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Special Issue on:
UGC Autonomous Funded National Conference on

QUALITY INDICATORS FOR
LIBRARY AND INFORMATION SERVICES

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Message

Quality, in the context of a higher educational institution, is multi-dimensional. The meaning of Quality differs from institution to institution. As per the ISO 9000 standard quality is described as *the consistent conformance of a product or service to a given set of standards or expectations.* Quality in library and information services can have many aspects. Peter Brophy, proposed a set of quality attributes to libraries. They are: Performance, Features, Reliability, Conformance, Durability, Currency, Serviceability, Aesthetic, Usability, Assurance, Courtesy, Communication, Speed and Services.

The above mentioned attributes are not only for the quality improvement of the library but also for all academic departments. *Let the Light Shine from the Library.* The Department of Library and Information Science, Islamiah College (Autonomous), Vaniyambadi is organizing a UGC Autonomous funded National Conference on Quality Indicators for Library and Information Services (NACQLIS 2018) on 25th January 2018 in association with Academic Library Association and going to publish a special issue in the International Journal of Science and Humanities (IJSH) the College Research Journal to disseminate the collective knowledge on these areas.

This issue presents research papers on Issues and Challenges Determining Quality, Quality of LIS Professionals, Library Standards, LIS Education and Research, Digital Libraries, Quality on e-Sources, TQM / SERVQUAL and LIBQUAL, NAAC / NIRF Parameters and Impact on LIS and Best and Innovative Practices in LIS etc. The mode of operation of the library is facing a change in recent years. Library is not a place to store books and journals but it becomes the centre for disseminating knowledge. Quality is the product of knowledge. The knowledge broadcasting centre must have quality. Therefore, the Managers of the library need to be trained in such a way to maintain the standard and quality of the library.

I hope this conference will help the mangers of the library to interact, discuss, deliberate the quality issues of the library and take a new path in the process of delivering the goods and services to the academic departments. I hope all academic departments will follow the footsteps of this programme and concentrate on the quality issue of their department concerned. In this juncture, I would like to appreciate our Librarian Mr. N. Abdul Latheef, and his team members for their untiring effort in bringing out this special issue as a collection of rare kind.

I thank Dr. Anwarullah Hajee, Secretary & Correspondent of the college and Members of the Management for their kind cooperation and financial support not only for this special issue, but also for the entire development of library. I thank the UGC for the financial support to the conference and also thank Dr. U. Rizwan, Nodal Officer for

publication who has taken keen interest in bring this issue in time. My thanks are due to the members of the Editorial Board of the IJSH for their wholehearted cooperation. I pray and thank the Almighty for smooth conduct of the conference.

Vaniyambadi   Dr. K Prem Nazeer

January 2018   Principal

Editors' Message . . .

Quality and Quantity of service is the main criteria for effective services of the Library and Information Centers. The modern Information and Communication Technology (ICT) development offers new opportunities in the delivery of information services and the way the libraries are managed. The National Conference on Quality Indicators for Library and Information Services aims to create an awareness among the library professionals about the Quality and Quantity Indicators of Service. In this context, libraries are heart of every institution to satisfy the parameters of NAAC, NIRF, NBA, etc. Based on this criteria, this conference is organized and the following objectives:

- NAAC/NBA/ISO/NIRF Parameters and impact on LIS
- Innovative and Best Practice Service in LIS
- E-Resources access Quality
- TQM, SERVQUAL & LIBQUAL
- Quality of LIS Professionals
- LIS Education and Research
- Library Extension Activity
- Digital Library/Virtual Library Service
- Issues and Challenges Determining Quality
- Library Standards for Academic/Public/Special Library Systems

I render my thanks to Dr. Anwarullah Hajee, Secretary & Correspondent, who readily accepted my request and grant funds to conduct this conference. I owe my heartfelt thanks to Dr. K. Prem Nazeer, Dr. U. Rizwan and Dr. A. Noor Mohamed who have given me this opportunity to publish the articles in the special issue of the *International Journal of Science and Humanities.* I extend my heartfelt thanks to *Academic Library Association*, Tamil Nadu for their support and kind coordination.

Finally, I dedicate this work to the Almighty, who has given me the strength and power to carry out this work.

January 2018   N. ABDUL LATHEEF

                                                    Organizing Secretary

Librarian   UGC Autonomous Funded

Islamiah College (Autonomous)   National Conference on Quality Indicators

Vaniyambadi   for Library & Information Services

REVIEWERS

Table of Contents

ii

LIBRARY STANDARDS - ACADEMIC/PUBLIC/SPECIAL LIBRARY SYSTEMS

ISSUES AND CHALLENGES DETERMINING QUALITY

vi

Best Practice in the Libraries: A Special Drive at Islamiah College Library

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Abstract

For sustainable development of any nation, education is a major instrument of change. The challenge of 21st century is a challenge to survive as an institution of quality. The developments in ICT have changed the users' expectations from the academic libraries in different ways. From the very simple 'book collection' concept to the services to the end users differ very much from the past practices. Quality and Quantity of the library services determine the best practices of the Library. Every library should expose their activities and talents, uniqueness in the form of services to be utilized by their visitors/users. This paper describes the best service practices provided in the Islamiah College Library. Different types of users and extension activity of the library, unique services of the library are highlighted in this article.

Keywords: Best Practice, Innovative service, NAAC, NPTEL, DSpace,Islamiah College Library.

Introduction

According to S.R.Ranganathan, father of Library and Information Science, saving the time of reader is most important for any Library system. That is why he had framed his fourth Law of Library Science as "Save the time of the Reader". Every library should follow this rule in order to satisfy their respective users. Quality, Quantity and potential services in the higher Educational institutions are highly expected in the current scenario. The NAAC team, ISO, NIRF,NBA etc., visit the higher educational institutions to assess the Quality of services offered and rank the Institution having 'Potential for Excellence' according to certain parameters. Likewise each department in an institution has the responsibility to expose their talents and quality of service which

is a crucial factor for the overall growth and development. Accordingly the Librarians should also take initiatives to adopt new technology, innovative methods and ideas and put them in to practice in their libraries. Information and communication Technology have opened up a world of opportunities for the Librarians, to adopt and implement newer methods. At the same time the Management of the institution is to lend support the librarians in order to implement and expose their talents. The following passage will highlight the special features of services provided by the Islamiah College Library.

Review of Literature

BUGG, KIMBERLEY (2015) Discussed in his paper that academic libraries should rely on talent acquisition strategies that use more than applications and interviews to secure the best talent. Developing a talent acquisition process to attract the top talent should fall within the strategic mission of the academic library, it should be embraced by the entire library and require active involvement of all library staff. HARDESTY, Lary L. (2003) Best of the Best boldly asserted the bright red buttons proudly worn by all the library staff members of the North Carolina State University Libraries on a balmy March day two and half years ago. On that day the North Carolina State University Libraries received the first "Excellence in Academic Libraries" award in the university division from the Association of College and research Libraries. YAN QUAN LIU (2004) Studies investigate the current practices in digitizing library materials in the USA. Building a good digital collection has been a common task, pervasive in all types of libraries. Digitization becomes more and more crucial, affecting libraries while they work towards becoming digital. Researchers and Practitioners would like to know what practices have been developed to deal with the challenges that pose the most significant problems or concerns for libraries in digitization. Through probing some widespread issues on what materials to digitize, and the associated standards and technologies in digitization in US libraries, this survey of current literature reveals a number of prominent library digitization practices, methods and challenges, and highlights the best practices, trends and interests in library digitization pertaining to both policy and technology marketplace issues.

What is Best Practice?

There is always a qualitative improvement in the services offered to the students by the staff that has become enthusiastic and resourceful. An activity or service of any Institution/ Industry / Concern provided in a unique way, which differs from other institutions/Concerns for their customers/beneficiaries, is known as "Best practice". In order to implement this, we need to rejuvenate the library staff members and educate them about the prevailing work practices in the other college/institutional libraries.

Needless to say, that the morale of the staff is increased due to the training and expertise in various areas of library operations. E-skills such as web hosting, automation have been acquired by the professional staff. As an outcome, the quality of library services and usage has been enhanced.

Best practices of the Library

The following activities are pursued in the Islamiah College Library during every academic year apart from the usual lending of books, reading room which has a remarkable number of national/international magazines on various subjects in different languages and neatly bound copies of the old magazines.

User Orientation Programme

One of the unique activity that we do every academic year conducting "Library user orientation programme" for the newly admitted students (First year UG, PG students and Research Scholars) in order to explain them the facilities available, sections of the library and how to utilize them effectively. Hands on Experience are also being provided to them as to how to retrieve the electronic resources.

User Handbook

A Hand book on Central Library is designed for our Library users. This book will guide the Readers/Users to know the facilities available in our library and utilize them effectively. There are four divisions in our library; they are Stack Area/Lending divisions, Reception/Circulation, Reading Hall cum Digital Library and Virtual Library. Each division and its services are clearly detailed out in this book. Our library is a regular member in INFLIBNET, DELNET, NPTEL (National Programme on Technology Enhanced Learning), National Digital Library and American Embassy Library, Chennai. Some screen shots of WebPages have been added for easily understanding the facilities. Virtual Library service functions in a separate circular building. It offers many open access facilities like e-books, e-journals, e-thesis etc., Users may download the e-resources in their external storage device. National Digital Library and DELNET Discovery Portal have been added and their features highlighted.

Conference/Seminar/Workshop

Islamiah college library organizes conference /Seminars/Workshops at regular intervals. In order to create awareness among the students/Research scholars and keep them

updated with the latest innovations and techniques in the field of Library Science, ICT Skills etc., we invite Library Professionals and faculty from all subject disciplines who share their expertise with the students. These seminars/conferences are open to the neighboring college students as well. In fact our national conferences attract both the academicians and the students from the length and breadth of the country. Invited research papers are presented in the programmes and also published in the form of Proceedings or Special issue of Journal.

Institutional Repository through DSpace

D-Space is an Open source software installed in the library as an Institutional Repository system. In Islamiah College there are fifteen departments; out of which eight departments are actively involved in research and publications. Apart from these departments, other departments also publish books, Journal articles and conference proceedings etc. Our library has a number of Rare Books collections, research Scholars' Theses and Dissertations, Completed research reports, NPTEL Video lectures, Question Bank and other materials documenting the history of our college like MASHAL Magazine and News Letter etc., All these publications have been made available in an online mode using DSpace. Users may browse the DSpace facility through their desktop. It is a treasure trove.

Competition Programmes

The Library organizes competition programmes viz. Story Telling, Quiz Programme Essay writing and Readings Sessions in every academic year in order to create and develop the reading habit among the students. Winners are honored in the college day function.

Virtual Library

This is a Paper-less Library located in an altogether separate building. There were 15 computer systems available with internet connectivity. Virtual Library provides INFLIBNET e-Resources Service, DELNET online Resources Service and NPTEL Video lectures apart from the regular net facilities. A-View Software for webinar from INFLIBNET, Ahmadabad and more than 350 Nos of CD/DVDs are available subject wise to cater to the needs of the student community. Institutional repository is also made available through DSpace. Downloading of online books and uploading into the repository software is also available for the benefit of the users. Head phones are provided.

Faculty Publication

A Separate Cupboard allotted for the faculty Publications which includes the books authored by our staff members, articles published in various journals and papers presented in different conferences and seminars. This collection also includes in the various individual publications made by the staff.

E-Learning Facility

NPTEL (National Programme on Technology Enhanced Learning) video lectures from IIT Madras have been downloaded and installed in our Virtual Library. They cover wide range of subjects like Physics, Chemistry, Biotechnology, Computer Science, Mathematics and Management. Headphone provision is there in each computer system so that each one can watch the videos or pursue online courses. A-View software is also installed in the virtual library exclusively for the Students/Research Scholars. Programmes conducted by the INFLIBNET centre in Ahmadabad available via this software.

Book Bank

A separate Almirah is allotted for the book bank. Important academic books are selected from all major subjects (according to the syllabus) and kept in that cupboard. These books are provided to economically poor students who can't afford to buy them on their own. These books are issued semester wise on the recommendation of the concerned subject Heads of departments.

Books Exhibition

Every academic year we organize Books Exhibition in the campus. Many books publishers/suppliers and distributors display their books and offer special discount to the students.

Impact of Best Practice

Government Inspecting Authorities like NAAC, ISO, NBA, NIRF etc., when they visit our Library, are very much impressed by the 'user friendly atmosphere' and the facilities provided to the student community. Surely this is very much appreciated by them. Neighboring Institutions are also visiting our library to know the facilities provided in the premises. These types of services will definitely create goodwill among the

Users/visitors.

