

Use of Electronic Resources in N-LIST Programme by the Undergraduate Students of Four Postgraduate Colleges of Jalandhar District, Punjab: A Study

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Abstract - This paper focuses on the use of electronic resources available in N-LIST Programme by the Undergraduate Students of four Postgraduate Colleges of District Jalandhar (Punjab). The aim of this paper is to examine the use of various e-resources by their UG students. The N-LIST Programme is providing 135000 e-books and 6000 e-journals for the college libraries at the national level. The study shows that 94.64% UG students of four different colleges are aware with the program. 75.92% UG students of four different colleges are using e-resources available in N-LIST Programme twice a week. The study covers 15 different aspects of the e-resources under the N-LIST Programme and is very helpful for college librarians to examine their e-resources very effectively.

Keywords: E- Resources, N-LIST Programme, UG Students, Colleges, Jalandhar

I. INTRODUCTION

In present era, Electronic resources are easily available due to advancements in technology. Publishers and users prefer e-resources rather than printed materials due to easy portable, easy access, time saving, more economical, 24x7 availability. Libraries are spending huge amount for the purchase of e-journals, e-books, databases etc; but due to financial constraint a large number of libraries unable to subscribe all types of electronic resources. Therefore the concept of consortia comes up to solve these type problems.¹ In India, N-LIST Programme is running to provide 135000 e-books and 6000 e-journals for the college libraries which is fully funded by the MHRD, Govt. of India.

A. N-LIST (National Library and Information Services Infrastructure for Scholarly Content)

The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)" is being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi. The consortium provide cross-subscription to e-resources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE resources for universities and UGCINFONET resources for technical institutions, it also provide access to selected e-resources to colleges. The N-LIST project provide access to e-resources

to students, research scholars and faculty members from colleges and other beneficiary institutions through server(s) installed at the INFLIBNET Centre. The authorized users from colleges can access e-resources and download articles required by them directly from the publisher's website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre.² As per recommendation of an Expert Committee, the MHRD has formed e-ShodhSindhu with merging three consortia, namely UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. The e-ShodhSindhu will keep on current as well as archival access to more than 15,000 core and peer-reviewed journals, bibliographic, citation and factual databases in various disciplines from a big number of publishers and aggregators. The consortium will include centrally-funded technical institutions, universities and colleges that are covered under 12(B) and 2(f) Sections of the UGC Act.³

B. Current Status of N-LIST (National Library and Information Services Infrastructure for Scholarly Content)

As on 16 September 2016, a total number of 5297 colleges are registered with the N-LIST programme. N-LIST Programme covers 4007 Govt. / Govt.-aided colleges covered under the section 12B of UGC Act as well as Non-Aided colleges. The authorized users of these colleges can access to e-resources under this programme. Members of this programme are paying Rs. 5750/- as annual subscription fee to access e-resources. The e-resources can be accessed from the N-LIST website (<http://nlist.inflibnet.ac.in>).⁴

II. LITERATURE REVIEW

Some of the studies related to the present study are as under:

Gill (2012)⁵ conducted a study to know the usage of e-journals among the users of ICMR libraries in Delhi. The study reveals that e-journals play a major role in information dissemination process in the libraries. A large number of users of ICMR libraries are well known about the availability of e-journals at their libraries and they are regularly use e-journals for their research needs.

Ambika and Ali (2014)⁶ made a survey to determine the awareness of e-resources among library users and promote the use of electronic resources available at the Kalasalingam University Library (KLUL). The study reveals several issues, include inadequate user account, lack of speed in access, lack of knowledge in searching techniques and lack of time. 53.84% of the respondents feel that the publicity of e-resources is essential and they listed the publicity method of creating links to the library web pages from the institutional homepages. As far as purpose for use of e-resources was concerned, majority of them use e-resources for their project work and preparing papers for presenting in conferences and seminars.

Parveen (2014)⁷ study focused that UGC INFONET Consortium is positive impact on the users and the respondents; they are very satisfied with e-resources available in the consortium. Users suggest to organize awareness programme in the library of University of Lucknow to access e-resources comfortably. The study shows that users of the library are satisfied with UGC Infonet consortium.

