ASSESSMENT OF ELECTRONIC SERVICES BY POST GRADUATE STUDENTS & RESEARCH SCHOLARS OF VELLORE INSTITUTE OF TECHNOLOGY.

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Abstract

This paper presents the status regarding the use of Electronic Resources by the post graduate students and Research scholars of VIT. The data reveals the extent of usefulness and the problems faced by the users in accessing the Electronic resources. The institute is providing online databases, online journals, distance education, CD & DVD ROM, Audio & Video cassettes etc. The use of these facilities is not satisfactory. The study shows that a majority of students use online journals for preparing project reports and for listing references only. The use of electronic resources for research purpose is very less. Measures should be taken to improve the use of electronic services.

Key Words: Assessment of E-Resources; Research Scholars; Online Journals; Internet Usage; Distance Education

1.   Introduction

Information plays a vital role for economic and social development leading to the progress of the nation. The rapid developments in information and communication technology have greatly changed the methods of information handling and communicating the relevant information at the right time to the end user. The advent of Internet accelerated the use of online information resources to a great extent. To day many academic libraries are providing internet facilities like www, E-mail, FTP, List serve, Usenet etc., to their users so that they keep abreast with the advancements in their respective fields of study. In this scenario, assessment and evaluation of library performances and services for users are becoming more and more important in defining the choices and the strategies to be followed. The present study deals with the extent of use of electronic resources and the difficulties faced by the users in accessing the E-Resources. A questionnaire was designed and it was circulated to the outgoing M.Tech. students and research scholars of VIT. Sufficient time was given to them to complete the same. Seventy one candidates submitted the completed questionnaire. The sample covers 48 M.Tech students and 23 Ph.D students who are carrying out their research work.

2.   Vellore Institute Of Technology

The North Arcot Educational Trust established the Vellore Engineering College in 1984 and it was renamed as Vellore Institute of Technology (VIT) in July 2001 after obtaining the status of a Deemed University. VIT now offers 17 undergraduate programs, 23 postgraduate programs, and research programs. The total student strength is 9121, out of which 257 candidates are pursuing Ph.D/M.Phil programs, 1375 candidates are pursuing post graduate programs and 6087 are pursuing their under graduate programs.

1.1   VIT Central Library

The institute pays good attention for the development of the library and spends a reasonably good amount of money for the procurement of books, Journals and electronic equipment, which are necessary to fully support the academic needs of both the faculty and students. The current holdings of the library are:

1.	Total number of books	73,425
2.	Number of Journals subscribed	600
3.	Total Number of back volumes of Journals	9,744
4.	Number of Online Journals subscribed (ASME, ASCE, IEEE, ACM, Science Direct)	4
5.	Number of Newspapers subscribed	13
6.	Audio cassettes	135
7.	Video cassettes	560
8.	Number of CD-ROM	3,043

1.2   Digital Section

The VIT Digital Library has 100 nodes and one Server. The network connection to the library is given from CAD Lab of the institute, using Novel NetWare mode. At present 40 nodes are working in LAN mode using star topology. Ten computers are given Internet connection using 16 port Hub and 2x 24 ports for staff use. In the Multimedia Resource Centre, 10 systems, which are connected by 2 x 24ports, are used for CD ROM search. The students and teachers use CDs , which come with books, as well as those purchased by the library.

1.3   On Line Journals

VIT subscribes to online journals and databases through the following service providers.

a)   *SCOPUS*: VIT pays $ 13,000 per annum for Scopus indexing and abstracting journals. Scopus provides 14,000 abstracts for the journals.

b)   *ACM*: VIT pays Rs. 4,59,000 to ACM. ACM provides 69,000 full text articles, 180 conference proceedings both in print and online version. It also provides back volumes from 1960 to till date.

c)   *EBSCO*: VIT pays Rs.3, 30, 408 for EBSCO, which provides 1128 full text journals and 1700 indexes and abstracts. It provides back volumes from 1985 to till date.

d)   *SCIENCEDIRECT :* VIT pays Rs.56, 76,000 as subscription for Science Direct, which is valid up to December 2005. Seven hundred and three full text journals are provided (According to the statistics from December 2004 to august 2005, 5000 Articles are downloaded in the Institute). The Downloaded articles are Copied on to the pen drive and floppy drive for the students.

e)   *ASME*: VIT pays Rs.1, 65,000 to ASME, which offers 19 journals and 200 conference proceedings.

f)   *ASCE*: VIT pays Rs.1, 78,200 to ASCE, which offers 30 journals.

g)   *IEEE & IEE*: VIT pays Rs.12, 67,900 to IEEE & IEE, which offer 120 journals.

