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Aims and Scope

This journal covering all area of library Science, technology, information and interdisciplinary research. The library science is an interdisciplinary field that applies the practices, perspectives and tools of management, information technology, education and other areas to libraries. The collection, organization, preservation, and dissemination of information resources; and the political economy of information are also included in library science.

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Contents

Awareness and utilization of electronic Databases by Under Graduate Students and Faculties in Pune.

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Librarian of symbiosis school
for liberal arts.

A B S T R A C T

The present Study trace to the awareness and utilization of electronic information databases among UG students and faculties, out of 103 responses, 101 (98.1%) declare that they are aware of e-databases and 2 (1.99%) are not aware of it. Among 103 students &faculties 60 (58.3%) are using E resources on regular basis, followed by 35 (34%) are use it occasionally and 8(7.8%) are using rarely. students are using e databases majorly for assignment and project work.

Keywords: Electronic Databases, undergraduate students, academic libraries, awareness

INTRODUCTION

Modern academic libraries are now becoming hybrid libraries. Now libraries have both collections such as print and e resources. Due to information technology so many electronic resources are available in market. For example, eBooks, e-journals, e databases among theme e-database are very useful resources for many academic libraries. It has also journal articles, reference articles, conference papers & reports etc. Electronic resources are being largely available and it is convenient and accessible from anywhere by many users at the same time.it is available 24x7 for readers. Today's academic libraries spend huge for it amounts. Therefore, Librarians' has additional responsibility of libraries & to check utilizing of electronic database.

LITERATURE REVIEW

Number of studies related to user awareness of e-resources has been carried out by the students, faculty members and researchers of various institute and universities. Some useful studies on the topic have reviewed and presented in there

- "Ananda &Tejashwini & Akshatha & Jagdeesh (2017) conducted survey to find use and awareness of electronic information resources among UG & PG Students of T John College, Bangalore." [1] The study found that 81% students are aware of electronic information resources and 19% are not aware of E-resources. Most of students are using e-resources for project work 74.07%, preparing class note 64,19%, social networking 56.79%, preparing assignment 55.55%, for entertainment purpose 43.02%. Also found that 53.08% students are facing technical issue to accessing electronic information resources.
- "Arti Jain (2019) Awareness and Use of e-Resources and Services by Faculty Members and Students of Pt. SKS College of Agriculture and Research Station (SKS CARS), Rajnandgaon." [2] The study was found that mostly faculties were aware yourself through orientation in training but majority students aware through friend's discussion and orientation program. Majority of faculty members use daily but students use occasionally.
- "Kwadzo, (2015) carried out study on awareness and usage of electronic databases by geography and resource development information studies graduate students in the university of Ghana." [3] The study found, students heard about e databases they use them. Most of aware about it but individual usage is less than awareness of e-resources out of 83 databases available in the university only 23 were mentioned.

- "Kuldeep Singh (2019) conducted research on awareness and use of e-resources among the users of library of Punjabi university, Patiala." [4] The study was found that most of student means 31.04%were satisfied with the subscription and only 8.04% of students were dissatisfied. Study also found that out of 100 students 87% students have awareness about electronic information resources and 13% students were unaware about electronic information resources.
- "Mahesh Nandkumar Gaikwad (2017) perform research on awareness and use of electronic information resources at arts and commerce college, Madha." [5] The study was found that out of 100 responses 88% faculties are aware about e resources and 18 faculties are unaware. In Ph.D. scholars 100% and undergraduate students 69% were aware and 31% were not aware. Most of students are highly satisfied with the electronic resources services.

OBJECTIVES OF THE STUDY

- Identify the awareness of electronic databases among UG students and faculties.
- Observe the frequency of using electronic resources
- To know of access, the purpose of using e resources
- To learn the issues faced by students and faculties
- Understand the impact of electronic resources for academic performance.

Scope and Limitation

A research paper based on the awareness and utilization of electronic databases among under graduate students and faculties of Pune.The study offers to see out awareness, satisfaction level, purpose, hurdle focal point during the access e-resources and services.

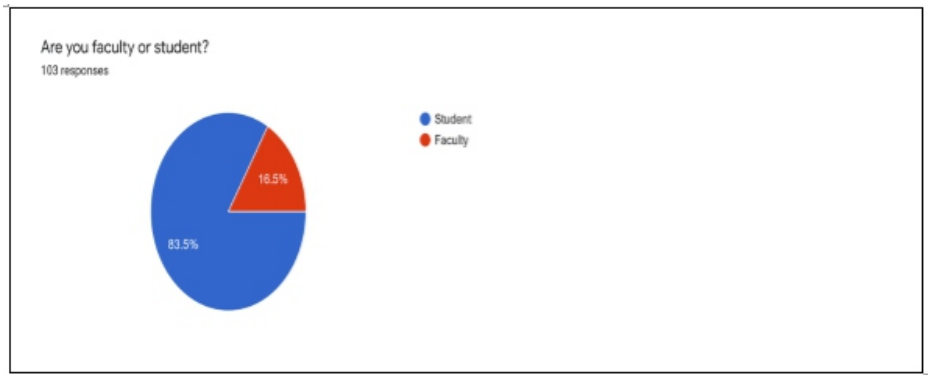
METHODOLOGY

The survey method used questionnaire tool to know awareness and utilization of e-databases among undergraduate students and faculties. 469 online questionnaires were distributed in to the students and 20 questionnaires in to the faculties and among them 86 (83.5%) questionnaire received from students and 17(16.5%) received from faculties. The total numbers of students & faculties registered 103. The data were analyzed statistically and presented in tables.

Table-1 Distribution of copies of questionnaires to the students and faculties.

Disciplines	No. of copies of questionnaire distributed	No. of questionnaires received
Undergraduates students	463	86
Faculties	20	17

Figure-1 Distribution of copies of questionnaires to the students and faculties.



DATA ANALYSIS AND INTERPRETATION.

Table-2 Awareness of library electronic databases

Awareness	Respondents
Yes	101
No	2

Table-2 Shows results of awareness of Electronic databases among UG students and faculties. Out of 103 respondents 101 (98.1%) declare that they are aware of E-databases and 2 (1.99%) are not aware of it.

Figure-2 Awareness of library electronic databases

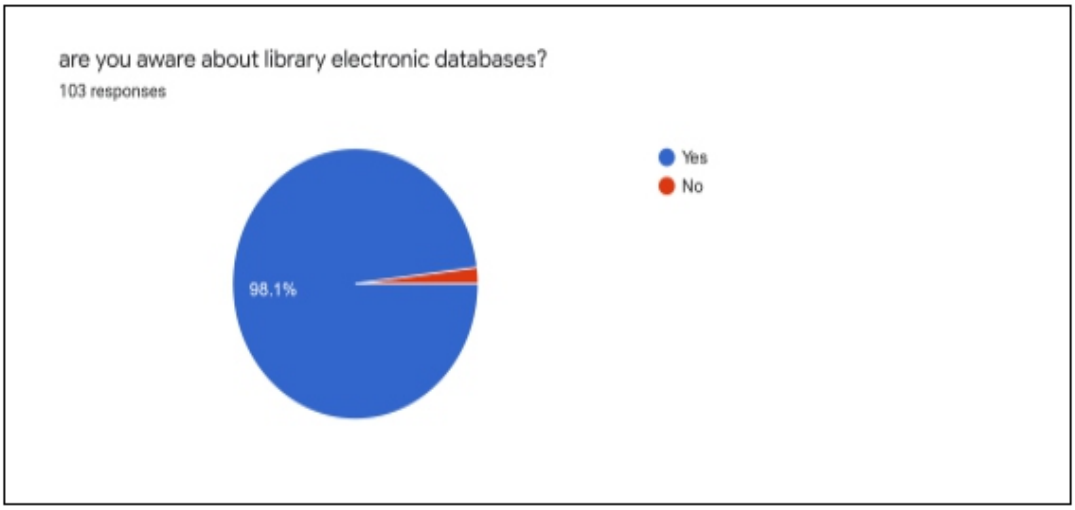


Table-3 Media of information resources to prefer.

Media of information resources	No. of Respondents
Print	2
Electronic	26
Both print & electronic	75

Table 3 depicts the media of information resources to prefer by UG students and faculties. Majority shows that 72.8% are prefer both print & electronic information resources.25.2%are prefer electronic information resources and 2% are prefer print information resources.

Figure-3 Media of information resources to prefer

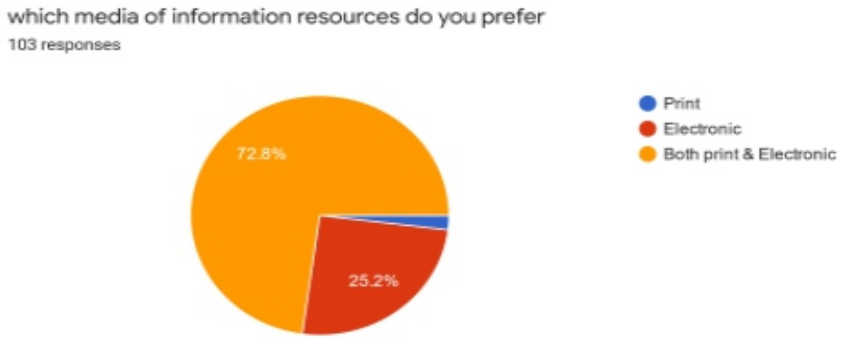


Table-4 Regularity of Using Electronic databases.

Frequency	Total	Percentage
Regularly	60	58.3%
Occasionally	35	34%
Rarely	08	7.8%

Table-4 shows the frequency of use of E databases by UG Students & faculties. Out of 103 students &faculties 60 (58.3%) are use Electronic databases on regular, 35 (34%) are using occasionally and 8(7.8%) are using rarely.

Figure-4 Regularity of Using Electronic databases.

