on RSS feed followed by 54.94% SDI, 47.06% CAS, 47.06% on e-content through email, and 5.88% equal for regular awareness program and manually access support.

5.8 Role of NLIST resources in NAAC assessment

NAAC inspection of UGC recognized Higher Education Institutes in India is compulsory and a very important assessment process to determine the quality standards of educational institutions. Achieving higher NAAC grades by HEIs is crucial for the legitimacy of the institution and the government reorganization and validation process. NLIST resources play a significant role in achieving high grades to the institution by scoring well under the criteria of infrastructure and learning resources in the NAAC evaluation process. In many colleges, NLIST resources are only e-resources and play a major role as the source of the main criteria for the NAAC inspection process. Some parameters have been taken to analyze the role of NLIST resources in NAAC assessment process in colleges of Assam and the results were discussed here. 100% of colleges earmarked for assessment commented that NLIST resources were helpful to the NAAC assessment process. NLIST resources standardized library collection according to 94.18% of the colleges. It is helpful for getting good grades as revealed by 76.475 and according to 58.82% of the colleges it is helpful to face e-resource questions in NAAC assessment process. The survey found that NLIST resources as e-resources only played a significant role in the NACA assessment process in 41.18% of colleges in Assam. Regarding the purpose of the NACT inspection, no negative comments were received against NLIST resources.
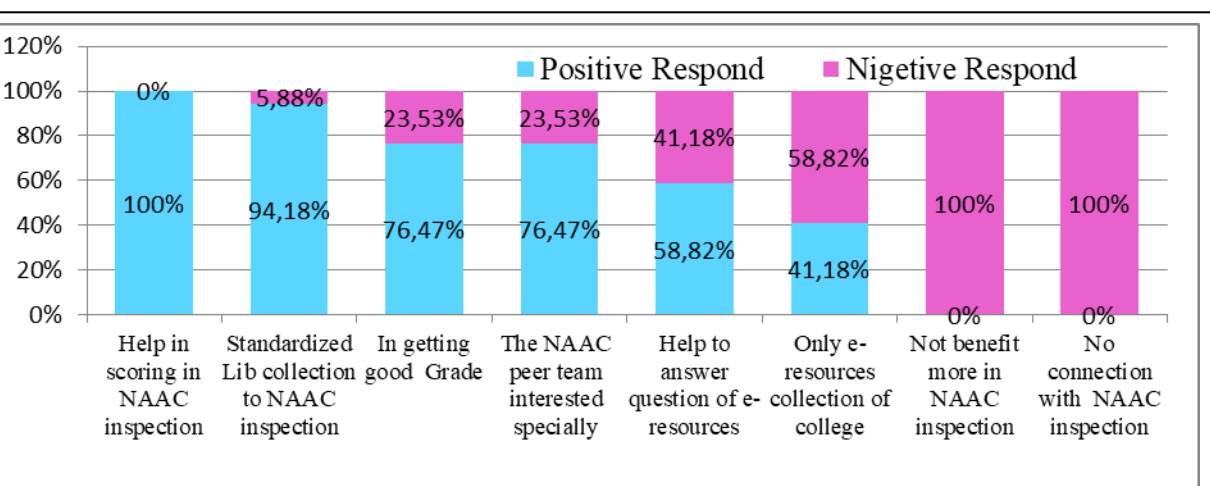

Fig 7. Role of the NLIST resources in NAAN assessment

6. Major Finding and Suggestion

The data analysis reveals crucial findings for maximizing NLIST resources in college libraries across Assam. The existing ICT infrastructure requires a significant overhaul, including increasing the number of computers, enhancing Wi-Fi connectivity, implementing power backup systems, providing technical support, and facilitating remote access for users to ensure 24/7 connectivity with NLIST resources. Strong support from authorities and dedicated willpower is essential for effectively executing long-term plans and policies. The findings suggest that college administrations must augment the current library budget, allocate special funds for e-resources, promote library-related programs, support skill enhancement initiatives for library staff, and provide the necessary infrastructure. Librarians evaluate the importance of the NLIST program based on factors such as usability and reliability of e-resources, alignment with college budgets, necessity for NAAC evaluation, inclusion of scholarly content, augmentation of library resources, and support for NEP 2020. This highlights the diverse reasons why colleges choose NLIST resources for their libraries. The analysis also indicate that libraries must address challenges such as slow internet speeds, inadequate ICT infrastructure, information search difficulties, and shortages of technical staff. Awareness programs are essential for enhancing the usability and accessibility of any system or facility. To maximize the use of NLIST resources, libraries must increase the frequency of library orientations, technical workshops, hands-on training sessions, and tutorial programs, transitioning from a yearly to a semi-annual basis. The college websites, social media platforms, and library notice boards can used to promote NLIST resources. Regarding current efforts, the findings suggest that regular awareness programs, Selective Dissemination of Information (SDI), manual assistance, Current Awareness Services (CAS), and e-content distribution via email and RSS feeds are deemed insufficient and need enhancement by libraries.