2.   Internet Use

The questionnaire, was circulated to the outgoing M.Tech. students and research scholars of VIT and sufficient time was given to them to complete the same. Seventy one candidates submitted the completed questionnaire. The sample covers 48 M.Tech students and 23 Ph.D students who are carrying out their

research work. The distribution of the candidates using the computer facility at various locations is presented in Table 1. It can be observed from Table 1 that most of the students (50.96%) use the computers located in the Periyar EVR central library.

Table 1. Use of computer facility at V.I.T.

Location	M.Tech No.	M.Tech %	Ph.D No.	Ph.D %	Total No.	Total %
Department	15	20.55	12	38.7	27	25.96
Periyar EVR Library	40	54.8	13	41.94	53	50.96
Laboratory	16	21.92	3	9.68	19	18.27
Residence	2	2.73	3	9.68	5	4.81

2.1 Frequency of Use of Internet and E-Mail Facility

It was found that 47.83% of the Ph.D students and 41.46% of the M.Tech students browse the Internet every day and use the E-mail facility. Only a relatively small percentage of candidates (only 4.4%) use the above facilities occasionally.

2.2 Status of Internet Facility in Departments

The opinion of the candidates about the availability of Internet facility in their respective departments was collected and it was found that none of the M.Tech. Students rated the availability as Very good and 36.96% of M.Tech. Students claim that the availability of Internet facility is unsatisfactory. However, only 4.35% of Ph.D. students claim that the availability of Internet in their respective departments is unsatisfactory.

2.3 Classes of Information Retrieved

It was observed that 48.48% of information retrieved by the Ph.D. students is related to research work; where as only 10.29% of the information retrieved is related to research work by the M.Tech. Students. It was also observed that 30.88% of the information retrieved by the M.Tech. students is not specific to their course work.

2.4 Search Engines

The information regarding the relative use of search engines by the M.Tech. and Ph.D. students reveals that the search engines, Google and Yahoo are quite popular among the students. Most of the Ph.D. candidates (82.14%) use Google and majority of M.Tech. students (55%) use Google. 30% of M.Tech. students and 17.86% of Ph.D candidates browse using Yahoo.

2.5 Usefulness of Internet for Research

The student's opinion about the usefulness of Internet searches for the course work is shown in Fig.1, while the usefulness of Internet resources for the research is shown in Fig.2. It can be observed that about 65 students, (including Ph.D and M.Tech) out of 69 (94.2%) find the Internet searches to be very useful/useful for their course work. Similarly, it can be observed from Fig.2 that about 65 candidates out of 71 (91.55%) find the Internet resources as very useful/useful for their research work.
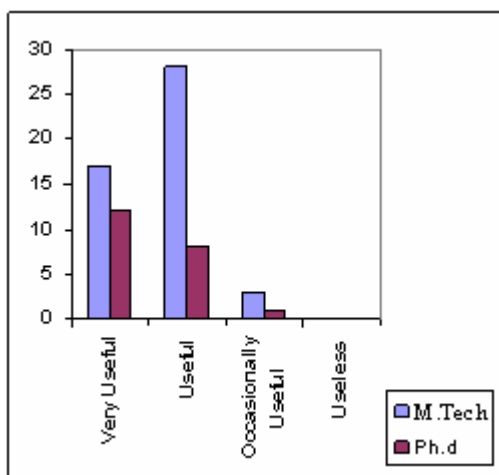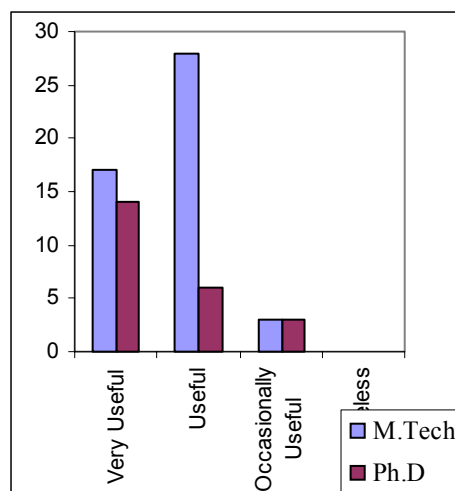
Fig.1 Usefulness of Internet for Course Work   *Fig.2 Usefulness of Internet for Research*

3.   Digital Resources

The data regarding the M.Tech. and Ph.D. students use of online databases indicated that 26.1% of Ph.D students and 38.3% of M.Tech students do not use online databases for their research work. It was also found that only 6.8% of the total population find the online databases as useless for their research work.

