

ASSESSMENT OF THE USAGE OF CLOUD BASED LIBRARY SERVICE IN DR. AMBEDKAR INSTITUTE OF TECHNOLOGY (DR.AIT) LIBRARY AMONG POSTGRADUATE STUDENTS: A CASE STUDY

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Abstract: Cloud computing is another marvel in the administrations which are presented over the web. It has totally changed the method of utilization of the extent of PCs independent of any geographic area. The greatest advantage for associations and organizations that offer Cloud computing, is that it offers administrations in utilizing equipment or programming or foundation of outsider sources. It is exceptionally practical as it saves cost and support. Cloud computing comes in a few distinct structures. To limit the cost and keep away from duplication of assets, framework, programming, equipment, labour utilization of arising innovations like an endeavour has additionally been made to outline the regions in libraries where this innovation can be sent to give better library administrations and the efficiency of library staff can be increased.

Keywords: Cloud Computing, Library, PostGraduate, IAAS, PAAS, SAAS.

Introduction:

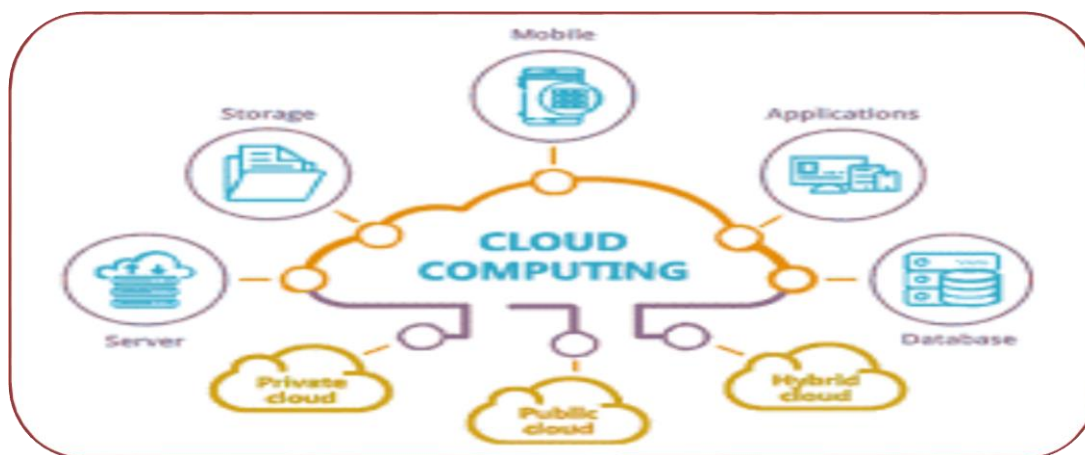
The growth of technology, libraries which were at just a building full of books has now reached hands of the users through various modes such as laptops, mobile phones etc. The users now can find a book in the library from the comforts of their classroom or home. This has been made possible by the growth of incorporation of digital technology in the library. But the digitalization in the libraries comes at a cost. The library wishing to digitalize its services have to invest a lot in the infrastructure, maintenance, technical support, training of the library staff and space for the infrastructure. As the library grows with time the cost too rises. These libraries then become stagnant and stop for the digitalization although they want to improve the services. Cloud Computing offers the perfect solution to this problem.

Cloud computing is the **delivery of different services through the Internet**, including data storage, servers, databases, networking, and software. Cloud-based storage makes it possible to save files to a remote database and retrieve them on demand its use of internet for computing needs. According to Wikipedia, cloud computing refers to "the delivery of computing as a service rather than a product, whereby shared resources, software, and information are provided to computers and other devices as a metered service over a network, typically the internet".

CloudComputing:

CharacteristicsMentionedbelowarethemain characteristicsofcloudscomputing:

- Assets are divided between clients. It works extremely quick in the dispersed registering climate.
- It ensures the arrangement of assets "on request", without the requirement for engineers for greatest burdens.
- By sharing a typical foundation, you guarantee that you work proficiently with various clients and numerous applications. Diminishes the expense of administrations.
- It is a component of distributed computing that clients can get to it from any side of the world basically through the Internet association on the grounds that the foundation is given by an outsider.
- These applications are not difficult to keep up with contrasted with individual applications as they are introduced on a typical stage and can be gotten to from better places.
- The odds of foundation disappointments are negligible, making workers more dependable and exceptionally accessible.
- Since the organization doesn't have to build up its own framework, there are cost decreases using assets dependent on payment.