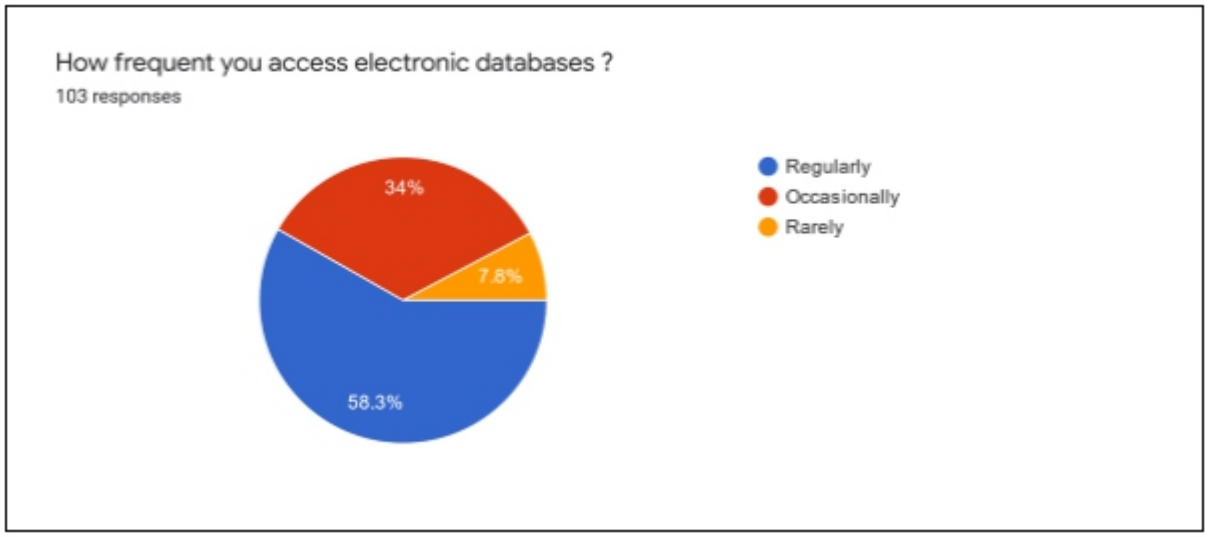


Table-5 Reason of using Electronic databases

Reason	Total	Percentage
class notes	31	30.1%
Seminars papers	14	13.6%
Project work	59	57.3%
Assignment	85	82.5%
Others	21	20.4%

Table-5 depicts the reason of using Electronic databases by students and faculties. Most of are using e-databases for assignment i.e.82.5%, followed by project work i.e.57.3%, preparing class notes i.e. 30.1%, seminar purpose i.e. 13.6%, and 20.4% for other purposes.

Figure-5 Motive of using Electronic databases

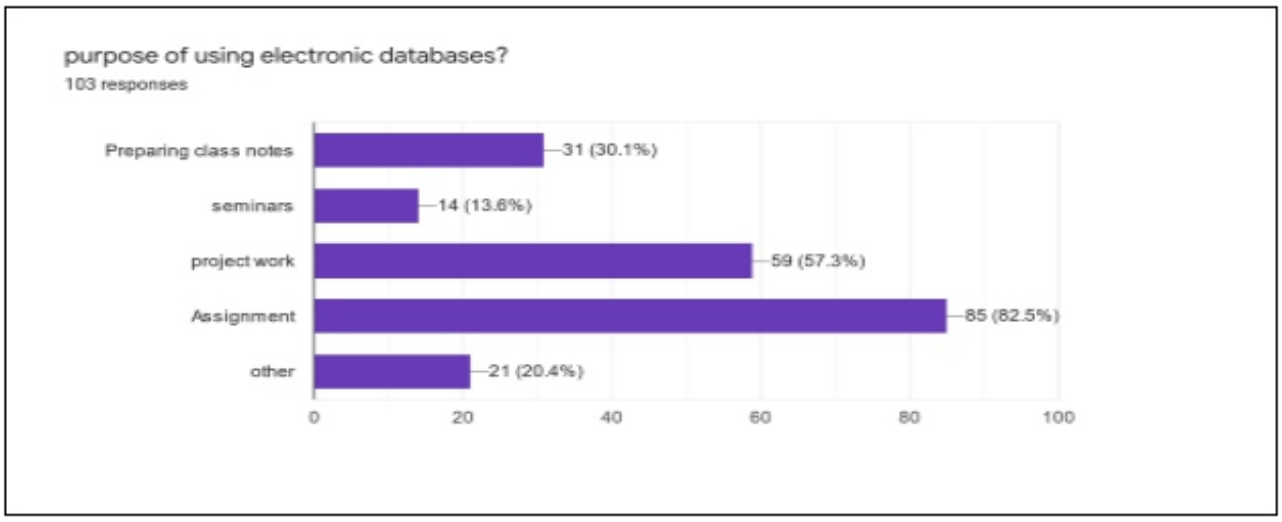


Table -6 Effect of Electronic databases on Academia

Effect	Total	Percentage
Very useful	91	88.3%
Not useful	4	3.8%
Don't know	8	7.8%

Table-6 Depicts the importance of Electronic databases on academic activities by UG students and faculties, out of 103 respondents,91(88.3%) students feel that E-databases are very useful for academic activities and 8(7.8%) believe that are not useful, 4(3.8%) declare that they are not aware about it.

Figure-6 Effect of Electronic databases on Academia.

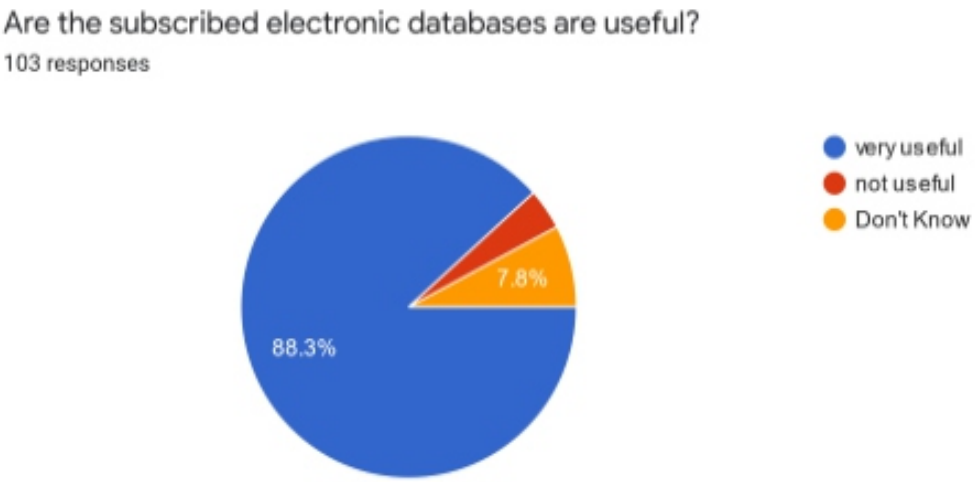


Table 7: Sources of awareness about E-databases

Sources	No. of Respondents	Percentage
Library staff	64	62.1%
Internet	10	9.7%
Colleagues	15	14.6%
Training	25	24.3%
Orientaion	56	54.4%

Table-7 depicts the sources of awareness about e-resources by UG students and faculties. Out of 103 respondents 64(62.1%) got aware with the help of library staff 10(9.7%)through the internet,15(14.6%)understand from colleagues,25(24.3%)through the training and 56(54.4%) by librarian's orientation.

Figure7: Sources of awareness about E-databases

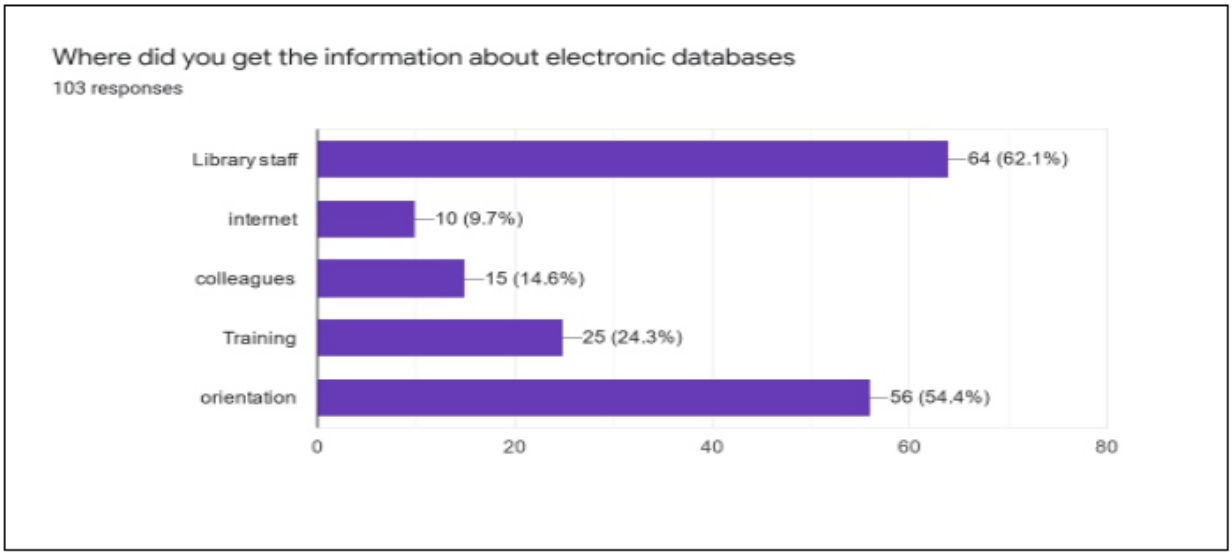


Table-8 Problems in using Electronic Information Resources

Problems	Total	Percentage
Unaware and less knowledge of E-resources	19	18.4%
Materials required are unavailable or not in use	40	38.8%
Technical problems	21	20.4%
Difficulty in e-reading	26	25.2%
Scarce information of course wise information resource	28	27.2%

Table-8 shows issues faced by UG students in using electronic databases, the major issue faced by students are unavailable or not in use of E-databases and course wise electronic databases i.e. 40(38.8%) and 28(27.2%), 19(18.4%)feel that they are not much familiar with electronic resources and 26(25.2%) opined that there is difficulty in E-reading and 21(20.4%)facing issues with technical problems.