Biradar and Kumar D (2016)⁸ survey reveals that 99% respondents are aware about UGC-Infonet Consortium. 50% respondents use e-resources at least once a week, 18.82% use several times, 11.76% use daily. 88.24% access e-resources in library, 28.24% in departments, 27.06% in computer labs, 5.88% in cyber cafe and 4.71% in other sources. 98.82% respondents prefer alphabetical and subject list of UGC-Infonet e-resources provided by library.

Hajam (2015)⁹ in his study shows that 80.6% respondents prefer both print and electronic medium for reading e-journals. The purpose for use e-journals in order of priorities are 'primary research'(50%), 'writing proposals, articles' (35%), 'current awareness' (30%), 'internal/external presentation'(27.5%) and 'background research'(22.5%).

Krishnamurthy and Awari (2015)¹⁰ in their study reveal that electronic information resources have a great impact on the PG students. Therefore, the future of academic libraries depends upon the collection of electronic information resources and services to provide with changing needs. Hence the university library must update the collections (both print and electronic) regularly and also enhance IT infrastructure and recruit skilled professionals to provide effective and efficient services to the users and remain vibrant to changing environment of the 21st century.

Ravinder (2015)¹¹ study highlights the problems in accessing the UGC-Infonet e-journals consortium by the research scholars from the Sri Krishnadevaraya University library. The study reveals that users accept huge information by the electronic journals for their research progress but they feel lack of training to access e-journals in the library. Users want to organize training and orientation program in

the library which shows positive attitude and support in favour of electronic resources available in the library. The study reveals that orientation and training programmes should be conducted from time to time by the university to provide training in the use of e-journals. The infrastructure facilities should be increased for the better utilisation of UGC-Infonet e-journals.

Velmurugan and Amudha (2015)¹² survey reveals that 58.59% respondents access daily ICT based resources, 29.08% access weekly, 12.33% access monthly. 37.58% respondents use ICT based resources for research purpose, 24.92% for career information, 19.75% for class teaching and 17.75% for getting general information. 54.08% respondents spent 0-1 hours on using ICT based resources, 24.17% spent 1-2 hours, 13% spent 2-3 hours, and 7.75% spent more than 3 hours.

Jagjit Singh (2016)¹³ survey on usage of e-resources by the PG Students of Doaba College Jalandhar. The survey reveal that 51.12% of PG students use electronic resources frequently, 31.12% use sometimes, 13.34% use always and only 4.45% use never. 43.34% PG students use electronic resources outside the library, 43.34% use within the library and 13.34% use in the computer department. 51.12% PG students agree with the quantity of e-resources available in the college library, 34.45% disagree with quantity, 10% strongly agree and only 4.45% strongly disagree with the quantity. 71.12% PG students are satisfy with available e-resources, 18.89% are very satisfy, and 10% are somewhat satisfy.

Yogendra Singh (2016)¹⁴ study highlights that In IIT Roorkee 25% top titles download by less than 1% users, next 25% downloaded by 2-3% users, next downloaded by 5-6% users and 50% titles are never use. The study reveals that out of 2500 titles only 250 titles (5%) heavily use.

III. NEED FOR THE PRESENT STUDY

The study deals with UG students of Four Post Graduate Colleges of District Jalandhar (Punjab) who are using e-resources through this programme. The study will focus on the use of N-LIST programme in various aspects and problem faced by the UG students during access to the e-resources. The study will be helpful for the college libraries to better management of their e-resources.

IV. OBJECTIVES OF THE STUDY

Objective of the study will be following as:

1. To find out accessibility of e-resources in N-LIST Programme from the UG students view point.
2. To find out satisfaction level of UG students after using e-resources available in N-LIST Programme.
3. To find out the preferences of e-resources in N-LIST Programme by the UG students.
4. To identify the maximum use of e-resources in N-LIST Programme.

5. To know the view of UG students of four different colleges about N-LIST program.

4. Lyallpur Khalsa College for Boys , Jalandhar

V. SCOPE OF THE STUDY

The scope of the study is limited to UG students of Four Post Graduate Colleges of District Jalandhar (Punjab). The institutes included in the study are as follows i.e.