3.1   Use of CD – ROM Data Bases

At VIT, it is found that 37.5% of M.Tech students and 52.17% of Ph.D students use CD-ROM databases. The students response regarding the usefulness of the CD-ROM databases is presented in Table 2, which shows that only 5 M.Tech students and 2 Ph.D students did not find the CD-ROM data bases as useful. It can also be noted that only 12.5% of the M.Tech/Ph.D students found the CD-ROM databases as useless.

Table 2. Usefulness of CD-ROM Data bases

Extent of Usefulness	No. of M.Tech Student	No. of Ph.D. Student
Very useful	08 (21.06%)	04 (22.22%)
Useful	14 (36.84%)	09 (50%)
Occasionally useful	11 (28.94%)	03 (16.67%)
Useless	05 (13.16%)	02 (11.11%)

3.2   Online Catalogues

The present survey reveals that a total of 38 students (23 M.Tech.+ 15 Ph.D.) use online catalogues or bibliographies and 32 students do not use this facility at V.I.T. This is a surprising result as the M.Tech. students are generally expected to use the catalogues for their research work. It was observed that 13.56% of the total M.Tech. and Ph.D. students find the online catalogues as useless for them. The opinions expressed by the students reveal that 13.33% of M.Tech/Ph.D. students find the OPAC as useless. The frequency of the use of CD- ROMs in the library by the students of VIT is shown in Table3. It can be observed from Table 3 that only 1 M.Tech and 3 Ph.D. students use the CD-ROMs frequently and 18 out of 47 M.Tech. students (38.3%) and 7 out of 23 Ph.D. students (30.43%) never used them.

Table 3.Frequency of CD ROMs usage

Frequency of use	No.of M.Tech students	No. of Ph.D students
Frequency	01 (2.13%)	03 (13.04%)
Occasionally	09 (19.15%)	05 (21.74%)
Some times	19 (40.42%)	08 (34.78%)
Never	18 (38.3%)	07 (30.43%)

3.3   Usefulness of CD – ROMS

The data regarding the usefulness of CD ROMs in Research/course work is presented in Fig.3. It can be observed from Fig.3 that only 11 students (6 M.Tech + 5 Ph.D) out of 64 find the CD ROMs as useless for their research/course work. 23.8% of M.Tech/Ph.D students expressed that CD ROMs do not supplement formal learning. It is also observed that 14 M-Tech. and 13 Ph.D. candidates use video cassettes in the library whereas 33 M.Tech (70.2%) and 10 Ph.D students (43.48%) do not use them at all. Regarding, the frequency of using the videocassettes, it is found that only one M.Tech and two Ph.D. candidates frequently use, while 11 M.Tech and 6 Ph.D. candidates use them, some times only.
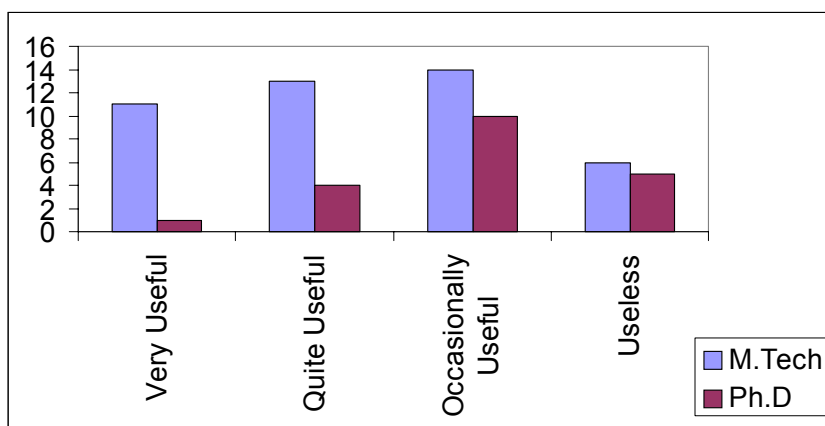

Fig.3 Usefulness of CD ROMs in Research/Course Work

4.   Online Journals

Based on the responses of the students it is found that 43 M.Tech. and 21 Ph.D. students refer the online Journals. The details of the places from where the candidates refer the online journals is summarized in Table 4. The data in Table 4 reveals that a majority (64%) of M.Tech. students and (66.67%) of Ph.D. students access the online journals from the library.