Figure-8 Issues in using Electronic Information Resources

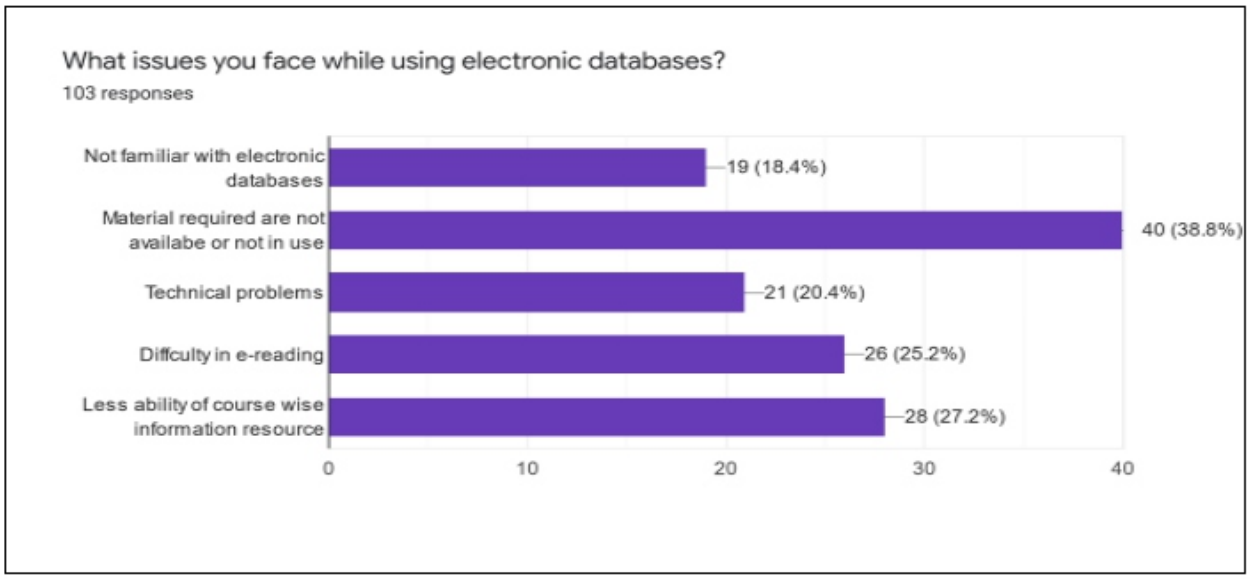
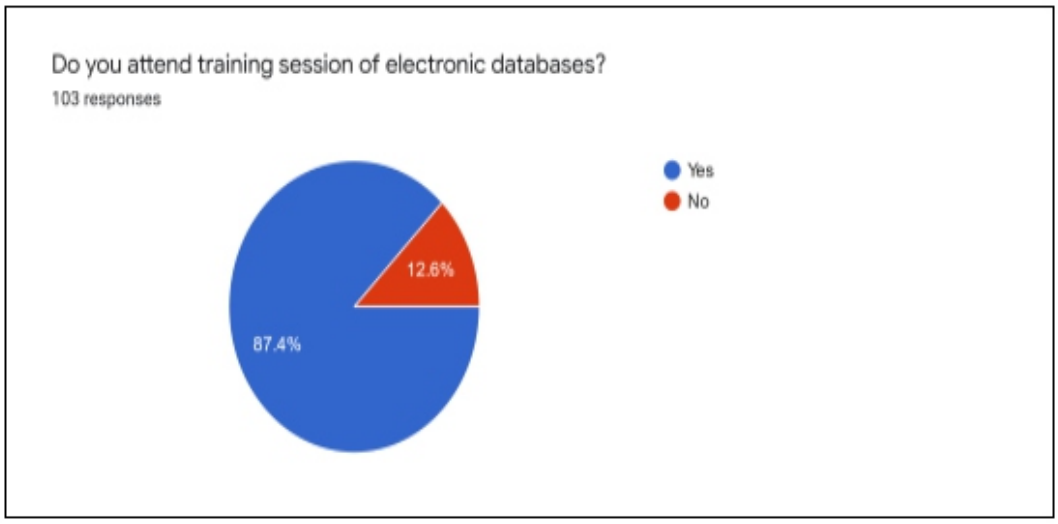


Table -9 Attending training session of electronic databases.

Training attends	Percentage
Yes	87.4%
NO	12.3%

Table-9 shows attending training session of electronic databases by UG students and faculties. Out of 103 responses 87.4% are opined that they are attending training session and 12.3% agree that they are not attending training session of electronic databases.

Figure-9 Attending training session of electronic databases.



FINDINGS OF THE STUDY

Total 469 & 20 questionnaire distributed through online to the students and to the faculties respectively. Among them 86 (83.5%) response received from students and 17(16.5%) from faculties. Out of 103 numbers of students & faculties registered, 101 (98.1%) reverted that, they are aware of Electronic data base and 2 (1.99%) are not aware of the same. Majority showing interest to prefer both print & electronic information resources. Mostly students are using e database regularly. Majorly E databases are used for assignment and project work. Most of Pupil opined that Electronic database are very useful for academic activities and very less respondents conveyed that, they are not aware about importance of electronic resources for academic activities. Most of students opined that they got aware of using e databases by help of library staff and library orientation. Major issue faced by students and faculties that are non-availability of E-database and course wise E-database. Most of opined that they are attending E database trainings.

CONCLUSION

The study concludes that majority of the students are aware of e-resources. Use of electronic resources are frequent among the students and faculties. But still, there are some students who are unaware of e-resources and some face difficulties with non-availability of electronic resources and course wise E-information. It is suggested to library staff to make the students aware of e-resources and improve infrastructure and services as per students and faculties requirement. Over all the library staff should make efforts to update time to time information, also implement new ideas to create awareness about e resources. Organize training & orientation programs for the students to create awareness about subscribed electronic resources.

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Impact of Information Technology on Learning for the Auditing Subjects

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ABSTRACT

Recent information technology has experienced very rapid development that has influenced the lives of individuals and society globally. The prior business processes that used to be done traditionally have changed through using technology to become more effective and efficient. The development of information technology also has a significant impact on the field of auditing, because modern business processes that currently utilize information technology have influenced the implementation of audits, one of which is the implementation of audits process carried out using technology tools such as audit software. Changes in the implementation of audits with the help of information technology, of course, must be balanced with the knowledge of the executor of the audit (auditor) in conducting the implementation of audits, because there are risks of information technology and control in the information technology field that must be examined by the auditor. Therefore, the accounting study program must be able to keep abreast of changes in technology development, especially in the learning process of auditing courses by adjusting auditing learning using technology aids in the form of audit software, so as to prepare graduates who have knowledge and have sufficient competence about information technology audits .

Key words: Information Technology and Audit Subjects.

BACKGROUND

Modern organizations are currently spending increasingly on investment in information technology, both in the form of hardware and software that companies need to achieve their business goals [1]. Technology currently has a role that greatly influences people's lives, especially in the world of education. Global demands on the world of education has been an increasing requirement in using the technology and information to intensify the quality of education in the learning process [2].

This widespread development of information technology triggered the emergence of the industrial revolution 4.0. which allows industries to carry out digital connectivity between machines, data and humans, which refers to the internet of things (IoT) concept. The utilization of this technology will be increasingly applied by organizations both from the private sector and from the public sector, so the world of education, especially accounting studies programs need to follow technological developments by making adjustments to the curriculum, teaching, and readiness of lecturers in integrating these materials to the learning process [1].

Industrial Revolution 4.0. provide a real impact on the accounting and auditing business processes, so that it is necessary to make adjustments against the accounting and auditing courses learning process [1]. Current research developments state that information technology has a considerable impact in the field of auditing. Information technology has made changes traditional business processes into more efficient operations and improved communication between entities with customers and suppliers [3]. Researchers

will focus on the field of auditing because the process of financial statements auditing has changed quite dramatically, which used to done manually before the inspection, currently the inspection is carried out using technology , therefore we need technological tools in the form of special software to conduct audits. This audit process change significantly affects the process of studying the auditing course to stay abreast of technology in the field of accounting, so that accounting studies programs can result graduates which have value added or have updated knowledge in the field of audit.

Auditing is a systematic activity to evaluate and assess the evidence whether it meets the criteria and the results are communicated to the user [4]. A systematic approach to all information in the audit process is very important in an environment that uses information technology. The use of information technology in the audit process often removes the physical footprint that can be assessed and verified, causing a significant risk in the audit process [3].

Modern information technology audits are often carried out online so that the hardcopy audit footprints is not available. Therefore, to conduct an information technology audit, an auditor must have good enough basic software and application knowledge, experts in systems, databases, servers and links [5]. An auditor must also follow audit procedures by companies that adopt information technology functions, namely reviewing relevant documents, reviewing documentation and storage systems for various applications, verifying computer operators for access, and also explaining various policies in practice [3].

Changing audit procedures manually to audit procedures using information technology must be balanced with adequate knowledge and skills from auditors who will carry out audit activities. The audit must be carried out by competent and independent auditors. An auditor must have the criteria used and must be competent in determining the type and amount of audit evidence that must be collected to reach an adequate conclusion [6]. An auditor must understand the theory to become a successful information technology auditor. In addition to expertise in accounting and auditing, an external auditor must also have experience in the field of information technology auditing [7].

Based on the phenomena and literature studies that have been described, researchers are interested in conducting further literature studies on the impact of information technology on the learning process of auditing courses. The accounting study program is expected to be able to apply audit courses with adequate information technology abilities to be in line with the development of the business environment that have applied a lot of information technology, so students are expected to have enough knowledge and get a real picture of information technology in performing the audit process.

LITERATURE

Information Technology

The current corporate environment must be able to integrate information technology with business strategies to achieve its goals. Information technology components in an information system include hardware, software, communication, and other facilities that must be managed (such as input, process, output, and information storage) [7]

Information technology refers to various computer-based devices that people use to work with information and to support company needs regarding information and information processing. Technology has a significant impact on individuals, the global economy and the environment. With technology, many people can communicate, collaborate, and compete using digital media [8].

Information technology is a general condition which consist of various technologies that help to produce, manipulate, store, communicate, and disseminate information. Information technology is divided into two area, namely computer technology and communications technology. Computer technology is a program, a machine that can capture data and process it, or manipulate it into various information that we use. Whereas communications technology consists of electromagnetic systems and devices to be communicated remotely [9].

Information technology has supported internal control in conveying information without delay and on time. In achieving good internal control the company must be managed properly the methods and techniques in internal control that are supported by real time systems, adequate software, data, simulations and other reports [5].

Information technology is a field of study that focuses on processing, managing information and capturing information systems automatically. One of the advantages of using technology is enabling us to get the job done effectively [10]. If information technology is integrated into the university curriculum, information technology will be able to increase student knowledge, facilitate many tasks in the classroom, and reduce the excessive workload on lecturers. One of the developments in information technology in education is the e-learning program [9].

Information Technology Audit and Internal Control based on Information Technology

Information technology is used to transfer information automatically from transaction processing systems to financial statements. If information is transferred automatically, a lot of unauthorized invisible evidence will occur, creating new risks. Auditors must be able to understand the risks of this unauthorized processing, so an information technology audit is needed [10]

Information technology audit is defined as a formal, independent and objective test of a company's information technology infrastructure to describe whether activities such as procedures and controls, including the collection, processing, storage, distribution, and use of information in accordance with policy, asset security, data management, and run efficiently and effectively to achieve company goals [7]. Reports of theft, computer fraud, misleading information often occur in companies today. An information technology audit is needed to evaluate the adequacy of the application system in processing, evaluate the adequacy of internal controls, and ensure assets are adequately controlled by the security system. Auditors are needed to ensure various internal controls have been run effectively to maintain data integrity and regulate access to information [7].