1. Apeejay College of Fine Arts, Jalandhar
2. DAV College, Jalandhar.
3. Doaba College, Jalandhar

VI. RESEARCH TECHNIQUE

Questionnaire technique was applied for collecting the data. This study covers 15 different aspects of N-LIST programme to know the UG students opinion about it. 400 questionnaires were distributed personally among the UG students of these colleges. Out of which 373 questionnaires were received back with their response as shown in table 1.

TABLE I NUMBR OF RESPONDENTS

Name of the college	Questionnaires Distributed	Response	
	UG Students	UG Students	Total (Ave %)
Apeejay College of Fine Arts Jalandhar	100	92	92 (92%)
DAV College, Jalandhar.	100	91	91 (91%)
Doaba College, Jalandhar	100	96	96 (96%)
Lyallpur Khalsa College for Boys , Jalandhar	100	94	94 (94%)
Total	400 (100%)	373	373 (93.25%)

VII.ANALYSIS AND FINDINGS

TABLE II AWARENESS OF N-LIST PROGRAMME

Name of the college	Yes	No
Apeejay College of Fine Arts Jalandhar	84 (91.30%)	08 (8.70%)
DAV College, Jalandhar.	89 (97.80%)	02 (2.20%)
Doaba College, Jalandhar	91 (94.79%)	05 (5.21%)
Lyallpur Khalsa College for Boys , Jalandhar	89 (94.68%)	05 (5.32%)
Total	353 (94.64%)	20 (5.36%)

Table 2 shows that 94.64% UG students of different colleges included in the study are aware about N-LIST Program and 5.36% are not aware with it.

TABLE III MODE OF AWARENESS

Mode of Awareness	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
Library orientation programme	26	22	43	18	109 (30.88%)
Library staff	54	63	46	68	231 (65.44%)
Colleagues	4	4	2	3	13 (3.68%)
Total	84	89	91	89	353 (100%)

Table 3 shows that 65.44% UG students of different colleges are aware about N-LIST Program through their library staff, 30.88% through their library orientation programme and 3.68% through their colleagues.

TABLE IV FREQUENCY LEVELS OF UG STUDENTS TO USE N-LIST PROGRAMME

Frequency	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
Daily	18	14	19	16	67 (18.98%)
Twice a week	65	70	64	69	268 (75.92%)
Once a week	1	3	6	3	13 (3.68%)
Twice a month	-	2	1	1	4 (1.13%)
Less often	-	-	1	-	1 (0.28%)

Table 4 shows that 75.92% UG students of different colleges use N-LIST Program twice a week, 18.98% use daily, 3.68% use once a week, 1.13% twice a month and 0.28% use less often.

TABLE V PLACE OF ACCESSIBILITY

Place of Accessibility	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
Library	36	41	43	35	155 (43.91%)
Workplace	2	5	4	3	14 (3.97%)
Home	46	43	44	51	184 (52.12%)

Table 5 shows that 52.12% UG students of different colleges access N-LIST Program from their home, 43.91% from their library and 3.97% from their workplace.

TABLE VI ACCESS PREFERENCES IN N-LIST PROGRAMME

Preference	Number of User				Total (Ave %)
	Apeejay College of Fine Arts Jalandhar	DAV College, Jalandhar.	Doaba College, Jalandhar	Lyallpur Khalsa College for Boys, Jalandhar	
Author	36	32	23	41	132 (37.39%)
Title	69	41	48	41	199 (56.37%)
Subject	52	63	61	72	248 (70.25%)
Keywords	46	41	54	61	202 (57.22%)

Table 6 shows that 70.25% UG students opt subject preference to access e-resources in N-LIST Program, 57.22% keywords preference, 56.37% title preference and 37.39% author preference.