Conclusion

Library and Information Centers have always been an indispensible unit of higher education, providing the students the knowledge and an ambient atmosphere to pursue their goals. Recent advances in ICT should be exploited to make the whole process automated and efficient. It is a constant and continuous process. Islamiah college library adopts new technology, innovative methods and implement it to provide the best services to their readers in an effective manner. Creativity is the name of the game. Team work plays an important role in day to day administration and in implementing new ideas. People working together can sustain the enthusiasm and lend support needed to complete the work of each programme. Of course, continuous self evaluation is an indispensable element for the librarians throughout the academic year. They should make the goals for every five year, plan the strategy to achieve them and be ready to face the Inspection team anytime. Finance and Manpower are important factors to achieve goals, which are to be provided only by the Management and the Head of the Institution. We have no hesitation in putting on record that luckily in Islamiah College, we have both on our side! Library is one of the most powerful means to create knowledge based society and let us achieve this by putting forward our best practices!

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Innovative and Best Practices in Library and Information Services

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Introduction

The library and information services are facing the challenge due to globalization and liberalization in higher education. It leads to privatization and creates cut throat competition. The public also vigilant in admitting their wards to the quality Institution to get quality outcome. Better outcome of the Institution depends upon its infrastructure facilities and the best services which are unique to that institution. It may be possible through better library services with better infrastructure with intention of return on investment. It exclusively meant for quality based on standards and best practices in the libraries attached to the parent institution.

Bench Marking and Best Practices

Bench marking is the process of identifying the highest standards of excellence for products, services, or process, and then making the improvements necessary to reach those standard - commonly called the 'best practices'. Bench marking is not competitive analysis or number crunching, nor is it spying, espionage or stealing. It is a process to establish the ground for creative breakthroughs.

A *Best Practice* may be innovative and be a philosophic, policy, strategy, program, process or practice that solves a problem or create new opportunities and positively impacts on organizations. Institutional excellence is the aggregate of the best practice followed in different areas of institutional activities. In general, the use of technology and innovative ideas lead to evolve best practices evolving in the library and the informative environment.

Bench marking the 'best practice' as a means for continuous learning through sustainable innovations is familiar in the world of business management. In recent years, the approach is being adopted in many fields, including higher education. Many organizations are coming up with their 'best practice database' to demonstrate in practical ways what actually works in nourishing quality efforts.

A practice qualifies to a 'best practice' status if it results in high value impact on any aspects of educational activity in an institution. It is different from 'standard practice' in that it is value added standard practice. Again, what is best practice may depend on viewer's perspective and time and context. Continual review and improvement of a current practice becomes necessary to elevate it to the status of a best practice, more so in the present day scenario of fast paced educational innovations. There is sometimes a hesitation on the part of some institutions to share their best practice data. Sharing , apart from being an exercise in institutional philanthropy, is one way to enhance competitive advantages, as the borrower institution sources its learning to the originator. There is actually a view that the best practices are 'bestowed' practices in that they already stand authenticated in an institutional context. Borrowing apart, each reflective institution , over the years of its existence, should also strive to discover what the best practice for it to enhance institutional effectiveness.

Libraries, today need to anticipate and respond to changes in this age of information explosion, handling the information sources, technological advancement and changing user needs. As a consequence, the libraries are looking towards bench marking and best practices to stay healthy and economical. Hence, libraries need to identify and adopt good practices and best practices and benchmark in enhancing the use and saving the cost, time and labour with the available resources in the present digital era. The NAAC has been keen on adoption of the benefits of use of information technology in library operations and user oriented need based services which are called as best innovative practices.

1. Management and administration

2. Collection development

3. Extent of the Use of services

4. Use of Information Technology

The best practices identified in some of the institutions in India are classified as follows:

Management and administration

Library management is the basic activity which helps the user in identifying and accessing knowledge resources in and academic institution some of the best practices.

a. Inservice programs: Training of the staff in the use of new systems and techniques has to be arrange with the support of management

b. Observation of other library practices: The library staff members are taken for a one day visit to other college libraries to know and learn the best services followed in their institutions.

c. Staff promotional policy: Clear promotional policies in terms of qualifications, length of service, regularly etc. with a clear job description and responsibilities.

d. Resource generation through external membership: Access to the library is provided to the users from other institutions with the nominal fee can be charged.

e. Student training: The student are given a chance to work in the library and their given the nominal amount us pocket money under 'Earn while you' scheme.

Library collection development services

Collection of information sources is based on the policies and programs. The collection of printed materials and the e- resources is to be used optimally in this respect few of the practices as follows.

a. Compact storage of less used collection: It is appropriate to provide more chances to select the exact material by the users through separate the less used books to the compact shelving.

b. Library book exhibition: Book selection process is possible and easy for the faculty members through the book exhibition organized at the institution to have the look on the latest books published on their subjects.

c. Extended working hours: To provide uninterrupted reading facilities to the users at their convenient time may attract the users beyond the regular working hours of the institution.

Extent of use of service

Information explosion requires a library is to play the important role in evaluating the information sources, weather print or digital resources.

a. Information literacy program: providing guidance to access the E-resources and create the awareness about the services provided by the library.

b. Research report training: Orientation to research report writing especially in the organization of references can be given.

c. User orientation: To encourage the students to use the library by motivation, inculcating reading habits and self study among the students particularly the UG students.

d. Library Best User award: To increase the frequency of visits to the library, instituting finance for providing best user award.

e. Feedback Mechanism: A feedback box near the entry point of library, feedback through twitter, e-mail from the users are also improve the service quality of the library.

Use of Information Technology

Use of Information and Communication Technology in library environment in the past decade is remarkable. Now a days, it is inevitable for the library development and management in library services. Some of the University and college libraries are using technology in their libraries spelt out their best practices with specific objectives. Use of ICT creates added value to its services for the benefit of the user community.

a. E-resource centre: providing internet facilities to access globally generated information to the students and researchers.

b. Library Website: to disseminate current information on various subjects to all the library users in time both online and offline.

c. Access facility to e-resources: By creating subject gateways students can be encouraged to make access facilities to e-resources.

d. Digital Repositories: With the use of DSpace, institutional repositories can be created and it can be disseminated to the users.

Conclusion

Best practices which are benchmarked in the best institutions can be followed in the institutions with good collection of books and infrastructure can improve its quality through its services. The best practices to be constantly updated when Information Technology tools are used in libraries, with changes that take place globally.

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Best Practices in Academic Library

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Abstract

Library is the heart of the institution. The libraries are located in the campus of the colleges or in the Universities. They serve primary to the students and also to the faculty. They are the customers who are part of the academic community. The best practices of academic library not only have a lot of collection and it also it promotes and offers a wide range of services from reference to electronic informatics services in a friendly manner to the customers. This paper explores the best practices or academics library in sri sarada college for women, Tirunelveli such as a pleasant environment, good collection of books, E-resources and atomized library. It offers services like library orientation, book bank facility, new arrivals display, and library advisory committee. Book review news paper clippings, library day celebration, conferences, seminars and also awarding best user award, Nptel online courses, internet browsing . It attracts more than 100 to 150 students to use the library or a day basis.

Keywords: Best Practices, academic community, best Practices.

Introduction

The library offers a wide range of services from reference to electronic information services. Academic libraries mirror the development of high education. According to the National Board of Accreditation and assessment (NAAC) the best practices may be innovative and be a philosophy, policy strategy, programme, process or practices that solve a problem or creates new opportunities and positive impact or organizations, institutional excellence is the aggregate of the best practices followed in different areas of institutional activities.

Meaning

Best practices are activities that lead to superior performance. Successfully identifying and applying best practices can reduce the cost and improve quality. These practices will help to enhance good environment among the user communities. Quality to improve the library customer and satisfaction has been the best practice.

Definition

Oxford advanced learner dictionary defines the best practices ad a quality of high standard , excellence, highly improved understanding excellent services. It means a way of doing something in the unusual or unexpected way in particular organization o institution. In the process or developing best practices we take action on good ideas and we improve the skills.

Developing Arts & Services College Libraries

Developing libraries in arts and science college will help the students as well as academicians access the library and also it will get readers attention. Todays world is a competitive world. So the libraries in colleges will prepare the students to get ready for the placement and it will improve the subject study performance for competitive examinations and producing skills.

Purpose

a. To exactly the 5 laws of library science.

b. To motivate users.

c. To maximize the utilization of library.

e. To identify the nee of the users

Salient features of the Library of Sri Sarada College of Arts and Science for Women

The library has the collection of Books, Magazine, Journals and Newspapers. Every year more than 100 books added. Library has an open access system and computerized library service. Library follows Dewey decimal classification. All the documents are classified and arranged according to the subject, internet facility, Book

bank facilities are also available. Bar-coded ID cards are issued to the students. We are the member of N-list & Delnet.

Environment

The college library has a ideal reading environment and free from noises, bright lighting, clean and good verification. It has comfortable furniture for seating. Libraries are providing access and guidance for reaching out t be new users. The library has clearly laid out rules and guidelines for the access hours and circulation polices.

Library automation

The college library is fully automated by D-space which is popular and advance leading library software. Database creation and maintenance, search(OPAC), Advanced search .Circulation- issue, return, renewal, etcD-space Digital library software is being used for constructing institutional repository. In library users could access research publications of our staff new paper clippings, questions are available.

Library orientation and talk

Librarian organizes the orientation programme for the students. The students are instructed to use the library materials books , reference books, journals , question books news papers effectively and take 3 books for UG students , 5 books for PG and 7 books for M Phil students.

Book bank facility

The book bank facility is available for the students belonging to the below creamy layer. The society physically challenged students are allowed to take the books to their class recommended. Concession is also provided in returning books. Students can take the book at the time of internal and external examinations and return it back once the exams are over.

New arrival display

The new books are added to the resources of the library, are displayed for the convenience of students and faculty members.

Library advisory committee

The college library committee comprises of principal, librarian, staff executive members and student representatives. Meetings are held o discuss the important issues regarding library. The committee discuss regarding upgrading and extension of the library especially for purchasing the new books and subscribing new journals. As per the minutes of the committee, the college library has automated in pace .

Book review

Students are encouraged to review the book in all the aspects. They are motivated and encouraged to review the books on the based on various criteria such as standard, quality, quantity, content suitability and usefulness of the book. It helps them to know the value of the book.

News paper reading

To cultivate the reading habits students are asked to read Tamil & English new, vocabulary and Thirukkural in the morning assembly regularly. A thought for the day will be given (Daily Divine in Tamil & English.

Clipping service

Special care taken to display news & advertisements relating to the job opportunities, competitive examination higher studies.

Resources sharing

Library has signed memorandum of understanding with St. Xavier College, Palayamkottai and Del Net.

Digital resources

N-list, Del Net resources are available in the library. The usage of services provided to the students during the working hours of the library. When the staff and students require its usage it will be provided

Kalam Home Library

Encouraging the reading habits of the students , Kalam home library movement initiated . Students kept the book in their home. It is not only for the students but it also included the family members to cultivate the reading habits.

Saradha Sudha

Our alumni donated books for library. The books are arranged in order with heading Saradha Sudha

Certificate course

Certificate course for library science is conducted for 2nd and 3rd year students of U.G and P.G in every semester with having one month duration. Students have attended and known about the library in batch wise.

E-learning

NPTEL online course is a joint venture of the IITs and IISC. NPTEL local chapter has been established in our college library provides facility and helps to access these programme for the students . Our students are encouraged to participate in these programme and to write examination. The students learn how to download and handle different type.

Pragnavani

(Biannually) Pragnavani journal is published with ISSN No. Once in six months , two journal are issued by our College. The article presented by our college staff and other college professors.

Gandeevam Magazine:- (Quarterly)

Gandeevam Magazine is published by our college students in every quarter. Students are encouraged to develop their creativity.

Feed back system

Feed back forms are collected from the outgoing students of our college and proper steps are taken to improve the functioning of the library and suggestions given by our students are also accepted

Best Library user award

To increase the interest of the students for using/utilizing library books , Library has started an award among the students those who are visiting the library and utilize the books regularly .

Conclusion

The best practices will help to improve literary services. This will create good reading habits and its aims for good professionalism in the library ambience. The Development of new research is based on the timely and accurate information given to the users. So the libraries must follow best practices. College libraries play a vital role in improving or strengthening the intellectual young minds to cope with the competitive world. Thus the best practices in libraries pave the way for making young minds to be aware of their role in the society which contains intellectuals in abundance.