Internal control is directly related to financial statement audits that affect the reliability, timeliness, and transparency of financial statements [4]. Management is responsible for providing adequate financial statement control procedures, and the effectiveness of internal control procedures. Whereas auditors based on AICPA audit standards are responsible for identifying and assessing risks of material errors, both errors and fraud, based on an understanding of the entity and its environment, including the entity's internal control [6]. Information technology influences internal control because it affects the flow of transactions initiated, authorized, recorded, processed, and reported. Control in information systems consists of a combination of automation and manual controls [4].

SA 315 also states that there are two classifications of information system control activities, namely: (1) application controllers, controllers that are applied to the execution of individual applications, and (2) general information technology control, control in the form of policies and procedures relating to many

applications that support the effectiveness of control applications to ensure the proper and sustainable operation of the information system [12].

AICPA issues Trust Services Principles and Criteria (TSPC) for practitioners' use in relation to various principles, such as security, availability, processing integrity, confidentiality, and privacy. Security is related to systems that guard against unauthorized access. Availability is related to the system that is available to be operated or run. Processing integrity is related to processing systems such as completeness, accuracy, timely, and authorization. Confidentiality related to information designed is sufficient enough to safeguard its security. Privacy is related to personal information that is collected, used and kept confidential [7].

Impact of Information Technology on Learning Auditing Courses

Industrial Revolution 4.0 which applies technology has a real impact on the accounting and auditing business processes. Private organizations and public organizations currently use information technology so that accounting study programs must align technological developments in the curriculum, teaching, and lecturers' readiness in integrating these materials to the learning process [1].

Maria and Haryani in their research stated that the use of technology in educational institutions influence the demands of stakeholders. Their research produced an audit model of an information system which consisting of a general audit model, an audit model framework, and audit steps of the Satya Wacana Academic Information Systems (SIASAT) based on the COBIT framework [13].

Ali stated that the auditing course was affected by the Industrial Revolution 4.0 technology, such as IoT, big data, business process automation, blockchain / distributed ledger, AI / machine learning, cloud computing and XBRL. Dai and Vasarhelyi in Ali stated that IoT assists auditors in collecting financial and operational information of the company which in audit process, as well as other audit-related data from companies and related parties in real time. Big data enables audit procedures to be automated, collect data in real time, and as a visualization tool. Business process automation can automate the audit process over and over. Blockchain / distributed ledger allows auditors to focus on more risky and complex transactions. Artificial intelligence can identify unusual anomaly patterns to detect fraud. Cloud computing drives the development of software and applications for performance measurement. XBRL (extensible business reporting language) simplify the auditors to access data for audit purposes [1].

One influence of information technology on audit learning is the existence of information technology audit courses that discuss the application of information technology on the implementation of auditing. Another impact that appears is the application of special software to conduct audits such as ACL (Audit Command Language) or ATLAS (Audit Tool and Linked Archive Systems). This software can be given to accounting program students in practical form so that students after graduation can apply the software when they practice as public accountants.

CONCLUSION

Information technology is currently experiencing a rapid development and influencing the company's business processes. Higher education in particular accounting programs should be able to allign the process of learning the audit course with the development of technology, this is done in the determination of curriculum and learning process that is obtained from literature books on information technology audits and the application of audit software in audit practice.

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Information Needs of Small Ruminant Farmers to Develop Mobile Based Application Software – An Appraisal

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ABSTRACT

Efficient dissemination of technological information from the research system to farmers and reporting of farmers' feedback is one of the critical inputs in transfer of technology. Information and Communication Technology (ICT) is one of the means whose potential can be exploited to strengthen the bridge between research system and farming system. Hence, the present study has focused to identify and prioritize the information needs of small ruminant farmers to develop mobile based application software. Data were collected from 40 researchers of Tamil Nadu Veterinary and Animal Sciences University, 60 extension personnel of the State Animal Husbandry Department and 100 small ruminant farmers of Tirunelveli Districts by well structured interview schedule which contains 48 items under five sub-heads. The responses for each item were measured on a five point continuum i.e., most needed, more needed, needed, less needed and least needed. The mean was calculated and the item above the mean i.e 24 items were considered as the identified needs that include topics on breed & breeding (three), feeding (five), management (five), disease control (six) and marketing (five). Based on the needs identified and prioritized, the content were organised, script prepared both in Tamil and English languages, video clipping, photos collected and mobile based application software is being developed in android platform.

Keywords: -- Information needs, Mobile app., Small ruminant farmers

I. INTRODUCTION

Information and Communication Technology (ICT) is one of the means whose potential can be exploited to strengthen the bridge between research system and farming system. Van den ban (1983) reported that it would be more effective to analyze first, who needs which information and how they receive and use this information at present, in order to be able to decide whether and how their information needs can be better served with the help of computers..

Modern communication technologies when applied to conditions in rural areas can help improve communication, increase participation, and disseminate information and share knowledge and skills. However it is observed that the rural population still has difficulty in accessing crucial information in order to make timely decisions. To overcome this problem, there is a need of using the available resources and technology to develop Mobile Application System as a decision support system for the small ruminant farmers in a cost effective manner. With these backgrounds, NABARD Project on "Development of mobile based technology transfer application system to empower the small ruminant farmers in Tirunelveli District" is functioning at Veterinary present study has focused to assess and prioritize the Information needs of small ruminant farmers of Tirunelveli District, Tamil Nadu, India.

II. METHODOLOGY

An exploratory research design was used in this study. Tirunelveli district is selected as study area since, NBARD Project on development of mobile app in small ruminant is being operated in Tirunelveli District which has sheep and goat population of about 3,03,105 and 3,30,230 respectively (19th Livestock Census, 2012). Identification of needs of small ruminant farmers means that the level of information needed by the farmers as perceived by the researcher, extension personnel and small ruminant farmers on various small ruminant farming activities.

The primary data were collected from the selected respondents by using well structured pre-tested interview schedule. A schedule of information needs contained 48 items on various aspects of small ruminant farming like breed & breeding, feeding, management, disease control and marketing. The different need items were identified in consultation with the subject matter specialists and secondary data on small ruminant rearing. The responses for each of the 48 items were measured on a five point continuum i.e., most needed, more needed, needed, less needed and least needed. The scores of 5,4,3,2 and 1 were given respectively for researchers, 10,9,8,7 and 6 for extension personnel and 15,14,13,12 and 11 for farmers as followed by Vetriselvan (2000) and Nish (2008) with slight modification in the continuum according to small ruminant farming in Tirunelveli district. The mean was calculated and the item above the mean was considered as the identified needs for the development of mobile application.

III. RESULTS AND DISCUSSION

The small ruminant rearing activity was classified under five major heads i.e breed & breeding, feeding, management, disease control and marketing were presented in Table 1. In breeding component, out of the nine topics, 14 topics viz. Indian breeds, native breeds of Tamil Nadu and local breeds of Tirunelveli region formed the information needs of small ruminant farmers as they had score a value of above mean. In feeding aspect, out of 11 topics, balanced feeding, formulation of ration, unconventional feed and fodder, fodder cultivation and need for feeding mineral mixture were identified as the major needs of small ruminant farmers. The researchers and farmers identified balanced feeding as most essential topic. All these factors contribute to the production and productivity of the small ruminants, which eventually enhanced the farmer‟s income. Hence, it was natural to be identified as their important needs.

In management part, out of 11 topics identified, five items formed the needs of small ruminant farmers viz., source of animal purchase, system of rearing small ruminants, summer management, management of pregnant animals and transportation of animal which score more than mean.

The researchers, extension personnel and farmers had given highest score for all seven topics considered under disease control section. This might be due to fact that the farmers are aware that regular deworming and vaccination could improve the health status of the animal which would eventually lead towards better production, while solving the problems related to breeding was essential to maintain regular and higher level of productivity.

The respondents of this study selected all topics as most essential topics under marketing components. This might be due to the fact that the farmers had livestock shandies in the study area like Reddiyarpatti, Melapalayam, Vallivoor and Pampukovil are very popular in trading of sheep and goats and felt need to insure their animals only during crisis.

Thus, a total of 24 items were considered as the identified needs that include topics on breed & breeding (three), feeding (five), management (five), disease control (six) and marketing (five). Based on the needs identified and prioritized, the content were organised, script prepared both in Tamil and English languages, video clipping, photos collected and mobile based application software is being developed in android platform.

Table 1 : Respondents' perception on the information needs of small ruminant farmers(N=206)