Picture of Cloud Computing Services Model

EnhancementofLibraryServicesbyTheUseofCloudComputing:

- **E-Book Lending Service:** The cloud platform is becoming popular for lending e-books.
- **Union / Shared Catalog / OPAC:** Network libraries can use the same platform and give access to their collection on one platform. Through cloud computing, creating a collective catalog becomes very easy.
- **Document Download Service** - Documents can be downloaded easily if network access is allowed.
- **Digital Scanning / Preservation Service:** Scanning and scanning work can be done centrally and thus time-consuming job duplication can be avoided. Libraries can preserve the collection in digital form in the form of archives.

- **Article delivery service:** Libraries can use cloud computing for the article delivery service to patrons. Publishers are already using this technology to provide access to libraries.
- **Current Awareness Service:** Providing a current awareness service to all users has become easy with cloud computing.
- **Document Sharing:** Document sharing has become easy with cloud computing.
- **Bulletin Board Service:** We can provide new bulletin board services with this technology.
- **Common Information:** Common information such as bibliographic data, content pages, covers, question papers, syllabus, and other reading material that we can share on a platform. It helps improve the economy of the library and avoids duplication of library purchases.
- **Collection development:** Cloud computing is used for collection development. Duplications can be easily avoided and alternative resources can be located and made accessible to users.
- **File Sharing:** Sharing multiple files electronically becomes easy with cloud computing.
- **Information discovery:** the cloud provides a platform to store all the information that can be accessed at any time and from anywhere; so the discovery and search of information becomes easy and very useful for researchers.
- **E-Learning:** Also in the E-Learning environment, cloud computing is a blessing. Study material can be saved in the cloud for reference purposes and exams can also be taken online. Discussions, reviews can be done at the same time from different places.
- **Information Literacy / Orientation:** Libraries can conduct information literacy and orientation courses in the cloud. They can keep the tutorials, videos, presentations and files in the cloud to guide the user.
- **Social interactions with users:** it can be possible thanks to cloud computing.

Brief History of Dr. Ambedkar Institute of Technology (Dr.AIT):

Dr. Ambedkar Institute of Technology managed by PanchajanyaVidyapeetha Welfare Trust is situated on the outer ring road, adjacent to JnanaBharathi Campus of Bangalore University. As a Grant-in-aid Institution of Government of Karnataka, 95% of the seats are filled up purely on the basis of merit through Common Entrance Test (CET) cell. The Institution is accredited by National Board of Accreditation (NBA), New Delhi, International Accreditation Organization (IAO), Tata Consultancy Services (TCS) and ISO 9001:2008.



Figure: Dr. Ambedkar Institute of Technology

(Dr.AIT) Library and Information Centre:

The Library is housed in an independent building named as “Dr. Ambedkar Centenary Bhavan” It occupies an area of 1778 sq. mtrs. includes three floors. There are five divisions in the

library they are Lending, Reference, Periodical, Digital & PG Library. It has collection of 88248 volumes & 22148 titles covering all disciplines in UG & PG courses.

Journals & Magazines: There are 115 National journals and 23 International journals and e-journals of IEEE, ASCE, ASME, Science Direct, Springer, KNIMBUS, NPTEL, DSpace. Very good digital library is available in the 2nd floor of the Library.



Figure 2: Dr. AIT Library and Information Centre

The institution is also having membership with INDEST –AICTE, VTU Consortium DELNET. The reference section is well equipped with Encyclopaedias of different disciplines of Engineering and general Sciences, ASM Handbooks, books on Nano Technology, Smart Structures, Manufacturing, Operation Research, Digital Computer Networking, VLSI Design and Embedded Systems, Telecommunication, Information Technology, Power Systems etc.