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Innovation and Best Practices at
Jamal Mohamed College Library: An Overview

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Abstract

Libraries are playing a significant role in providing good education and knowledge of high quality to the students of tertiary level of education. Development in Information Technology enables the transformation and distribution of information from the whole world into a global village. Students of present era are more dependent on technology based learning strategies. To meet the users demands effectively the academic libraries need to identify and adopt good practices and benchmarks. This paper discusses the best practices that are employed in the library of Jamal Mohamed College, Trichy.

Introduction

Library and information services are heart and head of a higher education institutions. They play a vital role in reaching the higher standard of academic and research. In response the recommendation of National Policy in education (1986), Government of India in 1994, established a council called National Assessment and Accreditation Council (NAAC) , the prime objective of this council is to assess and accredidate higher education institution in india based on their performance. One of the criteria of the NAAC to assess the institution is the role of library and information services of the institution in enhancing the learning resources to uplift the students academic performances. Some of the best practices that are followed in Jamal Mohamed College, Trichy is listed below:

Best Practices at Proquest Research Library

Proquest, the company, is a world leader in serving the information needs of millions of researchers of all ages, of all abilities, in libraries and institutions around the world. Proquest, the product, is the database search application we designed to pursue our mission to connect people and information, and realize our vision to be central to research around the world.

Best practices followed in the library

1. NPTEL (National Programme on Technology Enhanced Learning)

The National Programme on Technology Enhanced Learning (NPTEL), A project funded by the Ministry of Human Resource Development(MHRD), provides e-learning through online Web and Video courses in Engg., Sciences, Technology, Management and Humanities. NPTEL is a curriculum building exercise and is directed towards providing learning materials in science and engineering by adhering to the syllabi of All India Council for Technical Education and the slightly modified curricula of major affiliating universities. The main objective of NPTEL is to make learning material available to students of engg., institutions through easier means. NPTEL provides online coursewise in the form of web courses and video lectures. The e-learning courses from the IIT'S & IISc., subjects covered:

- Mathematics

- Physics

- Computer Science

- Chemistry & Biochemistry

- Biotechnology

- Nanotechnology

- Management Studies

- Humanities

Access Link : `www.jmc.edu (http://nptel.ac.in/)`

2. Proquest Research Library

Our library subscribed the Proquest Research Library from the academic year 2013 2014, and also conducted user awareness programme how to access the Proquest Research Library.

Proquest Research Library provides one-stop access to thousands of full-text periodicals from one of the broadcast, most inclusive general reference databases. Proquest has to offer search from a highly respected, diversified mix of scholarly journals, professional and trade publications, and magazines covering over 150 subjects and topics in all instances. One has access to:

- Research Library Business

- Research Library Health & Medicine

- Research Library History

- Research Library Science & Technology

- Research Library Social Sciences

- Research Library the Arts

Access Link : http://search.proquest.com (Via IP)

3.   RWA (Rockcity Welfare Association) Book Bank

Books have been distributed to the academically good of economically poor students through the Rockcity Welfare Association (RWA), Trichy under the Book Bank Scheme for the past sixteen years successfully.

4.   National Digital Library, IIT, Kharagpur

Ministry of Human Resource Development under its National Mission on Education through Information and Communication Technology has initiated the National Digital Library of India (NDL India) pilot project to develop a framework of virtual repository of learning resources with a single-window search facility. Filtered and federated searching is employed to facilitate focused searching so that learners can find out the right resource with least effort and in minimum time. It is being arranged to provide support for all academic levels including researchers and life-long learners, all disciplines, all popular form of access devices and differently-abled learners. Learning Resource Type: Book , article, thesis, manuscript, audio & video lecture.
Access Link : `https://ndl.iitkgp.ac.in/index.php`
User Name : `princi@jmc.edu`
Password : `jmclib`

5.   Bookshare

The Jamal Mohamed College is an organization member of Bookshare an online accessible library for people with print disabilities. Bookshare offers the world's largest collection of accessible titles. Bookshare provides accessible content in the form of DAISY includes Digital Talking Book (DTB) and Braille Ready Format (BRF). Any one with a qualifying print disability, such as blindness or low vision, a physical disability

that prevents using a physical book, or a learning disability that affects reading, like severe dyslexia, may join bookshare as individual member. Organizations that serving for the print disable can joing as organization member. DAISY (Digital Accessible Information System) is a technical standard for digital audio books, periodicals and computerized text. DAISY is designed to be a complete audio substitute for print material and is specifically designed for use by people with print disabilities. Based on the MP3 and XML formats, the DAISY format has advanced features in addition to those of a traditional audio book. Users can search, place book marks, precisely navigate line by line, to read the word spelling and regulate the speaking speed without distortion.

6. Guest Lecture Programme for Research Scholars

- Our library conducted a Guest Lecture programme for User Awarness to access to e-resources on 15th Feb. 2015

- Our library will be conduct a Guest Lecture Programme on E-Resources for Teaching, Learning and Research.

Conclusion

Many of the special features are provided in this paper and apart from this a competitive service will be need of the hour for every library. In order to equip the librarians to innovate their ideas according to the current generation of users. Technology based education to be provided in this context. Change the service of the libraries according to new expectations of the users in order to provide better information and dissemination service.

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Best Practices of Global Academy of Technology Library : An Overview

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Abstract

The main purpose of any library is satisfying the information needs of the users. Sizable amount is being spent for libraries in order to procure the documents. In this digital environment, the libraries have both print and electronic resources which need to be effectively utilized. For effective utilization, librarian should publicize the resource, collection and services to the users. Hence, the librarian needs to follow few best practices to reach the users. In this paper, authors have made an attempt to present the best practices being followed at their institute and have compared it along with the best practices suggested by NAAC.

Keywords: Best Practices, Academic Library, Quality Parameters

Introduction

Ensuring quality is being done all sectors and educational institutions are the institutions plays prominent role in development of the society. In order to ensure the quality of the educational institutions, there are many assessment organizations like NAAC, NBA, ISO etc.have been established. There are more number of engineering educational institutions has come up in India after setting up of All India Council of Technical Education (AICTE), New Delhi. In the 20th century, information has exploded exponentially and it is doubling in a shorter period. Due to easy publication over the web, the qualities of the resources are questionable. Hence, the 21st century is devoted for 'Quality'(Vyas, 2009). Academic libraries are attached to the academic institutions plays pivotal role in providing quality service to the user community. Libraries are considered as nerve centre for any academic and research centre with the purpose of providing right information to the right user at right time. Sizable amount is being spent for library for procuring the documents and the librarians are the promoters have to satisfy the needs of the customer.

Information and Communication Technology (ICT) has changed the library environment and its impact on library appreciable. Due to advancements in ICT, the

growth of information is doubling within short period and the users expectations are different which forces the library to provide relevant information to the user community. It is in this situation, the librarians need to adopt best practices which is carved out by NAAC for better use of the library resources.

Meaning and Definition

According to Wikipedia *A best practice is a method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means or because it has become a standard way of doing things, e.g., a standard way of complying with legal or ethical requirements* (Wikipedia, n.d.). According to Cambridge English Dictionary *a working method or set of working methods that is officially accepted being the best to use in a particular business or industry usually described formally and in detail.*

Best practice is an activity that leads to a superior performance. Benchmarking and best practices were used synonymously in business world has entered in many fields including library. The best practice is focusing librarians attention in a meaningful way for evaluating the performance of the organization towards greater consistency (Druery, McCormack and Murphy, 2013).

Review of Literature

There are many papers on best practices studied by many of the authors, out of which some of the articles reviewed are given below.

- Vivek Sampatrao Sathe (2015) in his paper stated that best practices will help for improving quality of Library Services and will create best image about the library profession in the society. The author also suggested that the best practices followed should divide the gap between the library and library users. He also emphasized the importance of web based information services timely information to the users in anticipation.

- Islam (2015) in his paper stated that best practices should be initiated since it is the best service for improving the socio-economic condition. The author also has listed out some of the best practices followed in some of the academic libraries. He also emphasized the need of training for library professionals through a unified system so that the knowledge from the source to beneficiaries can be achieved.

- Umesh Kumar (2012) also stressed the importance of best practices in academic libraries and resource centres so that the services provided to the user community will be effective and quality one.

Global Academy of Technology, Bangalore

There are large number of private engineering institutions has been established in India in the last two decades. Bangalore is being called as the Silicon Valley or IT hub of India has made land mark achievements in Information Technology sector. More than 80 new engineering colleges have been opened in Karnataka to meet the growing demand for engineering education since last two decades. Visvesvaraya Technological University (V.T.U.) is the State Technological University in Karnataka. Bangalore alone has 101 technical institutions affiliated to V.T.U.

In this digital environment, it has become a challenge to the librarians to meet the needs of the students. In an Engineering college, library users need both traditional and electronic kind of services like circulation, Reference service, etc. through modern touchup like online circulation service, web-enabled OPAC, e-books and e-journal browsing facilities and information on finger tips i.e. mobile based services or e services. It is possible only by adopting the best practices for better service to the user community.

Global Academy of Technology is an institution for imparting engineering education is one of the best colleges in Bangalore city. It was established in the year 2001. GAT is one of the most sought-after engineering and management colleges in Bangalore, Karnataka. The campus brims with more than 3000+ students and 300 experienced faculty and staff involved in effective Teaching and Learning Process. In 2017, GAT was accredited with A Grade by NAAC.

Following are the Best Practices suggested by the NAAC in its quality indicators in Library and Information Services and are followed in GAT Library:

Sl. No.	NAAC Quality Indicator	Adopted in GAT Library
1.	Computerization of Library with standard software.	GAT Library is using "LIBSOFT" library software for all its activities since the inception of the college.
2.	Inclusion of sufficient information in college prospectus.	Included all the information in college website as well as college prospectus and a separate Library Brochures are printed and distributed among new users.
3.	Newspaper Clipping Services.	GAT Library provides Newspaper clipping services to its users through Notice Board, e-mail and also through Whatsapp.

4.	Conduct Orientation Program for Users.	GAT Library staff conduct orientation program on usage of library to all first year students during first week of academic year, and Orientation program is also conducted to newly appointed staff members.
5.	Provide Internet facility to users.	GAT Library has exclusive digital Library section where students can browse e-journals, NPTEL videos, Library OPAC and also students can use internet through Wi-Fi connection.
6.	Displaying New Arrivals.	GAT Library displays a list of New arrivals once in a month and through OPAC users can check every day. A separate shelf is provided in the library for displaying new arrival documents.
7.	Conducting Book Exhibition	GAT Library conducts book exhibition on the Inauguration day for first year where students can purchase book and faculty can recommend a books to Library.
8.	Instituting annual best user award.	To motivate the users, every year best user award is given to one U.G. Student, One P.G. Student and One faculty/staff member.
9.	Organizing Workshop and Guest Lecture.	GAT Library organizes one guest lecture on Ranganathan's Birthday every year.
10.	Methodical verification of stock	GAT Library conducts every year a methodical stock verification through using barcode scanners.

Apart from the above best practices, the library is providing the following Best Practices.

- GAT Library has developed exclusive collection of Placement and Leadership Books to boost the students to participate in placement activities.

- To motivate the meritorious students, a separate Book Bank Collection is developed. Students who has obtained more than 75% in previous semester exam

can recommend a book and Library will purchase those books exclusively for that student and issued for whole semester.

- Hypertext link is given to e-databases in College Web Page and also through Web OPAC, which is subscribed from VTU Consortia. Remote access facility is also provided through Knimbus.

- Suggestion Box is kept in the Library and valuable suggestions are considered in Library Committee meetings.

- IQAC and Library Committee advise time to time for improvement of Library Services.

- Web Enabled OPAC facilitates online reservation of Books.

- Reprographic facility, Journal Alert, Current Awareness Services, Library Help Desk, Library Security like CCTV Cameras, Special facility for differently abled persons were the other services given to the users.

By adopting the above said facilities, the Library Services are used maximum by students and staff.

- More than 70% of the students and staff visit the Library every year

- More than 65% of the students and staff borrow the books from the Library.

- More than 60% of students and staff use the Digital Library and e-journals.

Conclusion

The main aim of any library or service sector is customer satisfaction; Customer delight can be achieved by adopting new and effective methods and motivating students to use maximum library services for their academic purpose. Converting non users into users and converting partial users into active users and associate the use of Library is the main aim of any Librarian. Every Library should recognize their own best practices and further improve towards perfection.