Sl. No.	Needs	Mean score value			
		Researcher (46)	Extension personnel (60)	Farmers (100)	Total (206)
I	**Breeds and breeding**				
1	Difference between Sheep & Goat	3.2	7.9	12.6	23.6
2	Indian Breeds	4.1	9	14	**27**
3	Native breeds of Tamil Nadu	4.5	9.3	14.2	**27.9**
4	Local Breeds of Tirunelveli region	4.4	8.9	14.3	**27.5**
5	Breeds – Phenotypic characters	3.8	8.9	13.2	26
6	Selection of sheep & Goat	4.3	9.1	13.6	26.9
7	Breeding age	4.2	8.8	12.7	25.7
8	Breeding of Sheep & Goat	4.1	8.9	13.6	26.7
9	Heat symptoms	4.1	8.9	12.8	25.8
10	Advantages of AI in goat	3.6	8.7	13.8	26
11	Pregnancy diagnosis	3.8	8.8	13.1	25.7
12	Gestation period	3.8	8.7	12.7	25.2
III	**Management**				
1	Source of animal purchase	4.2	8.9	14.1	**27.1**
2	System of rearing sheep & Goat	4	9	14	**27**
3	Housing - Type of animal sheds, Orientation	4.1	9	13.3	26.3
4	Culling of animal	3.7	8.7	13.7	26.1
5	Slaughtering of sheep and goat	3.5	8.7	13.1	25.3
6	Manure handling	3.8	8.9	14.2	26.9
7	Summer management	4.2	9.2	13.7	**27**
8	Management of pregnant animals	4.2	9	14.3	**27.5**
9	Management of sheep and goat	3.8	9	13.3	26
10	Transportation of animal	3.9	8.9	14.4	**27.2**
11	Record keeping	4.7	7.8	14.4	26.8
IV	**Disease**				
1	Deworming schedule	4.7	9.5	14.4	**28.6**
2	Vaccination schedule	4.5	9.5	13.1	**27.1**
3	Disinfection of shed	4.5	9.4	13.1	**27**
4	Control of external parasite	4.4	9.5	13.4	**27.3**
5	Isolation of sick animal	4.3	9.3	13.9	**27.5**
6	Disposal of dead animal	4.2	9.2	14.6	**28**
7	Animal quarantine	4.2	9.4	13.6	**27.3**
V	**Marketing**				
1	Marketing channels	4.3	9	14.1	**27.4**
2	Value added meat products	4	9	14.4	**27.4**
3	Sources of credit	4.2	8.9	14.2	**27.4**
4	Animal Insurance	4.4	9.1	14.4	**27.8**
5	Economic of rearing Sheep & Goat	4.2	9.1	14.6	**27.9**
	Mean Score value	**4.1**	**9**	**13.7**	**27**
13	Importance of inter kidding period	4.2	8.8	13.4	26.4
14	Infertility problems in Sheep & Goat	4.2	8.8	14	26.9
II	**Feeding**				
1	Feeding schedule	4.3	9.2	14.4	28
2	Balanced feeding	4.4	9.2	14.4	**27.9**
3	Formulation of ration	4.3	9.4	14.6	**28.2**
4	Unconventional feed and fodder	4.2	9.3	14.1	**27.6**
5	Fodder cultivation	4.3	9.1	13.8	**27.2**
6	Grazing of animal	3.9	8.9	13.1	25.9
7	Conservation of fodder	4	9	13.9	26.9
8	Chaffing of fodder	4	9	12.7	25.7
9	Need for feeding mineral mixture	4.4	9.2	14.2	**27.8**
10	Water requirement	4	8.8	12.9	25.7
11	Source of procurement of feed and fodder input	4.2	9.1	13.1	26.3

Technological booming in this Information Era, native and hybrid based mobile applications software is commonlyused in the development of mobile app. Among these, Android based mobile application software was selected since android is one of the smart phone operating system whose most applications are available freely on an android market. An android user can easily and freely download android applications. Android is an operating system for mobile device and also a platform to develop key application for the smart phone. Java programming language is used to develop android application by using Android SDK tools and API (Patel et a.l, 2014).

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The Positive Effects of Globalization and Information Technology on English Language Teaching

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ABSTRACT

The aim of this paper is to prove that what has made English a global language and outline the positive effects of globalization and information technology on English Language Teaching. Globalization and information technology are two sides of the same coin. Today the whole world can be in one's palmtop. As a result, the impact of information technology can be felt everywhere – offices, factories, homes, educational institutions, hospitals, railway stations, airports, bus stations, restaurants, grocery shops and so on. Information technology seems to be the master technology at the moment. Even the fine arts cannot flourish without technological props. In such a technology driven world, how can English Language Teaching take place successfully without adapting itself to the changing circumstances? The spread of English plays a major role in the expansion of knowledge. As most of the important books of science, technology and other fields of knowledge are written in English, scholars can enter the large domain of knowledge. So, by learning English, they can become enriched and make their own contribution to knowledge. English is the language of information technology, tourism and travel, international relations and telecommunications. So, opportunities await those who are competent in English. These are the pragmatic value of knowing English which are opened up by the widespread use of English. English Language Teaching is considered to be a kind of service industry. This means that English language is seen as a commodity, and teaching it is a service provided for people. Furthermore, English language is essential to the acquisition of ICT skills. The Global use of English has not only led to the modification of the learning objectives within the communicative approach, but has also enhanced the development of appropriated language pedagogies, i.e. new approaches to English Language Teaching which take into account cultural background and the specific needs of students.

Keywords: -- English Language Teaching, Globalization, Information Technology, Positive Effect

I. INTRODUCTION

Of all the languages in the world today English deserves to be regarded as a world language. It is the world‟s most widely spoken language. It is the common means of communication between the people of different nations. One person out of every four on earth can be reached through English. English is being learnt and used all over the world not out of any imposition but through the realisation that it has certain inherent advantages. Today the compulsions of learning English are no longer merely political but scientific and technological. For over a century and a half Indian intellectuals have been studying English. Today English has entered the fabric of India‟s culture. Language teaching especially, throughout the twentieth century underwent numerous changes and innovations. Approximately, every decade a new approach or methodology comes into practice. English language teaching practitioners around the globe have been practising different trends suitable to their context, needs, availability of resources and practicality. Teachers have had a large number of methods offered at different times. Obviously, some teachers stick on certain English language teachers instead of adhering to prescribed trends, follow different ones at different times applicable to their contexts.

Nowadays teaching and learning process affected by globalization. The use of a computer or laptop, TV, LCD, e- mail, blog, etc are indicated that the globalization has changed the media of teaching. Before globalization, most teachers used a simple teaching media such as pictures, blackboard or whiteboard, real things, or others. However, now, most of the teachers widely use computer or laptop, LCD, e-mail or etc in supporting the teaching - learning process. It will be simple and easier if the assignments or tasks are uploaded by the teacher to the internet via e-mail or blog or others and the student have to find those all. After doing the assignments, the teacher asks the students to submit it in teacher‟s blog or by sending message or e-mail to the teacher. Globalization has a big role in changing the methods, approaches, and techniques of teaching of a learning process.

II. ENGLISH LANGUAGE LEARNING & INTERNET

English is a language of learning, living and livelihood. Historically, older languages like Greek, Latin and Sanskrit were considered to be the languages of learning, not only of the letters but also of the sciences. However, the dominance of English in the past four centuries has led to the use of English for the purposes of learning at all levels. Now, English is a major language of instruction and education throughout the world. It is a language of living in the sense that people who know English use it to almost impossible to get jobs. The people earning low can enhance their earning capacity if they know a smattering of English.

English is the most widely used language on the Internet, as it has already been used in computers right from the beginning of the new technology. Hence, the letter „I‟ in English can stand for the Internet, which is an unlimited source of information for its users. Along with the Internet came to the facility of email and other new media of communication. Of course, both English and the Internet are used for instruction too. Instruction gives not only information but also knowledge with which today‟s youth are able to get more income too.

III. POSITIVE EFFECTS OF GLOBALIZATION ON ELT

There are many benefits of the spread of English as a world language. We all know that the present-day global status of English is primarily due to two factors: the expansion of British colonial power, which peaked towards the end of the 19th century and the emergence of the US as the leading economic power of the 20th century. The total number of people who use English as L1, L2 or English as a Foreign Language in the Inner Circle, Outer Circle and Expanding Circle are nearly twenty million. With so many people using English in various status, it helps create wider international understanding. To share and exchange views and ideas, English works as a strong gateway. This helps people of different countries to become inhabitants of the „Global Village‟.

IV. ROLE IN THE EXPANSION OF KNOWLEDGE

The spread of English plays a major role in the expansion of knowledge. As most of the important books of science, technology and other fields of knowledge are written in English, scholars can enter the large domain of knowledge. So, by learning English, they can become enriched and make their own contribution to knowledge. People with knowledge of English have easy access to the international job market. Job advertisements in local and international markets look for people with sound working knowledge of English. English is the language of information technology, tourism and travel, international relations and telecommunications. So, opportunities await those who are competent in English. These are the pragmatic value of knowing English which are opened up by the widespread use of English.

V. COMPUTER MEDIA COMMUNICATION

Human communication can be divided into two: synchronous and asynchronous. It will be better if the teacher uses asynchronous CMC when he/she does not come to the classroom then the teacher can give assignments by e- mail or by posting in the teacher‟s blog. Asynchronous CMC does not take place in real time as synchronous CMC. Asynchronous CMC in the form of the e-mail lists and discussion forum is an effective media for exchanges between distance groups of student in collaborative learning projects and for mentoring support in distance learning courses. It does not take much time to gather in one place that held the discussion, it just a simple thing that just to connect to the internet then the discussion can begin easily and more effectively. On the internet, there is so many pages and websites which can be used by the teacher and the learners in searching the materials or some information in order to support the teaching - learning process. The learners or students can learn by themselves helped by search engines, pages, or web directories, and others.

VI. THE CHALLENGES OF GLOBALIZATION

Globalization and English language are closely related, where the former encourages the learning and teaching of English and the proficient in language raises the characteristics of globalization. English is central in the development and spread of commerce internationally. Furthermore, the English language is essential to the acquisition of ICT skills since the technology is mostly denominated by English Communication on the internet is mainly in English, making English proficiency important in accessing information and data individual development and improvement and for common living. In a real sense, the English language as a basic course of study is encountered many problems in its learning and teaching. Most of these challenges are. Problems Intrinsic in English Language Itself. This is the main challenge in the teaching and learning of English largely. As a Second language its technical demonstration of the practical position of that language rather than its place in consecutive order of attainment.

VII. TECHNOLOGY FOR FUN IN THE ENGLISH CLASSROOM

The incorporation of technology into English language teaching is one of the important challenges for education today as it is a great step towards revitalizing the English language classroom. The use of technology will help the learners and teachers to move beyond the walls of the classrooms as the learning can take place anywhere any time. The use of audio-visual aids like radio and television, computer-aided instruction, internet and web-based education are some of the technological innovations in certain institutions. The concept of the digital classroom or smart classroom provides effective learning experiences by helping the learners to comprehend information, reflect on how it will affect a change in their lives, compare how it fits into their own experiences and think about how this information offers new ways to act in their enhancement of English language Educational technologies, especially computers and computer-related peripherals, have grown tremendously and have permeated all areas of our lives. It is incomprehensible that anyone today would argue that banks, hospitals, or any industry should use less technology. The Internet, in particular, is becoming an increasingly vital tool in our information society. More people are going online to conduct such day-to-day activities as education, business transactions, personal correspondence, research and information-gathering. Each year, being digitally connected becomes ever more critical to educational advancement. From the beginning of the computer age, educational researchers and practitioners were sure for technology use to be widespread in schools and universities it needed to be closely tied to education.

VIII. IMPACT OF INFORMATION TECHNOLOGY

Information technologies in English language teaching can actually assist with some of these expectations and make teachers and their students be more successful. However, as the world becomes more complex year-to-year instead of the generation-to-generation pace of most of the last century, educational needs continue to shift from teaching and learning isolated skills and information within each content area, to teaching skills that enable students to solve complex problems across many areas. Educators must prepare for a technology-rich future and keep up with change by adopting effective strategies that infuse lessons with appropriate technologies. However, this is balanced by a significant observation: the benefit to students of using new technologies is greatly dependent, at least for the moment, on the technical skill of the teacher and the teacher‟s attitude to the presence of the technology in teaching. So the primary factor for enhancing the learning productivity of students is to have teachers who are competent and knowledgeable about the appropriate and effective use of information technologies in English language teaching. The invention of the computer and internet connection are the biggest invention in the technology of information. By using computer and internet connection, the teaching and learning process will be joyful because there are some applications which can make the learners feel comfortable and make them easier to understand what the teacher taught.