Table 4: Places from where the online journals are referred

Location	No.of Students M.Tech	No.of Students Ph.d
Library	32 (64%)	16 (66.67%)
Department	10 (20%)	07 (29.16%)
Other Places	03 (6%)	01 (4.17%)
Hostels	05 (10%)	0

4.1   Use of Search Methods

The relative use of search methods used by the M.Tech/Ph.D students of VIT is shown in Table 5. It is observed from Table 5 that 89% of M.Tech. students and 80.65% of Ph.D. students use search engines/ link pages for Web searching.

Table – 5. Use of Search Methods for Web Searching

Search Method	M.Tech	Ph.D
Search Engines	39 (70.91%)	17 (54.84%)
Link Pages	10 (18.18%)	08 (25.81%)
Printed sources	01 (1.81%)	02 (6.45%)
Subject based Gateway	05 (9.1%)	04 (12.9%)
Total	55	31

4.2   Usefulness of Online Journals

The data regarding the usefulness of Online Journals is presented in Table 6. It can be observed from Table 6 that a significant percentage of students 88.57 percent (62 out of 70 M.Tech. and Ph.D. students) find the online journals as very useful/useful.

Table 6. Usefulness of Online Journals

Usefulness	M.Tech	Ph.D
Very Useful	22 (46.81%)	13(56.52%)
Useful	19 (40.42%)	08 (34.78%)
Occasionally useful	06 (12.77%)	01 (4.35%)
Useless	0	01 (4.35%)
Total	47	23

4.3 Platforms Used for Browsing Online Journals

The data about the platforms used quite often for locating the Online Journals reveals that 56.52% of the students use Science Direct Platform and 33.33% of students at VIT use the IEEE and IEE platform to locate the online journals. It can be stated that Science direct and IEEE platforms are quite popular among the VIT students for browsing the Online Journals.

4.4 Frequency of Downloading Articles

The students response regarding the frequency of downloading the articles from Online Journals is presented in Fig.4. It can be observed from Fig.4 that 23 students out of 71 (32.4%) down load the articles very frequently from the online journals, where as 15% of the total students never download the articles.
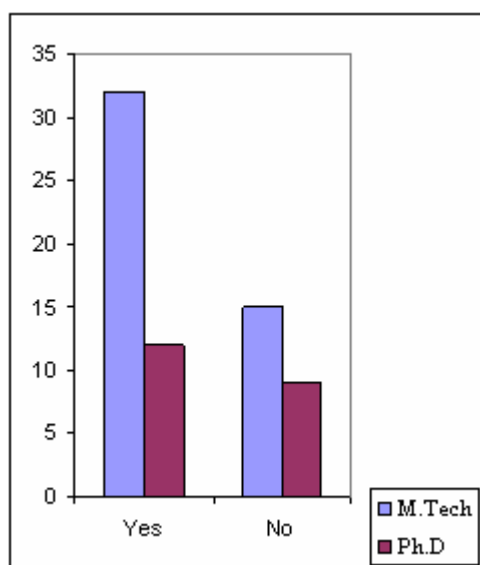

Fig.4. Frequency of Downloading of Articles from Online Journals

4.5 Reference to Back Volumes of Online Journals

Similar data is collected regarding the back volumes of Online Journals. The students response is summarized in Table 7. It can be observed from Table 7 that 25.35% of the total students frequently refer the back volumes of online journals. It can also be noticed that 17.39% of the Ph.D students never refer the back volumes of online journals.