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Analysis of National Institutional Ranking Framework (NIRF):with Special Reference to Tamil Nadu Institutions

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Abstract

National Institutional Ranking Framework (NIRF) for higher educational institutions in India. National Institutional Ranking Framework is based on the parameters of Teaching, Learning and Resources, Research and Professional Practices, Graduation Outcomes, Outreach and Inclusivity, and Perception. In this paper we have analyzed National Institutional Ranking Framework (NIRF) participated by Tamil Nadu Institutions such as Engineering, Management, University, College and Pharmacy and its Ranking.

Keywords: NIRF, National Institutional Ranking Framework, Institutional Ranking, Ranking.

Introduction

The National Institutional Ranking Framework (NIRF) was approved by the MHRD and launched on 29th September 2015. The ranking is based on 21 parameters under five major heads, The parameters broadly cover Teaching, Learning and Resources, Research and Professional Practices, Graduation Outcomes, Outreach and Inclusivity, and Perception. The most important parameter for NIRF is weightage given to research output of universities under the heading Research Productivity, Impact and IPR (RPII). This framework outlines a methodology to rank institutions across the country. The methodology draws from the overall recommendations broad understanding arrived at by a Core Committee set up by MHRD, to identify the broad parameters for ranking various universities and institutions. India Rankings 2017 based on this framework were released on 3th April 2017.

NIRF Parameters for Ranking Institutions

The NIRF provides for ranking of institutions in five broad generic parameters, namely:

(i) Teaching, Learning and Resources

(ii) Research, Consulting and Collaborative Performance

(iii) Graduation Outcomes

(iv) Outreach and Inclusivity and

(v) Perception.

Teaching, Learning & Resources	Median Salary
Student Strength including Doctoral Students	Metric for Graduating Students Admitted Into Top Universities
Faculty-student ratio with emphasis on permanent faculty (FSR)	Outreach and Inclusivity
Combined metric for Faculty with PhD (or equivalent) and Experience (FQE)	Percent Students from other states/countries (Region Diversity RD)
Total Budget and Its Utilization: (CBTU)	Percentage of Women (WF) + (WS) + (WA)
Research and Professional Practice	Economically and Socially Challenged Students (ESCS)
Combined metric for Publications (PU)	Facilities for Physically Challenged Students (PCS)
Combined metric for Quality of Publications (QP)	Perception
IPR and Patents: Filed, Published, Granted and Licensed (IPR)	Peer Perception: Employers and Research Investors (PREMP)
Footprint of Projects and Professional Practice and Executive Development Programs (FPPP)	Peer Perception: Academics (PRACD)
Graduation Outcomes	Public Perception (PRPUB)
Combined % for Placement, Higher Studies, and Entrepreneurship (GPHE)	Competitiveness (PRCMP)
Metric for University Examinations: GUE	

Advantages and Benefits of NIRF

Advantages of NIRF	Benefits of Institution
Increased Efficiency	Growth of the organization
Pro-research orientation	Creation of new knowledge
Better performers	High achievements
Action plan and teaching aids	Enhanced learning practices
Creativity and innovation encouraged	Emphasis on research orientation and learning culture
Increased employability	Acquisition of skills

Review of Literature

Aithal, P.S., Shailashree, V.T., & Suresh Kumar, P.M (2016) The institutions of higher education in India are in need of infusion of quality and clarity on the approach of building world-class educational institutions in the Indian context and environment. Recently, the Ministry of Human Resource Development, Govt. of India has identified various criteria and parameters that have global appeal e.g. research output, research impact, learning environment, etc. This framework called National Institutional Ranking Framework. This paper has analyzed *National Institutional Ranking System* for higher educational institutions as a novel performance evaluation system using our recently developed analyzing framework called ABCD technique. Based on four constructs Advantages, Benefits, Constraints and Disadvantages, this system consider all determinant issues in key areas through analyzing the major issues and identifying the critical constituent elements. Mandhirasalam, M (2016) Ranking of Higher Education Institutions (HEIs) in the world is a common practice among many organizations across the globe. Unfortunately no Indian institutions figure in the top 200 of many global rankings. To encourage HEis in india to develop their ability to compete in the international level, the MHRD launched the National Institutional Ranking Framework (NIRF) in 2015. This paper reports the salient features and various parameters of NIRF in brief and analyses the ranking positions of engineering institutions in Tamil Nadu in detail. This paper analyses only the rankings of engineering institutions among the five categories of institutions which are ranked separately in the NIRF India Rankings 2016.

Methodology

The study was carried out based on the National Institutional Ranking Framework website (`https://www.nirfindia.org/home`) and content retrieved on November 2017 and analyzed the Tamil Nadu Institutions. Further it analyzed institutions such as Engineering, Management, University, College and Pharmacy.

Objectives of the Study

1. To find out the Ranking of Tamil Nadu Engineering Institutions.

2. To identify the Ranking of Tamil Nadu Management Institutions.

3. To find out the Ranking of Tamil Nadu Universities.

4. To identify the Ranking of Tamil Nadu Arts & Science Colleges.

5. To find out the Ranking of Tamil Nadu Pharmacy Institutions.

Data Analysis and Interpretation

Ranking of Tamil Nadu Engineering Institutions

Table 1 shows that Ranking of Tamil Nadu Engineering Institutions in NIRF. Only 21 institutions are participated in NIRF. The Indian Institute of Technology Madras, Chennai got highest score (87.96%) of NIRF have placed first rank and It's followed by Anna University, Chennai get (63.97%) have placed eighth rank. It is further found that K.S.Rangasamy College of Technology, Tiruchengode got lowest score (36.40%) of NIRF have placed ninety ninth rank.

Table 2 shows that Ranking of Tamil Nadu Management Institutions in NIRF. Only 6 institutions are participated in NIRF. The Indian Institute of Management, Tiruchirappalli got highest score (55.46%) of NIRF have placed thirteenth rank and It's followed by Vellore Institute of Technology, Vellore get (51.83%) have placed seventeenth rank. It is further found that Shanmugha Arts Science Technology & Research Academy (SASTRA), Thanjavur got lowest score (41.90%) of NIRF have placed forty fourth rank.

Table 3 shows that Ranking of Tamil Nadu Universities in NIRF. Only 24 institutions are participated in NIRF. The Anna University, Chennai got highest score (56.50%) of NIRF have placed sixth rank and It's followed by Amrita Vishwa Vidyapeetham, Coimbatore get (54.70%) have placed ninth rank. It is further found that B.S. Abdur

Rahman Institute of Science and Technology, Chennai got lowest score (32.99%) of NIRF have placed hundredth rank.

Sl. No	Name of the Institution	City	Score	Rank
1	Indian Institute of Technology Madras	Chennai	87.96	1
2	Anna University	Chennai	63.97	8
3	National Institute of Technology Tiruchirappalli	Tiruchirappalli	59.44	11
4	Vellore Institute of Technology	Vellore	58.16	13
5	Shanmugha Arts Science Technology & Research Academy (SASTRA)	Thanjavur	51.44	25
6	Sri Sivasubrmaniya Nadar College of Engineering	Kalavakkam	50.77	27
7	PSG College of Technology	Coimbatore	49.49	33
8	S.R.M Institute of Science and Technology	Chennai	49.20	35
9	Thiagarajar College of Engineering	Madurai	47.01	37
10	Coimbatore Institute of Technology	Coimbatore	43.29	51
11	Kongu Engineering College	Perundurai	42.43	57
12	Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology	Chennai	42.31	58
13	Karunya Institute of Technology and Sciences-Coimbatore	Coimbatore	40.97	62
14	Mepco Schlenk Engineering College	Sivakasi	39.21	73
15	PSNA College of Engineering and Technology	Dindigul	38.27	78
15	Kumaraguru College of Technology	Coimbatore	37.74	82
16	R.M.K. Engineering College	Kavaraipettai	37.45	84
17	B.S. Abdur Rahman Institute of Science and Technology	Chennai	36.97	89
18	Saveetha Engineering College	Sriperumbudur	36.88	91
19	Sri Sai Ram Engineering College	Chennai	36.64	96
20	ST. Joseph's College of Engineering	Chennai	36.51	97
21	K.S.Rangasamy College of Technology	Tiruchengode	36.40	99

RANKING OF TAMIL NADU ENGINEERING INSTITUTIONS

Table 4 shows that Ranking of Tamil Nadu Arts & Science Colleges in NIRF. Only 37 institutions are participated in NIRF. The Loyola College, Chennai got highest score (68.68%) of NIRF have placed second rank and It's followed by Bishop Heber College and it got 61.18% and have placed fourth rank. It is further found that Thanthai Hans

Roever College got lowest score (34.65%) of NIRF and have placed hundredth rank.

Table 5 shows that Ranking of Tamil Nadu Pharmacy institutions in NIRF. Only 6 institutions are participated in NIRF. The S.R.M Institute of Science and Technology got highest score (54.28%) of NIRF have placed ninth rank and It's followed by Annamalai University (50.91%) and have placed thirteenth rank. It is further found that PSG College of Pharmacy got lowest score (36.21%) of NIRF have placed forty sixth rank respectively.

Ranking of Tamil Nadu Management Institutions

Sl. No	Name of the Institution	City	Score	Rank
1	Indian Institute of Management Tiruchirappalli	Tiruchirappalli	55.46	13
2	Vellore Institute of Technology	Vellore	51.83	17
3	Anna University	Chennai	49.81	23
4	PSG College of Technology	Coimbatore	48.32	26
5	Sri Krishna College of Engineering and Technology	Coimbatore	42.08	42
6	Shanmugha Arts Science Technology & Research Academy (SASTRA)	Thanjavur	41.90	44

RANKING OF TAMIL NADU MANAGEMENT INSTITUTIONS

Ranking of Tamil Nadu Universities

Sl. No	Name of the Institution	City	Score	Rank
1	Anna University	Chennai	56.50	6
2	Amrita Vishwa Vidyapeetham	Coimbatore	54.70	9
3	Vellore Institute of Technology	Vellore	51.36	14
4	Tamil Nadu Agricultural University	Coimbatore	48.84	17
5	Bharath Institute of Higher Education & Research	Chennai	46.45	21
6	Bharathiar University	Coimbatore	44.29	28
7	Shanmugha Arts Science Technology & Research Academy (SASTRA)	Thanjavur	43.50	32
8	S.R.M Institute of Science and Technology	Chennai	43.07	34
9	Tamil Nadu Veterinary & Animal Sciences University	Chennai	42.48	38

Sl. No	Name of the Institution	City	Score	Rank
10	Sri Ramachandra University	Chennai	42.46	39
11	University of Madras	Chennai	41.85	41
12	Sathyabama Institute of Science and Technology	Chennai	41.30	44
13	Saveetha Institute of Medical and Technical Sciences	Chennai	38.68	55
14	Annamalai University	Annamalainagar	38.59	56
15	Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology	Chennai	37.13	65
16	Meenakshi Academy of Higher Education and Research	Chennai	36.47	70
17	Karunya Institute of Technology and Sciences-	Coimbatore	36.44	71
18	Madurai Kamaraj University	Madurai	36.04	77
19	Periyar University	Salem	35.44	85
20	Bharathidasan University	Tiruchirappalli	35.14	88
21	Karpagam Academy of Higher Education	Coimbatore	34.86	90
22	The Gandhigram Rural Institute - Deemed University	Gandhigram	34.56	91
23	Alagappa University	Karaikudi	33.66	97
24	B.S. Abdur Rahman Institute of Science and Technology	Chennai	32.99	100

RANKING OF TAMIL NADU UNIVERSITIES

Ranking of Tamil Nadu Arts & Science Colleges

Sl. No	Name of the Institution	City	Score	Rank
1	Loyola College	Chennai	68.68	2
2	Bishop Heber College	Tiruchirappalli	61.18	4
3	The Women's Christian College	Chennai	57.37	10
4	P.S.G. College of Arts & Science	Coimbatore	55.64	11
5	Madras Christian College	Kancheepuram	55.44	12
6	Ayya Nadar Janaki Ammal College	Virudhnagar	54.62	13
7	P.S.G.R. Krishnammal College for Women	Coimbatore	53.97	14
8	Ethiraj College for Women	Chennai	52.85	16
9	Kongunadu Arts & Science College	Coimbatore	51.84	19