IX. CONCLUSION

In the age of knowledge economy, the mastery of English has become a high skill for professional teachers and „cultural capital‟ or „linguistic capital‟ for learners. English level is closely linked with employability and occupational competition which may further bring about changes in the labour markets. In addition to the economic manifestations of the influences of English teaching and learning, ideological and political impact of a new language should not be ignored. The Global use of English has not only led to the modification of the learning objectives within the communicative approach, but has also enhanced the development of „appropriated‟ language pedagogies, i.e. new approaches to English Language Teaching which take into account cultural background and the specific needs of students.

The globalization has a big role in English language teaching. If globalization is an economic process, the information technology is a communication process. Both of them have come to affect all aspects of human life throughout the world. Computers can help to improve the standard of English and enable the students of today and the professionals of tomorrow to live competitively in the globalized world. The teachers of English will have to realize the new significance of the language has gained the world over and help their students to achieve good command over English through the multimedia computer in tune with the advances in globalization and technology.

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Artificially Intelligent Student Information Network

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ABSTRACT

This paper provides the ways to implement an application to act as an artificially intelligent user-friendly agent to mine the available information feedback from students and faculties to present it appropriately. It will also perform the appropriate probability and numerical calculations for setting up question papers, assigning salary, fee structure and many more. Further it will also provide a network which connects the college community without the need of network providers or Internet. The user interaction is either through touch or voice input and the output is viewing or downloading the related information or establishing an easy communication between the college fraternities.

Index Terms—Artificial Intelligence, Natural Language Processing, Data Warehousing, Data Mining, Wireless Mesh Networks

I. INTRODUCTION

The 21st century has brought about many innovations which are mostly in automation to make the lives of people easier and better to live. People look up on technology to artificially sense their needs for reducing their burden and the time taken to complete their jobs. People expect the machine which is an artificial intelligent equipment to sense his / her needs. We would also want to relate relevant day to day information and feedback to get a different perspective to the available information which is useful for interpretation, analysis and evaluation. Also an inexpensive means to communicate with people in nearby places without the need for connection to the internet is the need of the art. The artificially intelligent student information network would make all of the above a possibility under a single cloud.

We have already seen how the usual college management works. The attendance, the marks, the syllabus, the time table and all are drawn up or recorded manually. This actually takes some time and is also not perfect. We may not be the perfect judge as to which a tough subject is or who the best teacher to handle crisis is. Further students and faculties would want up to date information in their hands to decide on anything such as the study pattern, the important topics to be covered and all that. All the information related to placements are not authentic or incomplete in some cases in certain websites. We may need to communicate with a person within the college (say 100 meters) wirelessly without incurring any additional expense or overhead. So we are bringing out an artificially intelligent application which heavily uses data mining to present the best knowledgeable information about the best teacher for each subject, the rating for the teacher and student likewise, performance of teachers and likewise for students, time table framing, identified tough subjects, all previous year question papers and then the list of important questions. And further information related to placement is also available. The application facilitates a communication medium using wireless mesh network. The aforementioned information is presented dynamically and not by the administrator by the Artificial Intelligent agent using Data Mining.

The Artificial Intelligent Agent for the application can be implemented using the Natural Language Processing for voice based input and set of other codes written for arithmetic and probability calculation

using the Python Programming Language. In case of a voice input, there are 3 stages which is the syntactic, semantic and pragmatic analysis. This will basically act as a decision support system. For implementing the Data Warehouse for our application, we make use of MySQL and for analysis and interpretation we make use of Python Database API to connect to MySQL database. We simply require a radio transmitter with 802.11g standard with support over 100 meters and a 2.4GHz radio spectrum.

II. LITERATURE SURVEY

An extensive study was made on different existing applications which inspired us to come up with this application for the college. Siri in Apple IOS allows you to use your voice to send messages, schedule meetings, place phone calls, and more. But the functionalities of less than1 what everyone would imagine. For example, we can't ask Siri to compute a salary waiver for each faculty or draw up time tables which we regularly do manually in college as a result. Enterprise Resource Tools such as Fedena Pro Support are in their native state and requires human skill to extract vital information from available patterns. The brain child of this innovation has to be the WebFOCUS Business Intelligence platform. It does higher end analytics and presents graphical comparative and vital information. But while this focusses only on analytics and interpretation, our application focusses on the higher level college activities such as periodic calculation of salary of teachers based on college performance and rating and also with the help of this application, we can set up question papers with different range of difficulties. During the recent Chennai floods, Fire chat served as the medium for communication and passing vital information. In our application, we are extending these features to a voice call within the college premises with all the devices supporting the application as a node in the wireless mesh network. The book on the Natural Language Processing with Python by Steven Bird, Ewan Klein and Edward Loper tells you how Python Programming language is simple and powerful for including excellent functionality for processing linguistic data and presenting it appropriately to the user. We can construct a powerful data analysis tool using MySQL and Mining tool using Python.

III. MATERIALS AND METHODS

A.Materials Required and Feasible Environment

The application is made utilizing the following: a workable computer with operating system that supports the Python programming language, a Python platform with version 3.4.2 which includes the support for PyBrain library, support for MySQL database description, manipulation, control and transaction, Database API to support MySQL connection to Python code and a radio transmitter with support for 802.11g standard. This application does not suffer from any major interference from outside environment and the establishment of wireless mesh network ensures that there is almost zero interference even when the signal is in contact with some physical medium.

B. Program Design

The Natural Language toolkit, or more commonly NLTK, is a suite of libraries and programs for symbolic and statistical natural language processing (NLP) for the Python programming language. It segments the sentences and tags these according to the part of speech. The program can be designed in the language that is suitable to both the tablet device and the Personal Computers and which properly incorporates the Natural Language Processing Toolkit. The Bluetooth specification and characteristics are similar to the existing Bluetooth Technology. There are three major aspects of any natural language understanding theory: The syntax describes the form of the language. It is usually specified by a grammar. The semantics provides the meaning of the utterances or sentences of the language. The

pragmatic component explains how the utterances relate to the world. To understand language, an agent should consider more than the sentence; it has to take into account the context of the sentence, the state of the world, the goals of the speaker and the listener, special conventions, and the like [1]. Machine learning is the science of getting computers to act without being explicitly programmed. Machine learning is a scientific discipline that explores the construction and study of algorithms that can be learned from data. Such algorithms operate by building a model based on inputs and using that to make predictions or decisions, rather than following only explicitly programmed instructions. This plays a very important role in including different algorithms for implementation. All machine learning algorithms (the ones that build the models) basically consist of the following three things.

1. A set of possible models to look thorough.
2. A way to test whether a model is good.
3. A clever way to find a really good model with only a few test with which any function can be included.

A useful data type built into Python is the dictionary. Unlike sequences, which are indexed by a range of numbers, dictionaries are indexed by keys, which can be any immutable type; strings and numbers can always be keys. Tuples can be used as keys if they contain only strings, numbers, or tuples; if a tuple contains any mutable object either directly or indirectly, it cannot be used as a key. A pair of braces creates an empty dictionary: {}. Placing a comma-separated list of key: value pairs within the braces adds initial key: value pairs to the dictionary; this is also the way dictionaries are written on output. The main operations on a dictionary are storing a value with some key and extracting the value given the key. It is also possible todelete a key: value pair with DEL. If you store using a key that is already in use, the old value associated with that key is forgotten. It is an error to extract a value using a non- existent key. The keys() method of a dictionary object returns a list of all the keys used in the dictionary, in arbitrary order (if you want it sorted, just apply the sorted() function to it). To check whether a single key is in the dictionary, use the “in” keyword.

Enterprise Data warehouse contains all information about subjects. The Data Mart is the departmental subset that focuses on selected subjects. The aforementioned artificial intelligence mechanism forms the Decision Support System (DSS). We perform drill downs and then maintain meta-data for our warehouse. The data about the fee structure, marks and salary forms the operational data. The user guidance support forms the informational data. We make use of the Structured Query Language to add the primitive data and the feedback which is in short the operational data. The informational data is added using Python snippets as mentioned above. We use MySQL Database Management system as our Relational Database Management System for the warehouse.

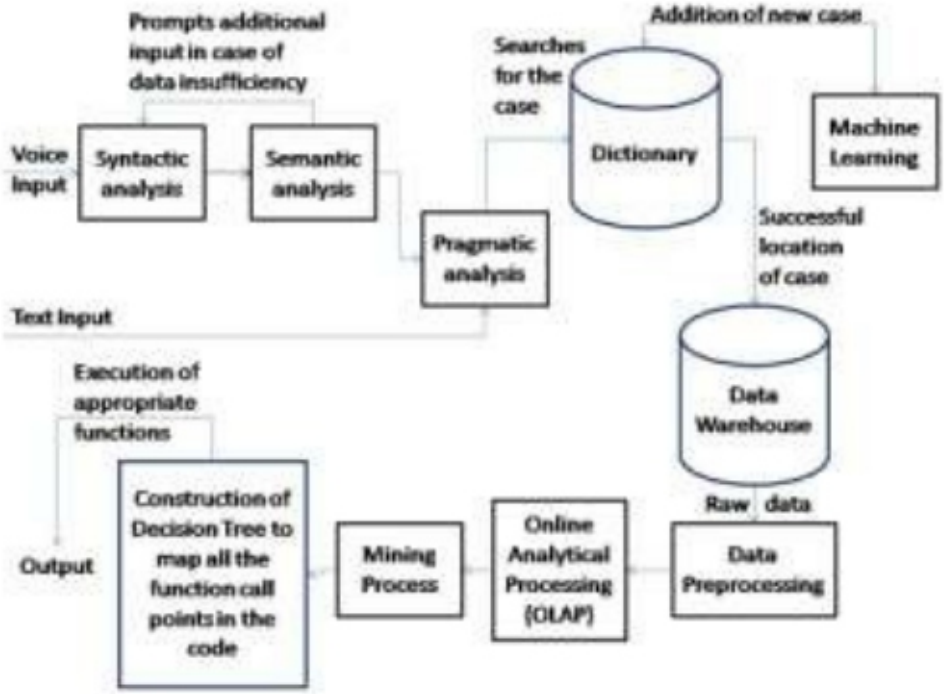
Data mining refers to extracting or mining knowledge from large amounts of data. The tasks involved in Data Mining: characterization, discrimination, association, classification, prediction and clustering analysis can be implemented in the Python programming Language. Main objective is the identification of a particular pattern to aid interpretation. This pattern may be either subjective or objective. We include functionalities to perform preprocessing of data to present the final data, the decision tree and also the probability prediction using Bayesian network which is a representation of variables or data and their conditional dependencies. Outliers can be implemented for safety of privacy [2].