TABLE VII PURPOSE TO ACCESS N-LIST PROGRAMME

Purpose	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
For research/project work	31	23	34	36	124 (35.13%)
For finding relevant information in the area of specification	42	39	49	44	174 (49.24%)
For getting current information	39	42	46	38	165 (46.74%)
For updating knowledge	41	52	51	46	190 (53.82%)
For writing paper and presenting paper in the seminars/conferences	31	26	21	26	104 (29.46%)

TABLE VIII PREFERENCE OF PUBLISHER IN N-LIST PROGRAMME

Publisher	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
American Institute of Physics	10	14	16	11	51(14.45%)
American Physical Society	4	7	3	9	23(6.52%)
Annual Reviews	6	4	5	7	22(6.23%)
Cambridge University Press	17	23	11	9	60(17.00%)
Institute of Physics	6	3	3	4	16(4.53%)
Oxford University Press	11	19	21	14	65(18.41%)
Royal Society of Chemistry	8	9	6	11	34(9.63%)
Economic & Political Weekly	12	17	8	21	58(16.43%)
Indian Journals	46	58	61	60	225(63.74%)
JSTOR	25	28	34	41	128(36.26%)
EBSCOHOST	23	32	37	29	121(34.28%)
Cambridge Book Online	10	8	12	9	39(11.05%)
Oxford Scholarship	4	5	7	9	25(7.08%)
Net Library	10	14	9	19	52(14.73%)
Mylibrary- McGraw Hill	12	11	9	16	48(13.60%)
Hindustan Book Agency	3	1	1	5	10(2.83%)
Institute of South Asian Studies	6	3	2	9	20(5.67%)
Springer eBooks	41	32	41	49	163(52.71%)
Sage Knowledge Books	23	32	40	31	126(35.69%)
Taylor & Francis eBooks	37	23	32	36	128 (36.26%)
E-Brary	49	56	60	39	204 (57.79%)

Table 7 shows that 53.82% UG students of different colleges use N-LIST Program for updating their knowledge, 49.29% use for finding relevant information, 46.74% use for getting current information, 35.13% for their

research/project work, and 29.46% use for writing/presenting paper in the seminars/conferences.

Table 8 shows that UG students of different colleges access Indian Journals with a maximum of 63.74%, E-Brary

57.79% Springer 46.18%, JSTOR and Taylor & Francis 36.26%, Sage 35.69%, EBSCOHOST 34.28%, OUP 18.41%, CUP 17.00%, EPW 16.43%, Net Library 14.73%, AIP 14.45%, Mylibrary 13.60%, Cambridge Book Online

11.05%, Royal society of chemistry 9.63%, Oxford Scholarship 7.08%, APS 6.52% Annual Reviews 6.23%, South Asian Studies 5.67%, Institute of Physics 4.53% and Hindustan Book Agency 2.83%.

TABLE IX ADEQUACY OF INFORMATION AVAILABLE THROUGH N-LIST PROGRAMME

Adequacy	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
Always	81	86	86	87	340 (96.32%)
Sometimes	3	3	5	2	13 (3.68%)
Total	84	89	91	89	353 (100%)

Table 9 shows that 96.32% UG students of different colleges admit adequacy of information through N-LIST program is always adequate and 3.68% admit sometimes.

TABLE X SATISFACTION WITH N-LIST PROGRAMME

Satisfaction	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
Very satisfied	14	21	19	23	77 (21.81%)
Satisfied	70	68	72	66	276 (78.19%)
Total	84	89	91	89	353 (100%)

Table 10 shows that 78.19% UG students of different colleges are satisfied with N-LIST program and 21.81% are very satisfied.

TABLE XI PROBLEMS FACED WHILE ACCESS N-LIST PROGRAMME

Problems	Number of User				Total (Ave %)
	Apeejay College of Fine Arts	DAV College	Doaba College	Lyallpur Khalsa College for Boys	
Slow access speed	34	31	23	29	117 (33.14%)
Difficulty in finding the relevant information	20	29	28	23	100 (28.33%)
Too much information is retrieved	21	22	28	27	98 (27.76%)
Difficulty in using e-journals due to lack of IT knowledge/learning	1	2	2	1	6 (1.70%)
Limited access to computers	8	5	10	9	32 (9.07%)

Table 11 shows that 33.14% UG students of different colleges face slow access speed, 28.33% face difficulty in finding information, 27.76% face too much information,

9.07% admit lack of IT knowledge/ training and 1.70% face limited access to computer in the library.