Sl. No	Name of the Institution	City	Score	Rank
10	Sri Krishna Arts and Science College	Coimbatore	50.80	22
11	Holy Cross College	Tiruchirapalli	48.13	26
12	Fatima College (Autonomous)	Madurai	47.95	27
13	V.V. Vanniaperumal College for Women	Virudhnagar	45.06	38
14	Virudhunagar Hindu Nadars Senthikumara Nadar College	Virudhnagar	44.80	39
15	A.V.C. College-District Quaide-E-Milleth	Quaide-E-Milleth	44.29	43
16	Dr. N.G.P. Arts & Science College	Coimbatore	44.00	44
17	Justice Baseer Ahmed Sayeed College for Women	Chennai	43.77	47
18	K.S. Rangaswamy College of Arts and Science	Tiruchengode	43.32	50
19	Holy Cross College	Kanyakumari	43.17	54
20	SaivaBhanu Kshatriya College	Virudhnagar	42.57	56
21	Gobi Arts and Science College	Karattatipalayam	42.39	57
22	Shri Shankarlal Sundarbai Shasun Jain College for Women	Chennai	42.07	59
23	Meenakshi College for Women	Chennai	42.07	59
24	Srimathi D.N. Bhat Vaishnav College for Women	Kancheepuram	41.91	62
25	Kongu Arts & Science College	Erode	41.90	63
26	Nirmala College for Women	Coimbatore	41.73	65
27	Rathinam College of Arts and Science	Coimbatore	41.69	66
28	Mahendra Arts & Science College	Namakkal	41.33	67
29	Sri Ramakrishna College of Arts & Science for Women	Coimbatore	40.89	68
30	SNR Sons College	Coimbatore	40.29	69
31	Hindusthan College of Arts and Science	Coimbatore	38.65	75
32	K.S.R. College of Arts and Science for Women	Namakkal	38.60	76
33	S R M College of Arts and Science	Potheri	38.03	82
34	Muthayammal College of Arts & Science	Namakkal	37.46	86

Sl. No	Name of the Institution	City	Score	Rank
35	Sacred Heart College (Autonomous)	Tirupattur	35.43	95
36	National College	Tiruchirapalli	34.93	97
37	Thanthai Hans Roever College	Perambalur	34.65	100

RANKING OF TAMIL NADU ARTS & SCIENCE COLLEGES

Ranking of Tamil Nadu Pharmacy Institutions

Sl. No	Name of the Institution	City	Score	Rank
1	S.R.M Institute of Science and Technology	Chennai	54.28	9
2	Annamalai University	Annamalainagar	50.91	13
3	JSS College of Pharmacy	Ootacamund	47.13	17
4	Sri Ramachandra University	Chennai	45.97	19
5	College of Pharmacy, Madras Medical College	Chennai	38.34	33
6	PSG College of Pharmacy	Coimbatore	36.21	46

RANKING OF TAMIL NADU PHARMACY INSTITUTIONS

Findings

- The Indian Institute of Technology Madras, Chennai got highest score (87.96%) of NIRF and placed first rank in Engineering Institution.

- The Indian Institute of Management, Tiruchirappalli got highest score (55.46%) of NIRF and placed thirteenth rank in Management Institution.

- The Anna University, Chennai got 56.50% in NIRF and placed sixth rank in Tamilnadu Universities.

- In Arts and Science College Loyola College, Chennai has secured 68.68% in NIRF and placed second rank

- With 54.28% in NIRF The S.R.M Institute of Science and Technology, Chennai is placed ninth rank.

Conclusion

Government of India has taken an initiative to bring the higher educational institutions in lime light hence it has developed the ranking system called National

Institute Ranking Framework (NIRF). Now ministry of human resource development (MHRD), Govt of India insisting all the higher learning institutions should participate in ranking system and also to maintain all the necessary details in online for the easy access by any one. This initiative will give the best results in terms of teaching learning, research, graduation outcome and outreach by the participating institutes. In turn this will enable the institutions to participate in national and international level ranking competitions and also to have collaboration between the institutions. In NIRF ranking the Institutions at Tamilnadu has taken the initiatives to participate and it shows that in 2016 the total number of participants around 51and now gradually increased upto 73 and this study recommends that more number of institutions to be participated in NIRF Ranking to show the potential institutions in Tamilnadu.

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Library Facilities and Services Based on NAAC Parameters in Kalai Kaviri College of Fine Arts

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Abstract

Quality, in the pointer of a higher education institution, is multi-dimensional. The functioning of a library can be said to manifest one such dimension. The need to improve on the accuracy of accreditation process is constant and exists side by side with possibility to do so. Hence NAAC will make all developing of academic libraries. This paper indicates in college libraries such as quality identified utilization of library services, Management, ICT, best practices. Though it is institutional accreditation that the NAAC does, the assessment of a library, a vital sub-unit, is a key step that integrates itself with the overall evaluation.

Keywords: Quality Library, NAAC policy, College library, Criteria

Introduction

UGC has established the National Assessment and Accreditation Council (NAAC) as an autonomous body in September 1994 for measure the higher educational institutions in India. It has been instilling a thrust of value awareness among higher educational institutions, aspire for constant enhancement. However, enhancement in standards cannot come about only by accreditation from outside, once in five years. Hence, the UGC has setup IQAC (Internal Quality Assurance Cell) for internal mechanism for sustenance, assurance and enhancement of the quality culture of education imparted by them.

Source of Information

The Information has been collected from web based publications guide line by NAAC in time to time and reputed institutions Self Study Report (SSR) and Annual Quality Assurance Report (AQAR) that belongs to second and Third cycle in NAAC with A Grade Accredited.

Objective of the Study

Institutional accreditation that the NAAC does, the assessment of a library, a vital sub element is a key step that incorporate itself with the overall evaluation, library is hub of support for the entire range of academic activities on educational campus. All this plays up the need for scientific evaluation of library so that its role as the center piece of academic development is protected and enhanced by the performance of library facility and services based on NAAC parameters.

Brief Discussion

Over the years, the University Grants Commission (UGC) and the National Assessment and Accreditation Council (NAAC) has succeeded in promoting quality as a defining element of higher education institutions in the country through a combination of self and external quality evaluation, the quality of higher education institutions is multi-dimensional. Thus, NAAC uses many criteria for evaluating the quality of higher education institutions in the country. The seven important criteria used by the NAAC are:

- Curricular Aspects

- Teaching-Learning and Evaluation

- Research, Innovations and Extension

- Infrastructure and Learning Resources

- Student Support and Progression

- Governance, Leadership and Management

- Institutional Values and Best Practices

Among these, Learning Resources are the library and information services offered to support the teaching, learning and research activities of the higher education institutions. The NAAC has recognized the importance of library and information services in higher education institutions very well and they evaluate the quality of the learning resource center as part of the assessment of the quality of higher education institutions in the country. . Recently, the NAAC had issued a set of Guide lines on Quality Indicators in Library and Information Services to improve the quality of the learning resource center in affiliated/constituent colleges and Universities in India. Assessing the needs and requirements as well as the satisfaction of the students and teachers with regard to the library and information services is highly necessary. The

NAAC has viewed that the main objective of the college librarian should always be total user satisfaction.

Quality Indicators for the Libraries

The details relates to the library users, services offered, facilities, collection, rules, budget, usage of services, extension activities etc. and at every step students and teachers are the party in complying with it. In other words we can say that involvement and support of these elements play a crucial role in the self-study report writing exercise. Hence maintenance of daily record needs serious attention. Library rules and the awareness among the users combined with alertness on the part of the library staff becomes the major requirements. It is true that libraries largely support learning, teaching and research processes in institutions. The set of questions framed for the library focuses on library infrastructure, collection, management and services.

Conclusion

NAAC policy helps in developing the college libraries to make modernize and to provide good standard service to users. This is the best methodology for measuring themselves to find deficiency to enhance the library services, which support get maximum score based on certain criterias, this paper clearly explains importance in maintaining the library to full fill the quality for the naac policy.

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NAAC Parameters in Library and Information Science

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Abstract

Library and Information Services of Higher Education institutions play a central role in enhancing the quality of academic and research environment. The National Accreditation and Assessment Council (NAAC) strive for quality and excellence in higher education and advocates for enhancing the role of Library and Information Services in improving academic environment. Though, it is institutional accreditation that the NAAC does, the assessment of a library, a vital sub-unit, is a key step that integrates itself with the overall evaluation. Library is the fulcrum of support for the entire range of academic activities on an educational campus.

Keywords: NAAC, AICTE, ICT Infrastructure

Introduction

In todays high-tech learning environment, the library as a learning resource is taking up increasingly more academic space and time in the life of a learner. In times ahead, this will be even more so. Thus NAAC has decided to identify the set of best practices in Library & Information Services, with the help of a few case presentations from few selected libraries of the accredited universities and colleges. This is a great initiative in promoting the libraries in identifying and sharing good or best practices that can be adopted in the Indian academic environment. Best Practice may be innovative and be a philosophy, policy, strategy, program, process or practice that solves a problem or create new opportunities and positively impact on organizations. Institutional excellence is the aggregate of the best practices followed in different areas of institutional activities. In general, the use of technology and innovative ideas lead to evolve best practices in library and information environment.

Management of Library and Information Services

The core objective of the library is to support the academic programmes offered and the library may evolve its collection and services mainly to reflect the curriculum

requirements of its users. Besides, the library may design a system to deliver its products and services to attract more users. Ultimately the library should aim at bringing all its target users to the library and ensure its optimum usage. The parameters compiled here would facilitate the quality enhancement and sustenance of library services to a large extent.

Collection and Services Provided to Users

Collection

The library is required to provide varied, authoritative and up-to-date resources that support its mission and fulfill the needs of its users. Resources may be provided in a variety of formats, including print or hard copy, online, electronic text or images, and other media. A college library needs to have the quantity of resources as prescribed by government, UGC, AICTE and other governing bodies. The collection of a college library may answer the following, for maintaining the quality of the resources.

Mention the total collection of Documents

   (i) Books

  (ii) Text Books

 (iii) Reference Books

 (iv) Current Journals

  (v) Peer reviewed Journals

 (vi) Back Volumes of Journals

(vii) Magazine

(viii) E- Information Resources
- CDs /DVDs
- Databases
- Online Journals

 (ix) Special collection
- Competitive Examinations
- Braille materials/Rare collection
- AV Materials

 (ix) Book Bank

Services

The library has a key role in supporting the academic activities of the institutions by establishing, maintaining and promoting library and information services, both quantitatively and qualitatively. The library offers a wide range of services from reference to electronic information services. College libraries may answer the following basic questions for ensuring appropriate services to the academic community.

- Publication and Research Support services

- Information display and notification

- Bibliographic compilation

- ILL/Resource Sharing

- Reprographic facilities

- Book bank

- User orientation

- Computers

- OPAC/Indexing services

- Audio-visual resources

- Internet

- Digital library services

National Assessment and Accreditation Council (NAAC)

National Assessment and Accreditation Council (NAAC) is an autonomous institution established by the university Grants Commission (UGC), under section 12-CCC of the UGC Act of 1956. It has been registered under the Karnataka Societies Registration Act of 1960, the Karnataka Societies Registration Rules of 1961 as on September 16, 1994 and is located at Bangalore. It is a Quality Assurance Agency (QAA) meant for assessing and accrediting Higher Education Institutions (HEIs) of the country.

Role of NAAC

The primary role of NAAC is to assess and accredit institutions of higher education and /or its units in the country.
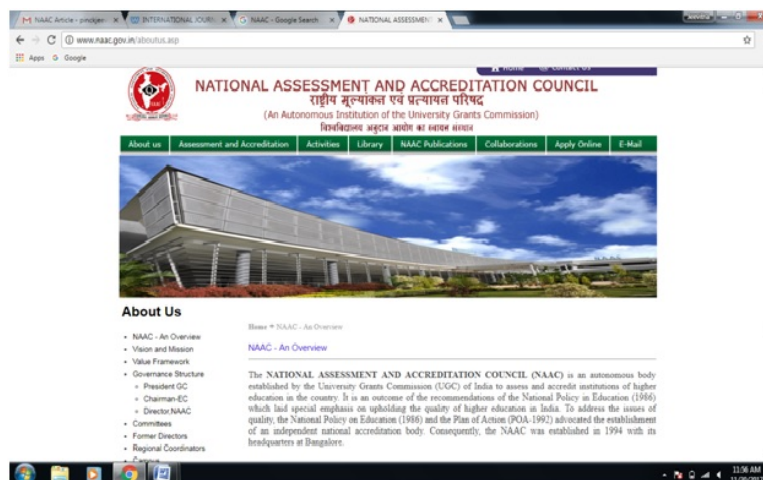
Figure 1: NAAC Website

Assessment in the Context of NAAC Process

Assessment is the performance evaluation of the institution and/or its units, based on certain established criteria. A process based on Self-study and Peer Review, using defined criteria, accomplishes it.