We implement the communication feature using the wireless Mesh topology which is a communication network in a mesh topology made up of radio nodes and this network would not require network provider and Internet service [3]

C. Methodology

The following working model is explained keeping in mind its implementation using the Python programming language. This application supports both speech and text input and they both would meet at the Pragmatic Analysis and thereafter the functionality is common.

Fig. 1 The working model of Artificially Intelligent Student Information Analysis and Extraction



The input is given either in the form of text or voice. In case of text, you will be put through a series of selection and choosing interfaces until you get the desired result. If it voice, then first the syntactic analysis is carried out to tokenize the sentences we speak. Then the semantic analysis, groups the necessary tokens to derive the real meaning it intends to put across. Finally the results of either text or voice goes to the Pragmatic Process module which decides what has to be done for the user request. The dictionary will check out if such user request can be handled. Else it adds the required functionality or data in the Warehouse automatically to handle such requests using machine learning module.

Then the control moves to the Data Warehouse containing a large number of databases or Data Marts. The tuples which we require is fetched from appropriate Data Marts. This raw data or tuples has to be preprocessed before analyzing the pattern between different relevant data. In this we perform cleaning, integration, transformation, reduction and finally discretion. Online Analytical processing supports execution of query tasks to get the relevant data from the tuples. The database manipulation and analysis is handled by the MySQL Relational Database Management System.

Now we utilize the database API of Python to connect the MySQL with the Python code. Now we are utilizing Python codes instead of Procedural and trigger statements of MySQL as Python includes easier and more functionalities. The Mining Process takes with the queried data as input and it involves several internal process toobtain the required pattern. Data characterization involves summarization of the general characteristics or features of target data. In Data Discrimination, we perform comparison of the general features of target data with the general features of data from one or a set of contrasting classes.

Then we establish a proper association relationship between different relevant datum considered. And then we classify the data based on numerical and probabilistic computations. Finally we cluster the data to include only those which we need to draw up a pattern.

With the help of that pattern we attempt to trace a decision tree which is a representation of the control flow across different functions to present the needed result.

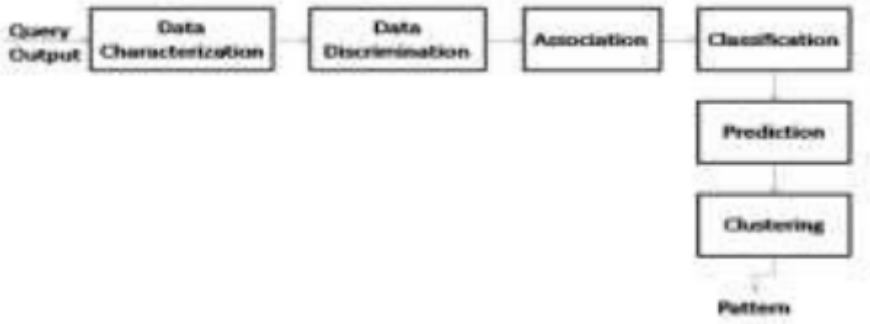


Fig. 2 The Data Mining Process

The following is an illustrative working model of the wireless mesh communication network.

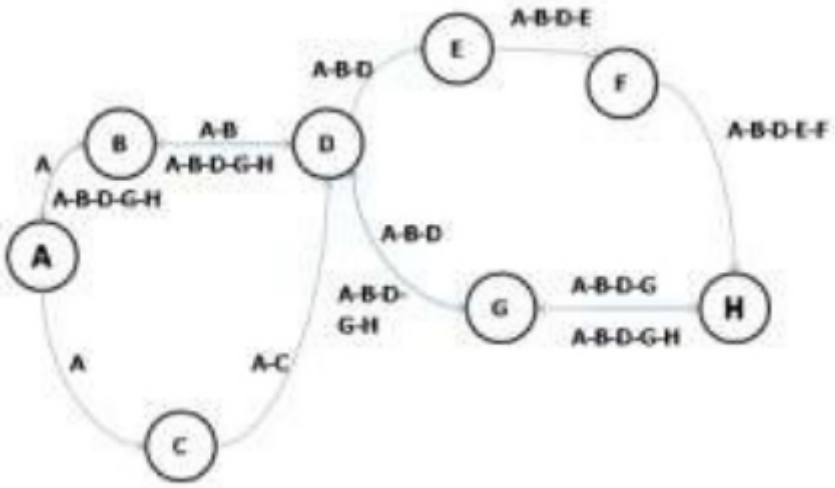


Fig. 3 The topology of Wireless Mesh Network

Suppose radio mesh node A wishes to communicate with node H which is within 100 meter radius, the slow motion of the process which is similar to Dynamic

Topology is explained as follows [4]. The A node first locates its neighboring nodes and sends its delivery request. Both of its neighbors acknowledge the only request that they receive and since they are not the intended senders they pass on the information to their common neighbor which is node D. Now node D acknowledges the request which it receives first so as to support faster connection. This process repeats until the destination node H is reached. This H node sends an frame indicating that it is ready to place a call. This frame header has the address, which was attached to the header of each nodes at a shorter distance from the A node to the H node, for easy path trace back. And then the communication takes place.

D. Problems faced

There are no major problems in the implementation of the application. But efficiency of Natural Language Processing in real world implementation is not exactly 100 percent perfect. But it is just about accurate for the system to understand and generate an algorithm. The easily or mostly solvable problems include Spam Detection, tagging, named entity recognition. Further problems include Sentiment analysis, Co-reference resolution problem, and Word sense disambiguation problem, Parsing, Machine Translation and Information Translation. These problems are solvable if proper research is done and corresponding implementation is included. Some of the problems which are almost impossible to solve are summarization of input and implementation of a dialog system that prompts a related query to the input if the input is ambiguous. Our system simply reacts by saying something like "I do not understand you. Come again". The world is new to the concept of Data Warehousing and Mining, so it would take some amount of time before we can understand how different patterns are related. Also we would not know firsthand how many databases are required as it is powered by artificially intelligent machine learning modules as opposed to the static databases added in the existing Enterprise Resource Tools. As a result, we can implement the Warehouse only by the Bottom-Up approach which is the incremental approach where in database can be incrementally added upon request. As in the case of the communication network, the problem is the range and also the primitive privacy policies for the mesh nodes in the network.

IV. RESULTS

Suppose a department Head wants to set up the time-table for the new semester, here is how the process takes place in the application. The input would be "Please schedule the time-table". Due to the lack of information at the semantic phase, the application prompts the user to specify the branch and year of course. From the tokenization, the key words identified were "time-table", "CSE", "4th". Now referring to the dictionary, the appropriate case was located by the agent and the input was understandable. Now it fetches the Subject-Credit-syllabus table and the Subject-Result-year table from the Data Warehouse. After prior preprocessing, we extract the tuples needed for that particular branch and year from the first table and then we extract the previous year results of 4th year Computer Science and Engineering alone from the second table. In the mining process we obtain a pattern relating the difficulty of the subjects to the results and subsequently the allocation of number of classes. If some subjects have almost the same level of difficulty, then probabilistic calculations are made which decides which subject should be given the most number of classes after the comparison with other subjects. The data virtual tree is pruned to contain only the subject information and the related pattern. Finally a subject can be allocated at different times based on the conditional probability. Here is a decision tree snippet to illustrate class allocation.

Assigning difficulty,

IF (result > 80) THEN difficulty = "easy";
ELSE IF (60 <result <=80) THEN difficulty = "medium";
ELSE difficulty= "hard";

Same level of Difficulty issue,

IF difficulty= "hard" and probability="yes" THEN num-class=5;
ELSE IF difficulty= "hard" and probability="no" THEN num-class=4;
ELSE IF difficulty= "medium" and probability="yes" THEN num-class=4;
ELSE IF difficulty= "medium" and probability="no" THEN num-class=3;
ELSE num-class=3;

Suppose vital information is required related to the placement, we can collect the feedback of the seniors through the application, create a new database in the Warehouse and extract an pattern relating the

placement and its trend. It will provide appropriate study materials for preparation, make the company profile evident and then making aware of the best companies in recruitment business by studying the table containing the company recruited year, base salary offered and the like.

Another instance would be the salary increment calculator of the faculties based on their rating and performance. Consider the students submitting the rating of their teachers periodically, then finally she will have a particular rating at the end of the semester and also her performance evaluated based on the pass percentage. The respective fields are fetched from the Warehouse and the average of the above 2 is calculated during the classification phase of the mining process. Then the following Decision Tree Snippet shows what to do:
Average Calculation, current_average= (rating+performance)/2 ; salary increment calculation, increment=(current_average-previous_average); IF increment>0 THEN salary+=increment*1000; ELSE salary+= 0;

We can easily set a easy or a moderate or a tough question paper by utilizing the Bayesian Network mechanism in the Prediction phase. It is based on Conditional probability relating the probability of maximum or minimum occurrence of question with the probability of occurrence of other similar questions of the same discipline.
The teacher in need of the student can simply say "Place a call with Ashwin of 4th year CSE". If he is within 100 meters, say in laboratory, the call will reach the student without the need of Network provider or Internet pack.

V. CONCLUSION

This application is generic and can be extended to different areas such as food chains, tourism, defense, agriculture and the like. Future likely addition to the above application would be the sensors. For instance to automatically sense and record the attendance saving further time. This would lead to the creation of a powerful Internet of Things tool which is the need of the hour at the moment.

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Two Component Information Security Fortification Method in a Distributed Storage Framework using Cloud

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ABSTRACT

This paper proposes two-factor authentication for the data stored in the cloud with revocability option. In our system, sender sends an encrypted message to the receiver through cloud server. The sender needs to know only Identity of the receiver but no other information like public key or certificate etc. To decrypt a cipher text, the receiver should possess two things. First one is secret key of the receiver stored in the computer system and second one is some hardware device, which is unique, that is connected to the computer. Cipher text cannot be decrypted without having these two things. But if the hardware device like pen drive or USB device is lost or stolen, then cipher text can never be decrypted and this hardware device is cancelled to decrypt any cipher text. Our system is secure as well as practical. We can use a new hardware device to decrypt the cipher text together with the secret key.