TABLE XII ADVANTAGES OF N-LIST PROGRAMME

Advantages	Number of User				Total (Ave %)
	Apeejay College of Fine Arts Jalandhar	DAV College, Jalandhar.	Doaba College, Jalandhar	Lyallpur Khalsa College for Boys, Jalandhar	
Time saving	66	72	67	81	286 (81.02%)
Easy to use	69	74	74	73	290 (82.15%)
More informative	61	67	73	77	278 (78.75%)
More interactive	56	46	49	58	209 (59.21%)
More useful	58	69	66	72	265 (75.07%)
More preferred	59	51	56	47	213 (60.34%)

Table 12 shows that 82.15% UG students of different colleges admit N-LIST Program is easy to use, 81.02% admit time saving, 78.75% admit more informative, 75.07% admit more useful, 60.34% admit more preferred and 59.21% admit more interactive.

TABLE XIII EFFECT OF N-LIST PROGRAMME ON THE QUALITY OF RESEARCH

Effect	Number of User				Total (Ave %)
	Apeejay College of Fine Arts Jalandhar	DAV College, Jalandhar.	Doaba College, Jalandhar	Lyallpur Khalsa College for Boys, Jalandhar	
Highly improved	10	7	11	18	46 (13.03%)
Improved	72	81	76	69	298 (84.42%)
Moderately improved	2	1	4	2	9 (2.65%)
Not at all improved	-	-	-	-	-
Total	84	89	91	89	353 (100%)

Table 13 shows that 84.42% UG students of different colleges admit that e-resources in N-LIST Programme are improved quality of research, 13.03% admit as highly improved and 2.65% admit as moderately improved.

TABLE XIV SUBSTITUTES FOR CONVENTIONAL RESOURCES

Substitutes	Number of User				Total (Ave %)
	Apeejay College of Fine Arts Jalandhar	DAV College, Jalandhar.	Doaba College, Jalandhar	Lyallpur Khalsa College for Boys, Jalandhar	
Yes	56	59	64	61	240 (67.99%)
No	28	30	27	28	113 (32.01%)
Total	84	89	91	89	353 (100%)

Table 14 shows that 67.99% UG students of different colleges admit -resources are substitute for conventional resources but 32.01% are not favour it.

TABLE XV TRAINING IS REQUIRED FOR USING N-LIST PROGRAMME

Training Required	Number of User				Total (Ave %)
	Apeejay College of Fine Arts Jalandhar	DAV College, Jalandhar.	Doaba College, Jalandhar	Lyallpur Khalsa College for Boys , Jalandhar	
Yes	79	78	81	84	322 (91.22%)
No	5	11	10	5	31 (8.78%)
Total	84	89	91	89	353 (100%)

Table 15 shows that 91.22% UG students of different colleges require training programme for access of e-resources in N-LIST Program and 8.78% did not require any training.

VIII. FINDINGS OF THE STUDY

1. UG students of different colleges included in the study are aware about N-LIST Program.
2. Majority of UG students are aware about N-LIST Program through their college library staff.
3. UG students access N-LIST Program twice a week in greater number.
4. UG students in great number access to N-LIST Program from their homes.
5. N-LIST program is being used by UG students for updating knowledge.
6. UG students prefer subject choice to access e-resources in N-LIST Program.
7. Indian journals in N-LIST Program are access more by the UG students.
8. UG students are satisfied with N-LIST Program.
9. UG students face slow access speed in N-LIST program.
10. UG students admit N-LIST Program is easy to use, time saving, more informative, and more useful.
11. UG students admit N-LIST Program improve the quality of research.
12. UG students admit e-resources in N-LIST Program can be substitute for conventional resources.
13. UG students in greater number require training program for access to e-resources in N-LIST Program.

IX. SUGGESTIONS

1. Training program for UG students are suggested by the students to know more access to e-resources in N-LIST program.
2. UG students suggested printing facility for e-resources.
3. UG students suggested guidance of library staff is required for access to e-resources in N-LIST Program.
4. More Internet speed suggested by the UG students for easy access to N-LIST Program.

X. CONCLUSION

N-LIST Programme has covered a wide area of information. UG students are getting advantages from the program. N-LIST Programme has become popular among the students because students are developing their reading and research

habits with the qualitative e-resources available in the program. The college librarians should encourage the students to develop their reading and research habits with the use of N-LIST Programme and also consider their valuable suggestions for the maximum use of this program.

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