Objective of the present study:

- To know the use and use pattern of Cloud applications
- To know the awareness about the cloud based services in Library
- To know the difference between the awareness and usability of cloud based service in education.
- To know the awareness about cloud based service providers in library users of Dr.AIT.

Scope of the study:

The present study intends to cover the use of cloud based services in Dr.AIT. User opinion has been collected by the PG students of Dr.AIT.

Methodology:

The Questionnaire based survey method adopted and simple random sampling techniques has used for the study. A structured Questionnaire seeking of cloud computing application awareness and use of library services speciality.

Table 1 Questionnaires received from the Respondents

Designation	Questionnaires Distributed	Questionnaires received	Percentage (%)
PG Students	106	90	84.90

The above table shows that out of the 106 questionnaires distributed 90 questionnaires were duly filled and received from the respondents.

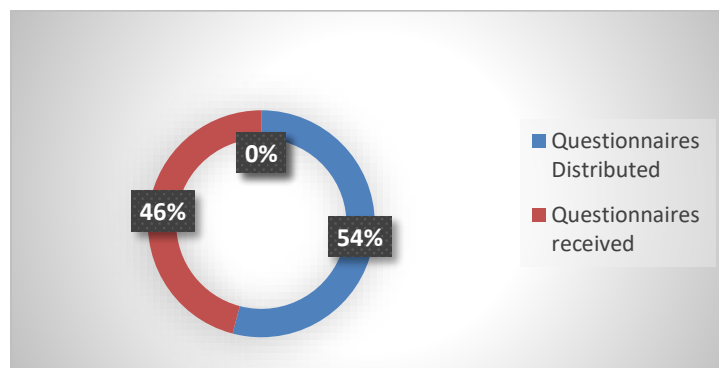


Figure :1 Questionnaires received from the Respondents

Table 2 Number of Respondents by the PG Students

S.No	Gender	Number of respondents	Percentage %
1	Female	54	60
2	Male	36	40
Total		90	100

The above table shows that out of the 90(100%) respondents, 54 (60%) respondents were male and 36 (40%) were female respondents.

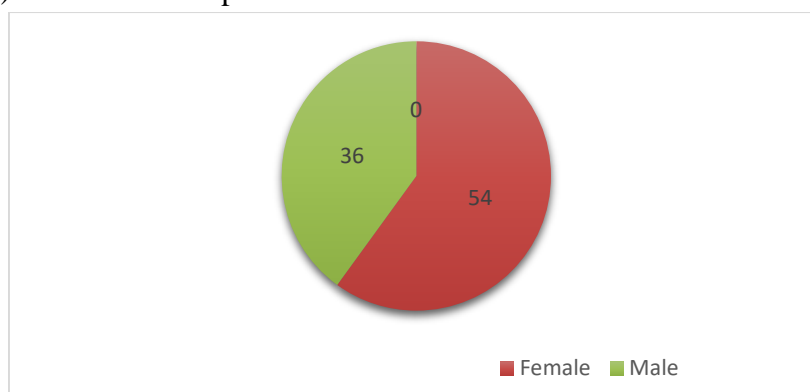


Figure -2 Number of Respondents by the PG Students

Table :3 Utilization of Cloud Computing services through Devices

Sr.No	Utilizing Cloud computing	Number of Respondents	Percentage %
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1	Desktop	72	80.00
2	Laptop	33	36.66
3	Mobile Phones	54	60.00
4	Smart/phones/tablets/I pad	18	20.00

The above table shows that the respondents used various devices as a medium for utilizing cloud computing. The respondents used desktops 72(80%) the most and Smartphones, tablets or iPad 18 (20%) the least. While laptops were used by the 33 (36.66%) respondents and mobilephones by 54 (60%) respondents.