Accreditation in the Context of NAAC Process

Accreditation refers to the certification given by NAAC, which is valid for a stated period of time after the assessment of the institution.

Criteria for NAAC Assessment

Criteria for assessment given in the manuals reflect the different facets of functioning of the unit of Assessment. NAAC has identified the following 7 criteria for assessment.

- Curricular Aspects

- Teaching Learning and Evaluation

- Research, Consultancy and Extension

- Infrastructure and Learning Resources

- Student support and Progression

- Governance and Leadership and

- Innovative Practices

Number of days the Library is kept open

This is to help in knowing whether the library is kept open on Saturdays, Sundays and other holidays so as to facilitate use by students and faculty.

Working hours

This parameter refers to opening and closing hours of the library, whether library opens before the institutions opening time and closes after the closing time so that readers have an opportunity to use the library without disturbance to their academic schedules.

Library Advisory Committee

The formation of the library committee with an equal representation by faculty and students, and the role of the committee and its functions in developing the library services are to be well defined.

Manpower Development

Qualifications and experience of the librarian and the library staff should be on par with that of the academic staff and should fulfill the norms prescribed by UGC/AICTE/NCTE/ICMR etc. for guaranteeing a professional approach in delivering information services. Training programs and professional involvement of library professionals need to be encouraged. Total qualified and semi-skilled manpower, the ratio between number of users and collection, needs to be maintained as per UGC/AICTE and government norms for promoting a better library environment.

Infrastructure of the Library

The Managements may look into the aspect of location of the library, to see whether the library has a place of its own with proper planning and organization of space, and has proper furniture, necessary quantity and quality of reading chairs, tables, display racks, magazine racks, etc. The minimum carpet area for service counters and other sections of the library as prescribed by government and other governing bodies are to be taken note of along with proper ventilation, fans, and water and toilet facilities. Fixing of notice

boards, research cubicles for scholars/teachers, providing uninterrupted power supply systems (UPS, generator, etc.) along with due attention to overall building maintenance and cleanliness also need consideration.

ICT Infrastructure

Quantification and computer facilities, systems for enabling e-library services, etc. need to be determined, taking into account the total number of users, type of users and programs offered. The library should have networking facility and be a part of institutional network, with fully implemented automation. The bandwidth of Internet access and subscription, organization and access of e- resources, etc. are important factors in the transmission of digital information services.

Overall Policy of the Institution on Library

The Library should have an approved policy on the collection development support, introduction of new services, support in terms of fund, annual increase of budget, binding procedure, removal of obsolete books, and policy on loss of books and an ongoing commitment of the institution in deputing library professionals for continuing and further education.

Budget

There should be a proportionate growth in the library budget. Budget for different documents such as books, journals and other resources and ICT infrastructure are to be defined as to the scope of the institute. Sources of income other than state, central and UGC grants may be identified for enhancing the collection and services.

Best Practices for College Libraries

Listed below are some of the best practices that can enhance the academic information environment and usability.

- Computerization of library with standard digital software.

- Inclusion of sufficient information about the library in the college prospectus.

- Compiling student/teacher attendance statistics and locating the same on the notice board.

- Displaying newspaper clippings on the notice board periodically.

- Career/Employment Information/ Services.

- Internet Facilities to different user groups.

- Information literacy programs.

- Suggestion box and timely response.

- Displaying new arrivals and circulating a list of those to academic departments.

- Conducting book exhibitions on different occasions.

- Organizing book talks.

- Instituting Annual Best User award for students.

- Organizing competitions annually.

- Conducting user surveys periodically.

Conclusion

This study concludes that library services and facilities are rated as good in ensuring the quality. But it also revealed that some of the aspects are still to improve particularly on collection development, infrastructure of the Library, ICT Infrastructure and information services.

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NAAC Parameters and Impact on LIS

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Abstract

The quality NAAC parameters for accreditation process have provided guidelines for improving the quality of work of the entire library. Accreditation process will make all round development of academic libraries in India. In this paper quality indicators identified for college libraries i.e. collection, automation, services, extension activities, best practices are studied in detail with reference to set of questions prepared for the library by the NAAC.

Keywords: NAAC accreditation,Library Innovative techniques, Quality Library, Parameters for library, NAAC policy library

Introduction

UGC an apex body in the higher education in India is entrusted with the responsibility of developments in the higher education at national level. National Policy on education (1986) has shown its concern over the deterioration of the quality of education in India. The make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives. Based on these lines it had prepared guidelines for the institutions who wish to invite this process. The grade or assessment outcome is valid for five years only. After this period institution are required to apply for reaccreditation and again the whole process is invited. The performance of the institution is studied from different angles keeping in mind the role of educational institutions in fulfilling the objectives of the higher education. At the same time external elements like alumni, members of the Parent-Teacher Association are also involved at different stages of the process. In-house analysis of the report is done by the NAAC. Next step is the on-site visit of the peer team for validation of the SSR and report on assessment outcome of the visit is prepared. Finally rewarding of the grade is done by the Executive Council of NAAC.

NAAC Parameters

Over the years, the University Grants Commission (UGC) and the National Assessment and Accreditation Council (NAAC) has succeeded in promoting quality as a defining

element of higher education institutions in the country through a combination of self and external quality evaluation, promotion and sustenance activities. So far the NAAC has assessed the quality of 140 universities and 3492 colleges in India. The quality of higher education institutions is multi-dimensional. So NAAC uses many criteria for evaluating the quality of higher education institutions in the country. The seven important criteria used by the NAAC are:

- Curricular Aspects;

- Teaching, Learning and Evaluation;

- Infra- structure and Learning Resources;

- Organization and Governance;

- Research, Consultancy and Extension;

- Student Support and Progression; and

- Other Healthy practices.

Among these, Learning Resources are the library and information services offered to support the teaching, learning and research activities of the higher education institutions. The NAAC has recognized the importance of library and information services in higher education institutions very well and they evaluate the quality of the learning resource center as part of the assessment of the quality of higher education institutions in the country. Recently, the NAAC had issued a set of Guide lines on Quality Indicators in Library and Information Services to improve the quality of the learning resource center in affiliated/constituent colleges and Universities in India. All these show that, the quality of library and information services offered in higher education institutions is a serious matter and the authorities and the library and information professionals in higher education institutions must consider it seriously. In order to improve the quality, the college and university libraries should provide good library facilities; collection; and services. They must provide necessary facilities to promote effective access and use all information sources available. They should offer safe; comfortable; well lighted; clean physical facilities with adequate and appropriate seating facilities to ensure the effective use of the resources and services offered. They should also provide adequate reader space for the effective use of references and textbook collections. The rules and guidelines with regard to the hours of opening, access, circulation and other services should be well framed and implemented. All the facilities, collection, and services provided, and the tools and methods used should meet and satisfy the library and information requirements of students and teachers.

Assessing the needs and requirements as well as the satisfaction of the students and teachers with regard to the library and information services is highly necessary. The

NAAC has viewed that the main objective of the college librarian should always be total user satisfaction. It is opined that the functioning of the library should be user focused and the librarian should be the interpreter of thought and content and user satisfaction should guide the libraries. It shows that there should be a user based assessment of the quality of library and information services offered in higher education institutions in the country.

Quality Indicators for the Libraries

Special Guidelines on quality indicators in Library and Information Services are published by the NAAC in a booklet form providing directions in organizing and developing library. These guidelines are revised time and again to have compatibility with latest developments in the field. Hence the standards for assessing the quality of library services are updated from time to time. Library rules and the awareness among the users combined with alertness on the part of the library staff becomes the major requirements. It is true that libraries largely support learning, teaching and research processes in institutions. The set of questions framed for the library focuses on library infrastructure, collection, management and services. Extension activities and best practices are also covered. This can be explained in more details by dividing these questions into different headings

The concept Quality is defined extensively by good number of scholars both in service industry and product industry. In general quality is a way of life; normal practices performed to enhance the living standards in the context of individual and of the community are considered as quality measures, Quality as a common denominator in all walks of life especially in today's knowledge Society. Quality as fitness for purpose provides answers to the what of education quality as excellence and standards in performance defines the process of education, quality as value for money provides benchmarks for the output of education and quality as a transformation gives as the indicators to judge the outputs of education. Thus quality is directly concerned with education. Quality concern is not only at the time of establishment but also to be maintained and audited regularly so as to enable the organization to elope with recent changes.

Impact on LIS

The main objective of college library is to become instrument of instruction. In order to determine, how far it has succeeded in achieving theobjective, one should determine the extent to which the user uses the libraryresource for their assignment as an integral part of the curriculum. In other wordswe can say that the teaching in the classroom must depend more on library thanthe textbooks. A college library is expected to support

the objectives of thecollege. Therefore the basic function of the college library is to provide studymaterials to its users in short possible time and serve the requirements of thestudents, teachers and researchers towards reading, study and research.

Most of the Library and Information Centers (LICs) of India have started using computers and Information Communication Technologies in organizingtheir collections, housekeeping operations, processing, retrieval anddissemination of information to the end users. The use and impact of ICTs is nowvisible in Indian library and information centers which may be due to the drasticreduction / escalation of the cost of hardware and software and their easyavailability in the markets with service support from the suppliers or venders.

The impact of IT is also evident on the activities of many LICs associatedwith universities and other institutions of the national importance. Thanks to University Grants Commission for establishing INFLIBNET which have beenplaying an important role since its inception for initiating the automation andnetworking activities of library and information centers of universities, colleges,R&D laboratories and various institutions of higher learning.

Changing Roles of LIS Professionals

Presently, librarians are playing an integrated role beyond their traditionaljob. In a fast changing world, there are new demands and influences on libraries and information centers. Using modern technologies, libraries all over the worldare now shifting their emphasis from traditional to multidimensional work force.As a corollary to this, LIS professionals are supposed to play versatile role indifferent areas of libraries and information centers to meet the expectations andneeds of the present situation.

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The Effective Pillars of Total Quality Management:
A Comprehensive Study

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Abstract

This present study discussed on the eight pillars of Total Quality Management (TQM) in the construction industry promises several benefits such as more repeat customers, reduced rework, improved employee job satisfaction, higher productivity, improved budget performance, improved schedule performance, better chances in bidding process with pre-qualification, increased market share, etc. The construction industry is different from other industries in many aspects such as one one-of-a-kind product, lack of top management's leadership and support, unqualified workforce, lack of effective teams, etc. Total quality management (TQM) is a general philosophy of gradually improving the operations of a business. This is done through the application of rigorous process analysis by every involved employee and business partner. TQM is usually applied at the tactical, front-line level, where production, clerical, and low-level managers are deeply involved.

Keywords: Total Quality Management, Benefits, Concepts, Pillars.

Introduction

TQM is a management approach for an organization, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society.

- Requires cultural change prevention not detection, pro-active versus fire-fighting, life-cycle costs not price, etc.

- Many companies will not start this transformation unless faced with disaster/problems or forced by customers Effect of TQM (Quality Improvement) Improve Quality (Product/Service) Increase Productivity (less rejects, faster job) Lower Costs and Higher Profit Business Growth, Competitive, Jobs, Investment.

Figure 1: Total Quality Management

Definition of TQM (BS 4778:1991)

A management philosophy embracing all activities through which the needs and expectations of the CUSTOMER and COMMUNITY, and the objectives of the organization are satisfied in the most efficient and cost effective manner by maximizing the potential of ALL employees in a continuing drive for improvement.

Total Quality Management Tools

There are a wide range of TQM tools; the size of this article does not permit a detailed discussion of them along with appropriate examples. The following is a list of widely used tools. There is no tool that is best for every application; the knowledgeable practitioner is aware of a rich variety of tools and uses the appropriate ones.

- **Poke-A-Yoke:** This concept of the Japanese management philosophy is to make a process foolproof. The idea is to design the process in such a way that it is self checking or incorporates process steps that cause immediate detection and possible correction of any defect.

- **Statistical Tools:** One of Deming's major contributions to the quality movement was the introduction of statistically grounded approaches to the analysis of defects. Without the use of these tools, one can often make incorrect decisions regarding the cause of a problem. This can often lead to exactly the opposite effect of that being sought. Included in this set of tools are statistical process control (SPC) charts, Pareto Charts, and histograms.

- **Force Field Analysis:** This tool asks one to diagram the forces (policies, culture, and so forth) that are resisting a desired change and the forces that support the change. This assists one in clearly determining the degree of difficulty of making change and exactly where effort will be needed. The supporting forces are places where assistance can be expected.