Table 7. Frequency of Reference to Back Volumes of Online Journals

Frequency of reference	M.Tech	Ph.D
Frequently	10 (20.83%)	08 (34.78%)
Occasionally	17 (35.42%)	09 (39.13%)
Sometimes	14 (29.17%)	02 (8.7%)
Never	07 (14.58%)	04 (17.39%)
Total	48	23

4.6   Reference of Back Volumes of Printed Journals

Similar information regarding the reference to Printed back volumes of Journals is collected. The responses indicated that 15 out of 45 (33.33%) M.Tech students and 4 out of 23 (17.39%) Ph.D candidates do not refer the printed back volumes of Journals. The students preference for Online Journals over printed Journals is shown in Fig.5. It was observed that only eight or 9 out of 61 students use union catalogues and inter library loan facility.
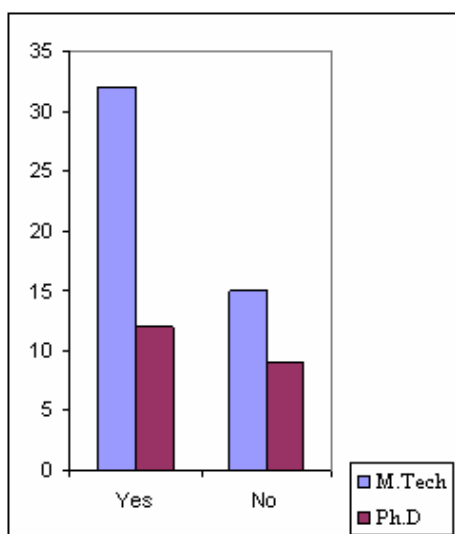

Fig. 5. Preference to Use Online Journals Over Printed Journals

4.7   Purpose of Using Online Journals

The purpose of using Online Journals by the VIT students is presented in Table 8. It can be inferred from Table 8, that majority (70%) of the students use the online journals for preparing reports and for listing references only.

Table 8. Purpose of using Online Journals

Purpose	M.Tech	Ph.D
Project reports	21 (36.2%)	07 (21.88%)
References	19 (32.76%)	16 (50%)
Research	10 (17.24%)	08 (25%)
To keep abreast	08 (13.73%)	01
Total	58	32

4.8   Level of Satisfaction of Using Online Journals

The degree of satisfaction in using the Online Journals in the library by VIT students is presented in Table 9. It can be observed from Table 9 that only seven candidates are highly satisfied and 39 are satisfied. It can be observed from Table 9 that majority of M.Tech. students (69.77%) and Ph.D students (69.56%) are highly satisfied/satisfied in using the online journals.

Table 9. Satisfaction Level in Using Online Journals

Level of Satisfaction	M.Tech	Ph.D
Highly Satisfied	4 (9.3%)	3 (13.4%)
Satisfied	26 (60.47%)	13 (56.52%)
Neither Satisfied nor Dissatisfied	5	4
Dissatisfied	4	3
Highly Dissatisfied	4	0

4.9   Visit to Other Libraries

The VIT entered into MOUs with I.I.T – Madras, British Council Library, Malibnet, American Information Resource Centre etc. for using their libraries by their staff and students. The response from the M.Tech and Ph.D students of VIT shows that most of the students (73.91%, 51 out of 69 students) do not visit other libraries for using the electronic resources.

5.   Distance Education

VIT library is providing Distance Education facility. The readers can access live telecast lectures through digital satellite relay device, for improving their knowledge. Anna University from Tamilnadu and the universities from the states of Mysore, Madhya Pradesh and Orissa are connected through dish antenna and the users can actively follow the lectures and participate in discussions. VIT receives the Tele Education programs from Anna University, Gyandarshan – 1, Gyandarshan – 2, Ekalavya and Gyanavani. The usage statistics of the Tele Education programs is presented in Table 10.

Table 10. Usage Statistics of Distance Education Programs

Month & Year	STAFF	STUDENTS	Total	Percent
OCT. 2004	13	90	103	81.7%
NOV 2004	01	0	01	0.8%
DEC. 2004	01	20	21	16.7%
JAN, 2005	01	0	01	0.8%
Total	16	110	126	100%

From April to Sep. 2005 none of the students and staff used the programs.