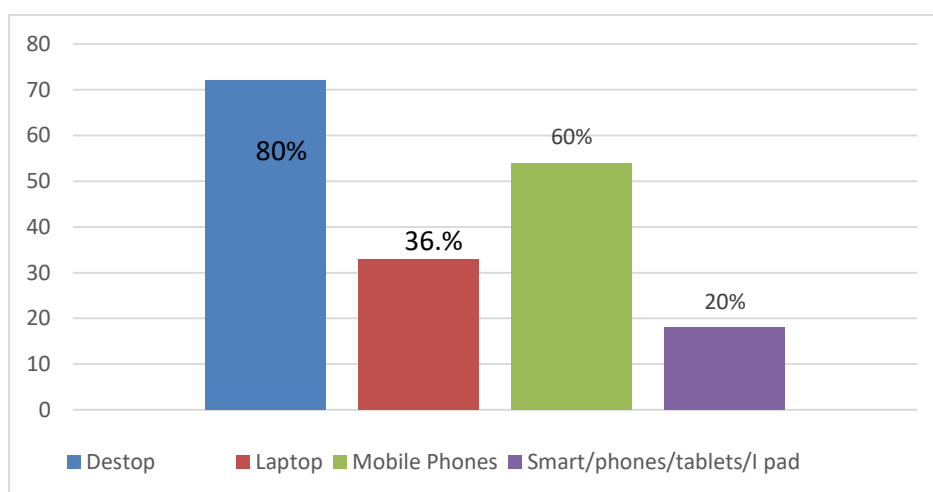


Figure -3Utilization of Cloud Computing services through Devices

Table:4Experience with cloud computing

S.No	experience with cloud computing service models like IaaS, PaaS,SaaS	Number of respondents	Percentage %
1	NoExperience	33	36.66
2	OnlyHeard	36	40.00
3	IKnowabout it	18	20.00
4	AlreadyUsingit	3	3.33

The above table shows that 36 (40%) respondents had only heard of cloud computing service models like IaaS, PaaS and SaaS and on contract only 3 (3.33%) respondent was already using it.

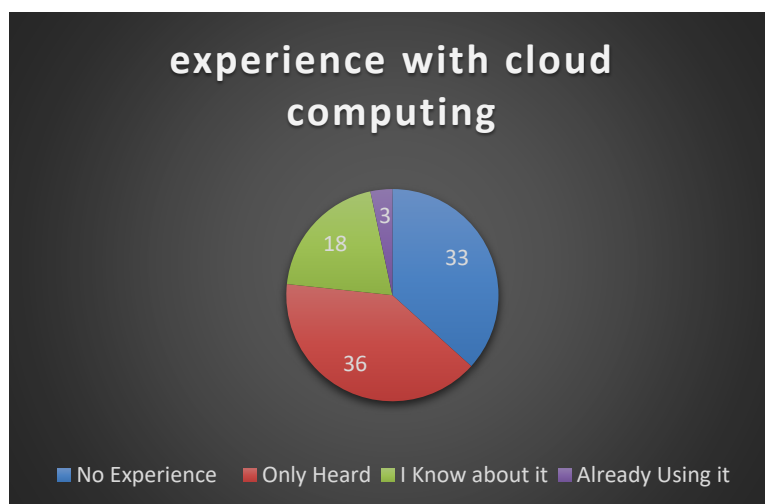


Figure -4

Table: 5Types of cloud computing

S.No	Types of cloud computing. public,private,community, hybrid cloud	Number of respondents	Percentage %%
1	NoExperience	18	20.00
2	OnlyHeard	42	46.66
3	IKnowabout it	18	20.00
4	AlreadyUsingit	3	3.33

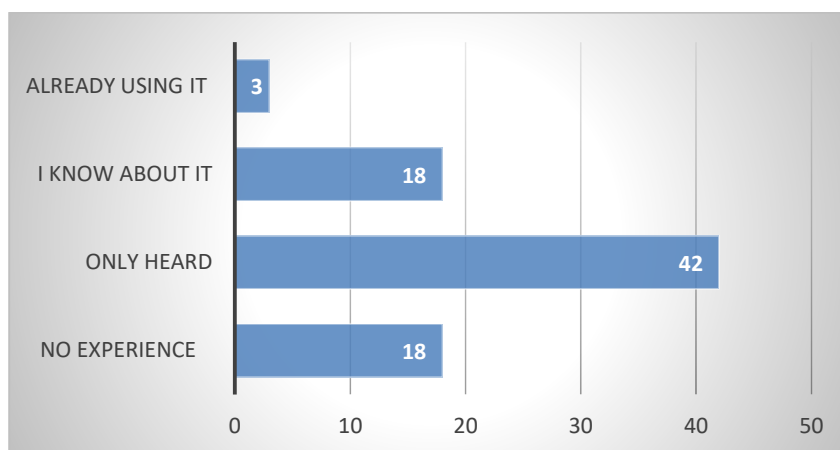


Figure -5Awareness of Cloud Computing Types

The above table shows that 42 (46.66%) respondents had only heard about Cloud Computing service models like public, private, community and hybrid cloud while only 3 (3.33%) respondents were already using it.