- **Root Cause Analysis (Five Whys):** The Japanese popularized this tool. It consists of asking a series of questions (whys) until one uncovers the root cause of a defective product. The objective is to determine why a defective product was produced; this is to be contrasted with the usual approach of just fixing the defective product or replacing it.

- **Fishbone Diagram (Ishawaka Diagram):** This tool is also called a cause-and effect diagram. It is used in a brainstorming session to examine factors that may influence a given situation or outcome. The causes are often grouped into categories such as people, material, method or process, and equipment.

- **Loss Functions:** In many manufacturing situations, one creates tolerance limits for a product. Products that fall outside of the limits are defective and those that are inside the limits are deemed well. Several difficulties arise with this approach. First, there is always the temptation to reclassify products that are just outside the limits into the acceptable category, especially if there is a great push for quantity.

- **The Plan-Do-Check-Act (PDCA) Cycle:** This tool is also known as the She hart Cycle. Deming popularized it in Japan; as a result the Japanese refer to it as the Deming Cycle. The tool emphasizes a new plan for change. It carries out tests to make the change on a small scale, observes the effects, and finally, studies the results to determine what has been learned. The cycle is repeated as needed.

- **Brainstorming:** This process has become a staple of the TQM movement. The concept is to invite participants to suggest solutions to a problem without any evaluation of the usefulness or correctness of their ideas. Several approaches are possible, including open suggestions, rotating suggestions, or blind suggestions.

- **Affinity Diagram:** The affinity diagram tool is used to organize large amounts of non-quantitative (ideas, opinions, issues, etc.) information into groupings based on natural relationships between the items. It is largely a creative rather than a logical process.

- **Interrelation Digraph:** This tool takes complex, multi-variable problems, or desired outcomes, and explores and displays all of the interrelated factors involved. It graphically shows the logical and often causal relationship between factors.

- **Tree Diagram:** This tool is used to systematically map out, in increasing detail, the full range of paths and tasks that need to be accomplished to achieve a primary goal and every related sub goal. Graphically, it resembles an organization chart or family tree.

- **Prioritization Matrices:** Prioritization matrices are one of a group of decision making tools that help to prioritize tasks, issues, or possible actions on the basis of agreed upon criteria.

- **Activity Network Diagram:** This class of tools includes a wide range of project management tools used to plan the most appropriate schedule for a complex project. Several excellent computer programs exist for automating the work associated with this class of tools.

Eight Pillars of Total Quality Management

1. Creation of quality management environment

Starting Part of the TQM philosophy should be the Creation of Quality Management (QM) environment for all employees to seek out quality problems and correct them and the environment must exist throughout the implementation period. An organization needs to have clear vision and mission about TQM implementation. This must be circulated to all employees in the organization. TQM is an organization-wide challenge that is everyones challenge.

2. Development of Teamwork

For continuous improvement, customers' requirements must be consistently measured and satisfied. A company should be organized to obtain the necessary information for the identification of customer requirements and to obtain reliable and fast feedback on the quality levels of currently available products/services.

3. Practice of quality control tools and techniques

TQM places a great deal of responsibility on all employees. If employees are to identify correct quality problems, they need to apply appropriate tools and techniques.

4. Focus on customer

TQM recognizes that a perfectly produced product has little value if it is not what the customer wants. Therefore, we can say that quality is customer driven. This means that the goal of customer satisfaction must be incorporated in the planning processes and then maintained day in and day out.

5. Focus on supplier relationship

Management needs to allow sufficient time for the purchasing department to identify several low cost, qualified suppliers and to analyze the information they submit. An unrealistic deadline can lead to poor selection based on incomplete information about

supplier qualifications. Early equipment management

6. Benchmarking

Benchmarking is a systematic method by which an organization can measures its performance against the best industry practice. It is a tool for continuous improvement. Basically, it is process of borrowing ideas and adapting them to gain competitive advantage.

7. Improvement of processes

The process improvement can be done by the training of production employees and adapting new technologies, if required. Process improvement can be the beginning of a quality program. Most authors support a 'zero defect' and a 'do it right the first time' attitude towards the quality program, which require zero defect mentality of the employees.

8. Involvement of employee

Involving employees, empowering them and bringing them into the decision-making process provide the opportunity for continuous process improvement, which is what one of the goals of TQM implementation.

The Advantages of Total Quality Management

• **Cost reduction.** When applied consistently over time, TQM can reduce costs throughout an organization, especially in the areas of scrap, rework, field service, and warranty cost reduction. Since these cost reductions flow straight through to bottom-line profits without any additional costs being incurred, there can be a startling increase in profitability.

• **Customer satisfaction.** Since the company has better products and services, and its interactions with customers are relatively error-free, there should be fewer customer complaints.

• **Defect reduction.** TQM has a strong emphasis on improving quality within a process, rather than inspecting quality into a process. This not only reduces the time needed to fix errors, but makes it less necessary to employ a team of quality assurance personnel.

• **Morale.** The ongoing and proven success of TQM, and in particular the participation of employees in that success can lead to a noticeable improvement in employee morale, which in turn reduces employee turnover, and therefore reduces the cost of hiring and training new employees.

• Total quality management ensures the maximum effectiveness and efficiency of everything that is done with an organization. It provides market and sector leadership by the establishment of processes and system, which

• Promote excellence, preventing errors, waste and avoid duplication. It ensures every aspect of the organization aligned to the needs of both the External and

• Internal Customers.

Total Quality Management Philosophies

In addition, the Criteria provide an excellent tool for measuring an organization's performance against a well-calibrated standard. As outlined in the Criteria, the TQM philosophy involves eleven interrelated concepts.
Visionary Leadership, Customer-Driven Excellence, Agility, Organizational and Personal Learning, Management by Fact, Valuing Employees and Partners, Focus on the Future, Managing for Innovation, Social Responsibility, Focus on Results and Creating Value, Systems Perspective.

Total Quality Management in Six Basic Concepts

I. LEADERSHIP
· Top management must realize importance of quality
· Quality is responsibility of everybody, but ultimate responsibility is CEO
· Involvement and commitment to CQI

II. CUSTOMER SATISFACTION

· Customer is always right in Japan customer is King
· Customer expectations constantly changing 10 years ago acceptable, now not anymore.
· Delighting customers (Kano Model)

III. EMPLOYEE INVOLVEMENT

· People most important resource/asset
· Education and training life long, continuous both knowledge and skills
· Suggestion schemes; Kaizen, 5S teams

IV. CONTINUOUS PROCESS IMPROVEMENT

· View all work as process production and business
· Process purchasing, design, invoicing, etc.
· Inputs PROCESS outputs

V. SUPPLIER PARTNERSHIP

· 40% prod. Cost comes from purchased materials, therefore supplier Quality Management important
· Substantial portion quality problems from suppliers
· Need partnership to achieve quality improvement long-term purchase contract

VI. PERFORMANCE MEASURES

· Managing by fact rather than gut feelings
· Effective management requires measuring
· Use a baseline, to identify potential projects, to access results from improvement

Application of TQM is to identify service improvement techniques for an academic library systems and services. Thus, implementation of TQM requires a changed attitude of employees towards their work. An academic library is a part of a service organization which delivers personally to the customers. TQM is at present not emerging as one of the management technique, but also felt very essential by several organizations and disciplines. Sirkin, suggests some ways a library might use the principles of TQM to enhance library and information services. Create service brochures and information kits Conduct a user survey about library and information services, Change hours of operation, Provide a more convenient material return, Simplify checkout of material, Use flexibility in staff assignment, Co-operate with local government, Improve the physical layout of the library.

Conclusion

In the field of total quality management, confusion arose worldwide with the scope of TQM concept and the effects of TQM implementation. In fact, much research dealing with the concept of TQM has been conducted. Researchers have adopted different definitions of TQM; thus far, it has come to mean different things to different people. After survey of literature related to TQM implementation in Indian manufacturing firms, it became evident that no case study research dealing with the implementation of TQM in automotive industry had been systematically conducted.

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TQM in Library and Information Services

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Abstract

Total Quality Management was initially applied as management philosophy in the manufacturing sector, following its enormous success, this philosophy and a set of guiding principles that represent the foundation of a continuously improving organization in the service sector, including libraries. The purpose of this paper is to present an overview of total quality management (TQM) in the Library and Information sectors.

Keywords: Total Quality Management, Library and Information Service.

Introduction

TQM is defined as a continuous effort by the management as well as employees of a particular organization to ensure long term customer loyalty and customer satisfaction. Commitment, involvement and continuous improvement are the three basic fundamental aspect of TQM. Commitment in the sense to take pledge for never ending improvement in quality and services to the customer, involvement means involvement of all the team members in achieving a common goal, work as a single unit for better results and think about continuous improvement by looking any error and defects and eliminating it on spot. The popular buzzword is Customer is the King, Customers are our GOD. Users of the library are defined as customers. Customers have become more and more aware of their rights. To provide quality services is the prime function of each and every library. Quality in service is a never ending journey. To improve the Quality of service given to user, information provide must devise new methods of collecting feedback from the users of the Library and Information Center.

Objectives

- To understand the need of TQM practices for its successful implementation in Library and Information service.

- To propose guidelines for effective implementation of TQM in the Academic Library.

- To find out the barriers, in the applicability of TQM in Library and Information Service.

Definition of TQM

TQM is nothing but a continuous improvement of organizational service through proper manager and individual efforts for the users satisfaction by doing right thing at right time in a right way.

According to Jurow and Bernard TQM is A system of continuous improvement employing participative management and centered on the needs of customers (Jurow & Barnard, 1993).

Analyzing the three words,

Total Made up of the whole.

Quality Degree of excellence a product or service provides.

Management Act, art or manner of handling, controlling, directing, etc.

TQM includes maximum focus on customers, their satisfaction, leadership in setting values, fulfilling the organizational mission leading to goals and continuous improvement. Definitions could differ but essentially, TQM comprises following elements. There are its building blocks and required for its successes.

- Top Managements Commitment.

- Customer focus.

- Process focus and improvement.

- Continuous improvement

- Benchmarking

- Employee involvement and empowerment.

- Quality assurance

- Communication.

- Training

- Time being.

TQM in Library and Information Sector

Libraries are the most ancient social and cultural institutions in existence, which have body of information recorded on some type of medium and that information could be retrieved when needed. The Quality assurance initiative in Library Science sector primarily came from central or parent organization to which it provides services. However, in the later years, the quality assurance system has become as essential feature of Library and Information Services.

- Publicize new or changes services.

- Develop user and staff training materials

- Target services of specific groups

- Offer electronic document delivery.

By applying TQM technique in libraries, the librarians can not only satisfy the users consistently according to their needs and requirements but also improve quality of their services frequently. TQM in Library and Information centers may help us in:

- Improved quality of services and user satisfaction

- Innovations at all levels of planning

- Better Library Resources

- Better Cost Management

- Reduction in user grievances

- Enhance skill and performance of end users to profitability interact with information systems and services.

- Developing an inventory of all the documents available in the library.

- Update and enhance the abilities of staff members.

The Principles of TQM to enhance the Library Services:

Library can benefit from the principles of TQM as suggested by Sirkin(1993)-

a) Make a Library Brochure and Information kits

b) Change the hours of operation

c) Conduct a user survey about library services

d) Provide more convenient materials return

e) Improve signage

f) Use flexibility in staff assignments

g) Offer electronic document statement

h) Motivation

i) Improve the physical layout of the library

j) Training and development of staff

k) Smooth acquisition procedure

l) Implement interlibrary loan facilities

m) Develop user and staff training materials

n) Target services to specific groups

o) Technology use for easy information retrieval

p) Open Internet facilities

q) Smile.

Library staff must find out what readers want and concentrate upon providing it.

Effective Implement of TQM in the Academic Library

The effective implementation of TQM in the academic library represents a new age in the management of an organization. Its elements such as participating management, the personnel training and the responsible service to the users are views that the libraries are already driven by. As a result of this, the libraries are up to improving these principles, which already have been valued positively by them and put them partially in practices. Many college libraries have embarked on plans for implementing quality-related philosophies such as TQM. It is well known that TQM is a management method that libraries can benefit from lit in several ways.

TQM can be effectively used in providing services to user. In rendering CAS/SDI, interlibrary loan, access to national and international databases the through internet or other network, attending reference queries and reference service over phone, fax

or personal contact, etc. Library and Information Centers produce catalogue card, indexing and abstracting periodical, newsletter, database of their collection, subject bibliographies, etc. all of which can be enrich by TQM. TQM can be used in creating information awareness and consciousness among the user and reaching out to the potential users. It can be used in identification of the user group, determination of needs, wants and demand of each user group, fulfillment of the same though designing and delivering appropriate information product and services.