5.1   Distance Education Programs

The data regarding the usefulness of Distance Education Programs like Ekalavya, DD Bharati and UGC from the M.Tech. and Ph.D. students of VIT is presented in Fig.6. From Fig.6, it can be observed that 16 out of 60 candidates (26.67%) find them as useless.
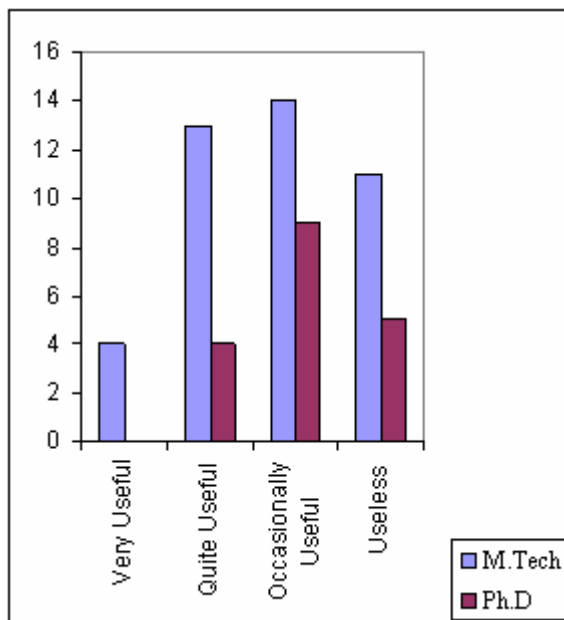
Fig. 6. Usefulness of Distance Education Programs

5.2   Use of Commercial Sites, Virtual Libraries

A few questions were designed to find whether the students of VIT use commercial sites, virtual libraries and other institutional sites or not. Their response is summarized in Table 11. It can be observed from Table 11 that 67.39% of M.Tech. students and 40.91% of Ph.D. students use commercial sites, where as 85.1% of M.Tech. students and 72.73% of Ph.D. candidates use other academic institutional sites.

Table 11. Use of Commercial Sites, Virtual Libraries and Other Academic Institutional Sites

Status of use	Commercial Site M.Tech	Commercial Site Ph.D.	Virtual Libraries M.Tech	Virtual Libraries Ph.D.	Other Academic Inst. Sites M.Tech	Other Academic Inst. Sites (Ph.D.)
Yes	31(67.39%)	09 (40.91%)	25	10	40 (85.1%)	16(72.73%)
Yes	31(67.39%)	09 (40.91%)	25	10	40 (85.1%)	16(72.73%)
No	15	13	23	12	07	06

5.3   Usefulness of Other Institutional Sites

The data regarding the usefulness of other institutional sites for learning is presented in Table 12. It is observed from Table 12 that only 2.94% of M.Tech. and Ph.D. students did not find the other institutional sites as useful.

Table 12. Usefulness of Other Institutional Sites for Learning

Extent of usefulness	M.Tech	Ph.D
Very useful	13	0
Useful	20	15
Occasionally useful	13	05
Useless	0	2 (2.94%)

5.4   Edusat's Interactive Lectures

The Anna University provides Edusat's interactive lectures and the opinion of the VIT students about these programs is summarized in Table13. The data in Table 13 shows that on the aggregate only 10 students out of 56 (17.86%) find them as useless. 53.85% of Ph.D. students do not find the Edusat's interactive lectures as useful.

Table 13. Usefulness of Anna University Interactive Lectures

Usefulness	M.Tech	Ph.D
Very useful	07 (16.28%)	0
Useful	18 (41.86%)	0
Occasionally useful	15 (34.88%)	06(46.15%)
Useless	03 (6.98%)	07 (53.85%)
Total	43	13

6.   Conclusion

 The study presents the state of Art report for the use of E-Resources in an academic year in V.I.T. Since the institute is providing online journals, Satellite education etc. involving considerable expenditure, it is essential for the library to assess the usage of services. Though the institute is trying to provide some electronic resources, the usage is not up the expectation. The usage of online journals, data bases and Tele-education should be increased. It is possible, only when the library staff provides active orientation programs to the students presenting the existing library facilities and their utility. The library staff should encourage the students on how to search online journals and databases, by arranging demonstration programs. The teachers should assign research projects and the students should be directed to different electronic resources for current information. Some open ended questions, which were included at the end of the questionnaire brought out a few additional pieces of information.Their response shows that 83.58% students are unable to access the printing facility; and 69.56% students do not have the facility of copying the downloaded papers on a floppy disk/CD.

About Authors

Mrs.Y.V.Ramana at present is working as an Assistant Librarian at Bapatla Engineering College. She worked in the digital section of V.I.T library for one and a half year. She presented several papers in National conferences and also published a few research papers in National Journals.
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