I. INTRODUCTION

There are so many advantages, to store the data in the cloud. Data hosted in the cloud storage [1] server can be accessed at any time from any place. Cloud users can get any amount of additional resources [2] any time that will be provided by cloud service provider. No risk of data maintenance. Data sharing between users is very easy.

There are so many disadvantages also, if we store the data in the cloud. As long as data is stored in the third party physical storage device, there is no security for data stored in the cloud server.

Many users are connected to the cloud server every day so that, any entity or user can get access to cloud data stored in the cloud server. Malicious cloud users can access any information stored in the cloud server, it is difficult to predict malicious cloud user because the number of users are connected to the cloud every day.

How to protect data in the cloud means, cloud data is usually protected by using asymmetric encryption. Asymmetric encryption [5] allows the sender to use only the public key or Identity of the receiver to generate a cipher text. Receiver should possess his/her own secret key to decrypt.

But the risk in protecting data in the cloud server is anybody can hack the secret key stored in the personal computer or a trusted server. This personal computer or a trusted server may be protected by a password. In an open network, this works best.

But today is an Internet age. In this internet age, every computer is somehow connected to another computer through networks. Therefore, so many chances required for the hacker to compromise the secret key. Therefore, there is a need to enhance a security protection. That is why; we are using two-factor authentication process which is flexible and scalable in the cloud computing era.

II. RELATED WORK

Here, we discuss some of the presented method to give the security for the cloud storage.

Double encryption: In this method, the plain text is encrypted using a public key or identity of the user. Again this cipher text is encrypted using some hardware device like pen drive. To decrypt, we first put hardware device, which will decrypt the cipher text once [4]. Finally, secret key of the receiver is used to decrypt to get the original plain text. We should have these two things to encrypt as well as decrypt (Secret key and hardware device).

This disadvantage of this method is, if the hardware device is lost or stolen, then it is not possible to decrypt the cipher text forever because, this method does not support revocability or new hardware device update.

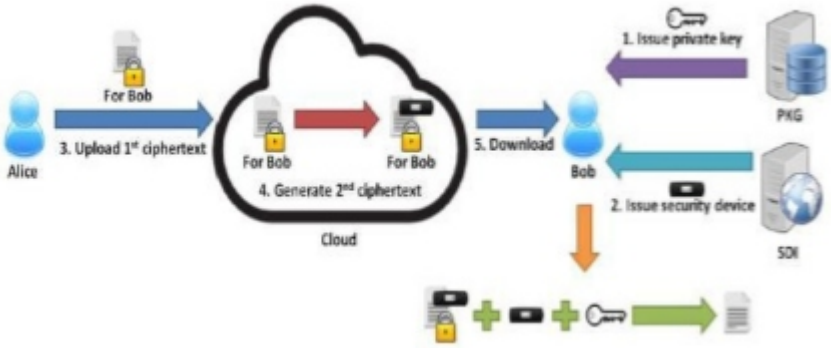

Fig 1: Existing system

The above figure 1 demonstrates the existing method to secure the cloud storage.

Split the secret key into two parts: In this method split secret key into two parts. First part is stored in the computer and second part is embedded into a security hardware device, then the drawback is that again without either part, one cannot decrypt the cipher text and also, if the device is lost, anybody who is having that device can break into the computer where the other part of the key is stored and he/she can decrypt all cipher text [3].

III. PROPOSED METHOD

Our system is Identity Based Encryption mechanism (IBE mechanism). Sender need to know only the Identity of the receiver to send encrypted data. In order to decrypt the data present in the cloud, the receiver need to do following things: where he/she should provide secret key which is stored in the computer and should have unique security hardware device, which will be connected to computer. It is impossible to decrypt the cipher text without either of these two things (either secret key or security device).

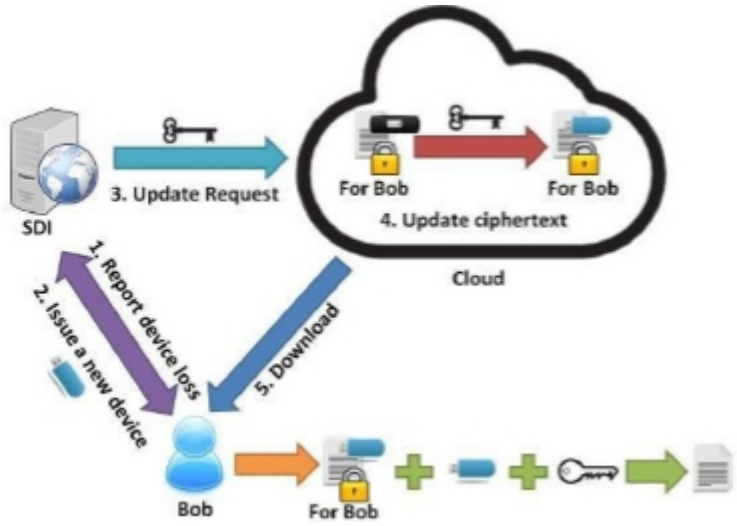

Fig 2: Proposed System

Our security hardware device can be revocable; the cloud server at any time cannot decrypt any cipher text itself. Our approach or method provides flexible security mechanism for the data stored in the cloud server.

IV. EXPERIMENTAL RESULTS

This section gives details of the experiment carried out to provide the two factor security for the cloud by means of Eclipse Juno IDE.

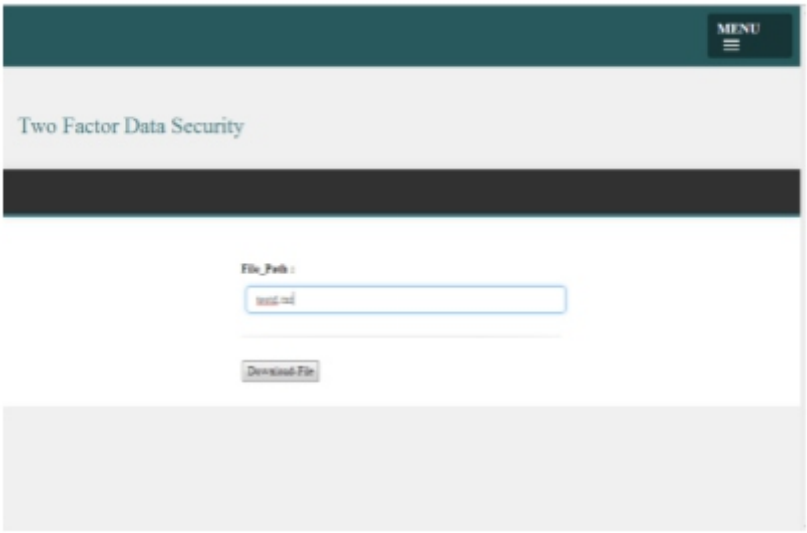

Fig 3: File download

The above screenshot shows the File downloading step. Here we have to mention the Filename.

The fig 4 shows actual File downloading from the Amazon cloud server. This file is downloaded and stored locally.

Fig 4: Downloading file from Amazon cloud server

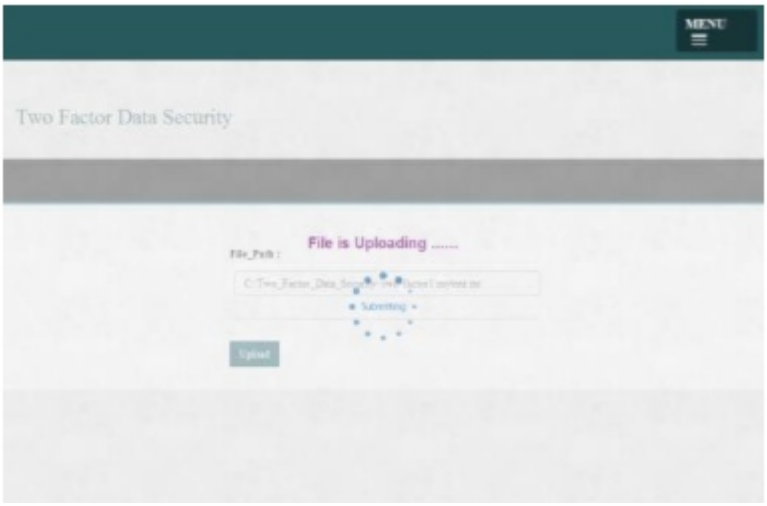

Fig 5: File uploading to the Amazon cloud server

The fig 5 shows the actual File Uploading to amazon cloud server. This file is encrypted twice and stored in the cloud server.

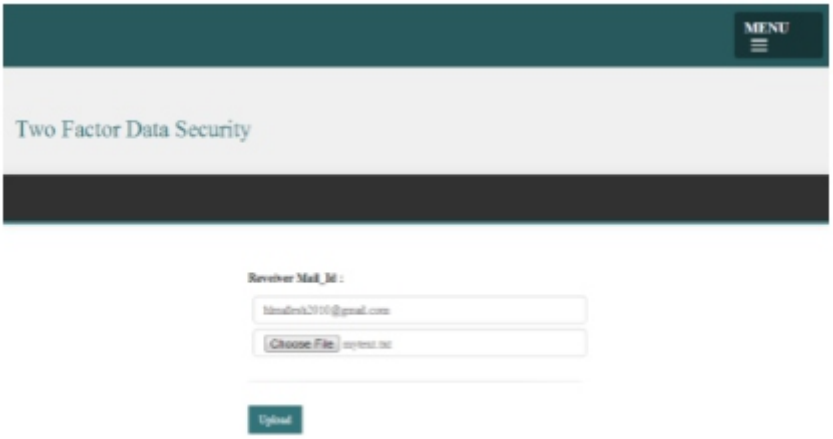

Fig 6: File Upload

The fig 6 shows the File Uploading step. It requires a receiver's email Id and File name to upload.

V. CONCLUSION

In this paper, a novel two-factor authentication for the data stored in the cloud server is introduced. Data is encrypted twice using the Identity of the receiver as well as security hardware device. The receiver uses both the security hardware device and a secret key, to decrypt the data twice.

Confidentiality of the data is enhanced in our project and also the revocability of the security hardware device is revoked, the corresponding cipher text will be updated with the new hardware device, without the knowledge of the sender, by the cloud server. Multiple revocability is not possible, one file can be sent to one receiver only. Multiple files cannot be sent to one receiver or multiple receivers.

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