Table:6

Sr. No	Cloudbasedservicesgivenbylibrary	Number of respondents	%
1	CloudbasedmailingServices (Gmail,Yahoo mail)	84	93.33
2	CloudbasedSocialNetworking(Facebook)	69	76.66
3	CloudbasedVideoServices (Vimeo,youTube)	48	53.33
4	CloudbasedFileSharing (Google drive,Dropbox,Shreit)	75	83.33
5	CloudbasedDatacollection (Surveymonkey,googleForms)	48	53.33
6	Cloudbasedeventcalendar (Doodle,Google calendar)	60	66.66
7	CloudbasedonlinePresentation (Slideshare)	81	90.00
8	CloudbasedSpreadsheet,wordfileonlineEditingServices(ex googledocs)	39	43.33

The above table shows 84 (93.33%) respondents were using cloud based services given by the library Like Gmail, Yahoo mail were the majority while cloud based video services like Vimeo,YouTube 48(53.33%) and Cloud based data collection 48 (53.33%) were the least.

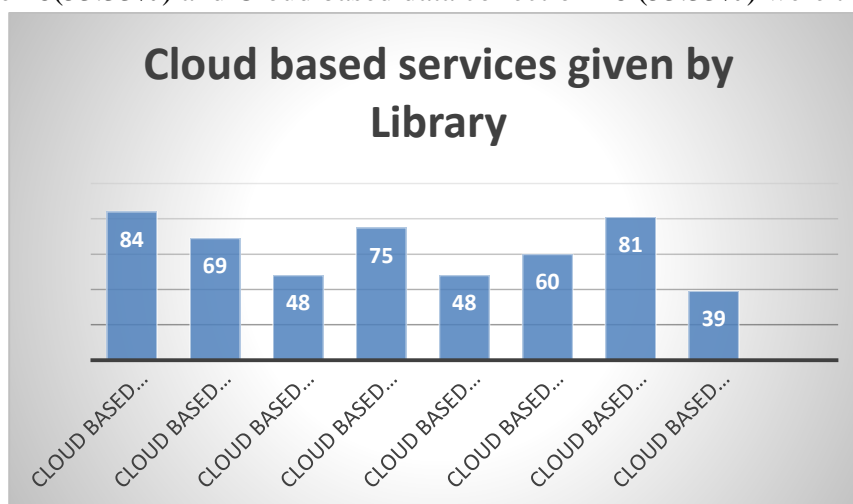


Figure-6Cloud based services given by Library

Table:7

S.No	Usage of Cloud Storage	Number of Respondents	Percentage %
1	Sync.com	6	6.66
2	pCloud.com	6	6.66
3	Jottacloud	2	2.22
4	Dropbox	45	50

5	Idrive	18	20
6	Elephantdrive	6	6.66
7	Googledrive	87	96.66
8	Opendrive	60	66.66

The above table shows the usage of cloud based storage providers like Google drive 87 (96.66%) was the most and usage of Jottacloud 2 (2.22%) was the least.