7. Conclusion

The current study reveals that colleges in Assam have been facing numerous challenges to promote the usage of e-resources available through NLIST. Establishing electronic resources and promoting digital learning environments within colleges is urgently necessary. The deficiency in ICT infrastructure and sluggish internet speeds collectively hinder providing quality e-resource services. The low adoption rate of fiber optic connectivity, observed in just

11.76% of colleges, highlights the crucial need for advanced high-speed internet access to utilize e-resources fully. Despite 70.57% of college librarians conducting awareness and training programs, 52.94% still feel the need for further orientation, workshops, training sessions, and awareness initiatives in Higher Education Institutes across Assam. To maximize the impact of the NLIST project in Assam, it is essential to conduct publicity and marketing campaigns targeting college awareness, attracting more colleges to benefit from the initiative. The study reveals a significant gap in the utilization of NLIST resources in Assam's colleges, requiring prompt attention to bring these colleges in line with those in other states of India.

References

1.   N-LIST (nd). about us. https://nlist.inflibnet.ac.in/vabout.php (Retrieved 8th February, 2024).

2.   NLIST (nd). Membership registration. https://nlist.inflibnet.ac.in/vregister.php (Retrieved 8th February, 2024)

3.   N-LIST   (nd).   *Information   Brochure.* https://nlist.inflibnet.ac.in/docs/nlist_brochure_high.pdf. (Retrieved 8th February, 2024).

4.   NLIST (nd). *College status.* https://nlist.inflibnet.ac.in/vstatus.php (Retrieved 10th January, 2024).

5.   Parmar, P. T. (2017). *Use and utilization of N-LIST programme in affiliated colleges of Veer Narmad South Gujarat University and Hem Chandra charya North Gujarat University of Gujarat: A comparative study.* Veer Narmad South Gujarat University, Surat. 215p. https://shodhganga.inflibnet.ac.in/handle/10603 /353540 (Retrieved 26th August 2022).

6.   Malipatil, B. (2020). Role of INFLIBNET in India library services. *International Research Journal of Education and Technology.* 1(4), 62-67. https://www.irjweb.com/V1I4%20IRJET-7.pdf.   (Retrieved   12th   January, 2024).

7.   Patil, S.S. (2022). The role of colleges and information centre to access e-resources of NLIST program. *International Journal of Advance and Applied Research (IJAAR)*, 2022, 10(1), 487-496. DOI: http://10.5281/zenodo.7205100. (Retrieved 2nd November 2023).

8.   Pradhan, S. S. (2022). N-LIST: effective e-resources for academic research and development. International Journal of Advance and Applied Research (IJAAR), 10(1), 497-503. DOI: http://10.5281/ zenodo.7205126.

9.   Bansode, N .N. and Burugale, N. V. (2019). Journal of advancements in library sciences usages and effectiveness of INFLIBNET N-LIST programme: A study. *Journal of Advancements in Library Sciences (JoALS).* 6(1), p.272- 278. DOI: https://doi.org/10.37591/joals.v6i1.1771.

10.   Latheef, N.A. and Thiruvengadamami, T.K. (2018). Role of INFLIBNET access in arts & science college libraries: with special reference to Islamic management colleges of Tamil Nadu. *International Research: Journal of Library & Information Science*, 8(4), 546-553. http://irjlis.com/wp-content/uploads/2019/07/9-IR506-84.pdf . (Retrieved 25-12-2023).

11.   Kaushal, S. (2017). Usage of the N-LIST e-resources: an evaluative study of select degree colleges affiliated to Panjab University*, Panjab University*. 202p. https://shodhganga.inflibnet.ac.in/handle/10603 /206037 (Retrieved 25th December 2023).

12.   Narayanaswamy B.V. (2016). Use and awareness of N-LIST services by degree colleges in Bangalore: a study. *International Research Journal of Multidisciplinary Science & Technology*, 1(5), p.63-68. https://www.researchgate.net/publication/346602079_Use_and_Awareness_of_NList_Services_By_Degree_Colleges_in_Bangalore_A_Study (Retrieved 25[th]Nov, 2023).

13.   Solanki, M. R. (2016). Awareness and use of n-list programme in college libraries affiliated to Saurashtra University. *International Journal of Research in Humanities & Soc.* Sciences, 4(5), 35-44. https://www.raijmr.com/ijrhs/wp-content/uploads/2017/11/IJRHS_2016_vol04_issue _05_07.pdf. (Retrieved 29th October, 2023).

14.   George, A., Pillai, M.G. & Aparna , P R. (2015). *Use of N-LIST programme and the role of college librarians: a survey.* In International Conference on Building Knowledge Centres, NMAM Institute of Technology. p.1-6. http://eprints.rclis .org /24825/ (Retrieved 30th October, 2023).

15.   Kumar, G. R. (2013). Awareness and use of electronic resources through N-List: A boon to academic libraries. *International Journal of Librarianship and Administration*, 4(1), pp.17-25. http://www.ripublication.com/ijla.htm. (Retrieved 25th November, 2023).

16.   Mandhirasalam, M. & Srinivasa Ragavan, S (2011). N-LIST: An E-learning library consortium for colleges and universities to access e-resources. In National Conference on Networking of Libraries, Resources, Technologies and Users in the Knowledge Society (SALIS 2011) National Engineering College, Kovilpatti p. 425-431, https://www.researchgate.net/publication/344327995 (Access on 2-02-11-2023).

17.   Kaur, N. (2007). E-resources and collection development: Emerging issues for the academic libraries. 5th International CALIBER-2007, Panjab University, Chandigarh. p. 599-607. (Retrieved 25th November, 2023).

18.   NLIST   (nd).   State   wise   college   beneficiaries   list. https://nlist.inflibnet.ac.in/vstatewise.php (Retrieved 25th February, 2024) ……………@……………….