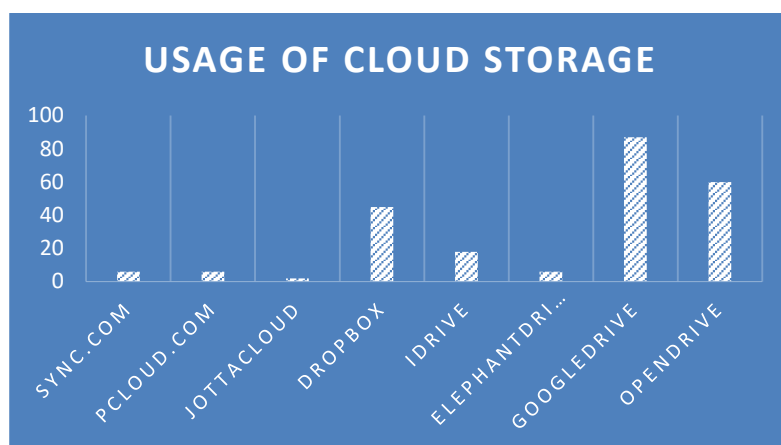


Figure- 7Usage of Cloud Storage

Table: 8Usingcloudcomputingservices

S.No	Usingcloudcomputingservices	Number of respondents	Percentage %
1	ReadingNational/ InternationalArticles	75	83.33
2	ToknowlatestResearchArticles	72	80.00
3	ReferencePurpose	75	83.33
4	Getting InformationwithAcademicWorld	48	53.00
5	OnlineDatabaseAccess	54	60.00

The above table shows that 75 (83.33%) respondents used the cloud computing services for the purpose of reading National, International articles and 75 (83.33%) respondents also used it for the purpose of reference while 48 (53.33%) the least used it for getting information about academic world.

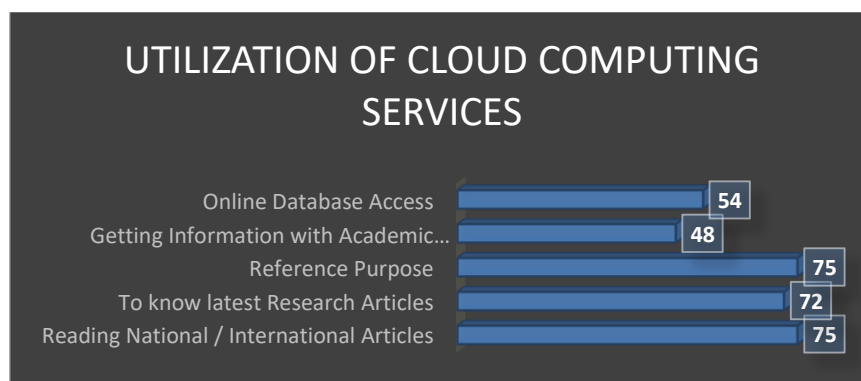


Figure -8Usingcloudcomputingservices

Findings and suggestions:

Below entities are the findings

- Table 1 describes the questionnaire distributed to the PG students. There are 106 questionnaires are distributed among PG students out of which 84% of students were respondents.
- In table 2 indicate that majority of 60% female and 40% male users responded to the questionnaire
- Table 3 shows that The respondents used mostly desktops 72(80%)
- Table 4 shows that 40% of respondents are aware about the cloud services models, IAAS, PAAS, SAAS.
- According to table 5, 46% of respondents are aware about the types of cloud computing.
- Table 6 shows that majority of respondent are using Google cloud service
- Table 7 indicate that more respondents are using google cloud based storage services
- Table 8 shows that 83,33% of the user using cloud for reading National and International articles

Suggestions:

Based on the findings the authors made some recommendations which are as follows:

- Since the study confirmed that the respondents are fully aware about cloud computing technology
- Cloud computing usage was more but less proper awareness about cloud technology
- Cloud computing, its promote to virtual learning environment so the authorities should utilize the cloud computing services in proper direction.
- Cloud computing promote to content based learning through cloud technology various deployment models platform
- E-granthalaya is fully cloud based library management software so all the engineering colleges are making utilization of that open access software
- Cloud computing can be introduced to student's cloud which can add values to their academic work and research.

Conclusion:

Cloud computing has given us many solutions to our growing computing needs. It has built many bridges that can assist the Academic sector not only the entertainment sector. E-learning which is the necessity of the day. Academic sector now has witnessed the utility of Cloud computing on a very large scale due to the pandemic. Engineering College libraries have been able to reach their clientele easily now. Most have extended their utilization of the 'Cloud'. Users have welcomed it and it can further be enhanced and explored by the libraries as vital component of the library Infrastructure.

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