In each and every academic library plays key role for development of professors, students, researchers in term of knowledge navigator.

Benefits of TQM in Academic Library

- TQM ensures the maximum effectiveness and efficiency of everything that is done within the library.

- Staff is motivated

- Better user satisfaction

- TQM helps to detect defects and focuses on practices that identify potential defects to prevent them from occurring.

- Quality of service ensures courtesy, attitude, helpfulness and treatment of users with respect.

- TQM help us to maintain qualitative library and information services.

- TQM reduces bureaucracy, empower staff and create a team base culture, which is keenly desired for academic library.

- TQM help us for meeting users needs and expectations in an appropriate way.

Barriers to Adoption of TQM in Library and Formation Sector

A number of barriers to the implementation of TQM have been encountered in all types or organization, including libraries some of them are listed below.

- Lack of management commitment and management understanding on Quality

- Lack of clarity in the guideline, implementation plan and implementation methods

- Lack of understanding about the positive results of continuous improvement

- Ignoring the importance of users.

- Inadequate knowledge of TQM and improper understanding of the measurement techniques that are used to measure the effectiveness of TQM implementation.

- The business and industrial background of TQM might not lend itself to the non-profit sector, including libraries.

- Fund allotment

Conclusion

Library and Information sector should focus on providing the best services possible and be willing to change to serve its users. The main aim of libraries and information sector is to satisfy the users. Today's libraries are pushed to a position where they have to provide quality services to its users, to justify their existence. The process of implementing TQM in libraries involves a conceptual change in library professionals and cultural transformation in the organizational operations. Without a long-term thinking and commitment, it is not applicable. Teamwork is important for successful implementation of TQM. The whole process of TQM aims at introducing a new cultural change which is likely to bring about greater participation of the employee to achieve the goals and objects of the Academic library.

The Library and Information sector or the authority concerned should remember of few words of M.K.GANDHI, A customer is most important visitor in our premises; he is not dependent on us, we dependent on him.

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Competency Mapping for Librarians of Arts and Science Colleges in Theni District

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Introduction

The Libraries are challenging to balance the traditional collection and service models with resource needs for new initiatives. Primary users of the academic library in the future will continue to be students, faulty, and staff of the college. However, characteristics of these groups are changing, as is the nature of their use of library services. Demographics show that students are increasingly diverse, often older, more independent and frequently part-time. All of the users are now able to access the resources of the library with greater ease due to technology and community partnerships. Technology will continue to expand opportunities and provide new challenges for libraries to serve remote users, distant learners, faculty and it is providing new opportunities for libraries to create, manage and disseminate information, serve new and often distant users, and enhance teaching and learning. The professionals are playing the vital role to meet and support the basic aims and objectives of Higher education. In the modern world the LIS professionals are respected for their knowledge and skills with which they select, acquire, analyze, process, consolidate and disseminate information in the most meaningful manner.

Review of Literature

Siraj Nissa begum (2003) defines the quality is customer satisfaction through product or by service. The customer in the academic library is the user / reader / student. In a service organization like an academic library, customer satisfaction means fulfilling expectations.

Vicki Williamson (1994) found the competency standards are statements that set out the knowledge, skills and their application required for effective performance in employment. Competency standards provide clear benchmarks from the training system in developing and delivery courses relevant to work place requirements. Don Hellriegel,

John W Slocum (2004) describes the managing self competencies involves the overall ability to assess a person's own strengths and weakness.

Definition

According to Michael Armstrong (2007) what role holders have to know and be able to do (competencies) and of how they are expected to behave in particular aspects of their role (competencies) Fences and Roland Bee (2008) defines that competency is a set of behavior pattern that an incumbent to bring to a position in order to perform its tasks and functions with competence Shibu N S (2003) describes the competencies consists of four components called knowledge skill attitude capability.

Measuring the Competency

Measuring the competency begins with identification of the workforce competencies required to perform the organizational activities. Once the competencies are identified, a mapping between the targeted vs actual value of competencies is required to measure, analyse and predict the future capability of competencies and take necessary corrective/preventive action to either enhance or maintain the current capability.

Hypothesis

1. The competency level is being improved due to the developmental practices adopted by the librarians.

2. There is a significant relationship between the professional competency and the quality of service offered by the librarian

Sampling

The stratified random sampling technique was used for selecting samples. The questionnaire approach was adopted for the data collection. Survey method was followed for the study. The survey area was the Arts and Science Colleges located in Theni District.

Tools and Techniques Applied

An analysis of mean scores of the self-rating of grouped competencies gives an indication of their relative possession by respondents. Thus, higher score indicates that

the respondent possesses that competency is higher degree compared to a respondent having a lower score for that competency.

Classification of the Colleges

Colleges	Govt.	Aided	Self Fin.	
Co-education	NIL	2	5	
Womens Colleges	NIL	1	2	
Total	NIL	3	7	10

Respondents of the Study

The respondents of this study are college librarians working in various Arts and Science Colleges.

Analysis and Interpretation

The Karl pearsons x^2 test was utilized to compare the observed frequencies with theoretical frequencies and to draw decision whether there is any significant difference between these two sets. The null hypothesis was rejected at 5

Chi Square test for Professional Competency and Developmental Practices

To find out whether the professional competency is being improved by the developmental practices, adopted by the librarians.

Null Hypothesis: The professional competency of librarians does not depend on the developmental practice

$\chi^2 = 9.93$ is $> X_{0.05}^2 5.99; v = 2$ From the above table, we observe that the calculated value 9.93 which is greater than the table value v = 2, X20.05 = 5.99. The null hypothesis is rejected. Hence the professional competency and developmental practices are not independent. The developmental practices concentrated for this study are Seminar, Conference participation, paper presentations, Article, Books publications, Membership in Consortiums and Professional bodies.

Observed	10.1	14.2	13.2	0.0	9.0	14.0
Expected	5.8	10.8	14.0	4.3	8.1	10.6
$(O - E)^2/E$	3.2	1.1	0.1	4.3	0.1	1.1

Table 1: χ^2 table for Professional Competency and Developmental Practices

Observed	10.1	14.2	13.2	5.0	12.0	14.0
Expected	7.5	14.3	8.0	7.6	7.6	30.3
$(O - E)^2/E$	0.9	0.0	3.4	0.9	2.6	8.8

Table 2: χ^2 table for Professional Competency and Quality of service

Chi Square test for Professional Competency and Quality of Service

To find out whether the professional competency is improving the quality of service.

Null Hypothesis: The quality of service does not depend on librarians professional competency

$\chi^2 16.55$ is $> \chi^2_{0.05} 5.99; v = 2$

From the above table, we observe that the calculated value 16.55 which is greater than the table value $v = 2$. $\chi^2_{0.05} = 5.99$. Hence, The null hypothesis is rejected. Hence the professional competency and quality of service are not independent.

Findings

1. The developmental practices are helping the library professionals to enhance their professional competencies, which was derived from the statistical result. Hence, the librarians must register their name in the developmental practices that are paper presentation in seminars, conferences, articles and books publication.

2. The developmental practices are the key factors to improve their competency level. The professionals must concentrate on these criteria to develop their present competency level to achieve the excellence in performance.

Conclusion

The core of the profession remains the same, the methods and tools for information delivery and the scope of the enterprise continue to grow and change dramatically. While maintaining their client and content centered approach, practitioners increasingly

require advance knowledge of information technology to realize their full potential.

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Total Quality Management In Public Libraries

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Abstract

The concept of quality management occurred in Japan and later moved into the USA and other countries market. Since then, the concept outstanding management has been growing fast. TQM was first used as a management viewpoint in the production market. Following its tremendous success, this viewpoint is gradually being used for the services market, such as options. In today's fast paced international economy market limitations are challenging that organization provide their alternatives more quickly and completely meet customers. A Total Quality Management Technique (TQM) approach can have an effect on the needs if it is completed smartly. TQM is a awesome break through enhancement business strategy that enables assistance companies to use simple and awesome methods to measure and evaluate techniques for accomplishing and maintaining efficient the finest high quality. An variety is part of a assistance organization which provides products personally to the consumer. From the viewpoint during option alternatives, applying the top the finest high quality programs increases the performance of the collecting and meets gradually higher customer goals. Librarians must improve the outstanding the best outstanding high the finest high high quality of their alternatives to live. The present work has tried to walk around some elements of TQM in option assistance.

Keywords: Library, TQM, Quality, Service.

Introduction

Total Quality Management (TQM) is a idea created by W. Edwards Deming. It was initially presented in Asia after Globe War II to assist the Japanese people in rebuilding their economic system. The main objective of TQM was and is ongoing quality enhancement in the sections of products or solutions, employer-employee interaction, and consumer-business interaction using the following 14 Points:

1. Create consistency of purpose for enhancement of product and service;

2. Adopt the new philosophy;

3. Cease dependency on huge examination to achieve quality;

4. End the practice of giving company on the basis of a price tag–instead, reduce total cost;

5. Improve regularly and permanently the system of manufacturing and service;

6. Institute training for all employees;

7. Adopt and institution leadership;

8. Drive out fear;

9. Break down limitations between staff areas;

10. Eliminate catch phrases, exhortations, and objectives for the task force;

11. Eliminate mathematical allocations for workers consider mathematical objectives for individuals in management;

12. Remove limitations that rob individuals of pleasure in their work;

13. Encourage knowledge and self-improvement for everyone;

14. Take action to achieve the transformation".

The regular applying TQM have been in the company world; i. e., in manufacturing, professional, or support companies. Since collections are not predicted to show a benefit, are not run as businesses, and are considered "free", why would anyone want to apply TQM concepts in a library? There are two reasons that instantly come to mind- first:

1. Libraries are not 100 % free. Public collections are sustained by allows of various types, as well as tax money provided by the Municipality. Educational collections are sustained by student educational costs charges and allow from UGC; analysis collections are often sustained by efforts and account subscribers or the company which they provide.

2. They provide servicescirculation (issue and return of books), inter-library loans, performing knowledge programs, user attention programs, reading, analysis, referrals features, and more. If any company presents solutions, then the solutions should, theoretically, try to surpass the objectives of the customers. TQM concepts, properly followed, have been proven not only to enhance the standard of solutions, but increase worker participation and spirits, as well.

What is Quality?

Nunan and Calvert (1992) point out that: The term top quality contradicts any definition which will be globally accepted. When it is linked to performance, top quality implies assessment for relative purposes; 'measures of top quality involve norms and standards and decision of top quality are assisted through use of standard or requirements recommended signs.

Quality in Library and Information Centres

Each one gives his/her own definition, but one meaning excellent is customer satisfaction through product or by support. The client in the educational collection is the user/reader/student. Here the client is not an outsider, but aspect of the educational community. As a reaction of this challenge excellent, Indias University Allows Commission has set up NAAC, the National Certification and Evaluation Authorities. NAAC performs audits and examinations on the support top quality provided by schools, including collection support. Allows are linked to the outcomes of these tests. In light of this, educational collections must develop systems, concepts, and strategies for handling top quality. The primary purpose of an educational collection is to support the educating, research, and other educational programs of its parent company. An educational collection is aspect of a support company which provides products personally to the client. In a manufacturing concern, the client is remote, where as in support company like an educational collection, manufacturers and consumer meet one on one. The complexness of handling support companies is typically increased by the existence of multiple connections.

Quality Management

Quality management is focused not only on product/service quality, but also the means to obtain it. Top quality management therefore uses quality guarantee and management of procedures as well as items to obtain more consistent quality. Three primary elements of Top quality Management

- Top quality Control,

- Top quality Assurance , and

- Top quality Improvement/Enhancement.

Quality control: Qc deals with creating a set of requirements, conferences and operations. These activities are precautionary and effective actions to fight mistakes and enhance quality. It also includes actions for quality required to be followed by

the Collection professionals as well as the visitors. Quality Assurance / Improvement: Top quality improvement is performed on all aspects of the project.. Also the present procedures and requirements, tools and techniques are improved based on the reviews and assessment of customers. According to Wang Hong (2006), Total quality management (TQM) has got significant attention in the library world since the early 90's. Risky research and preliminary implementations illustrate a extensive knowing libraries changing role in today s community and their initiatives to modify to the change as an result of the rapid development of market and technology. TQM is an overall strategy to speed up developments in procedures, services as well as. Collection and information manager are these days increase with advice as to how to acquire and arrange learning resources and fulfill in order needs of their customers.

There are a broad range of definitions of TQM, some examples are as follows:

- TQM is an incorporated, corporately led program of organizational change designed to engender and maintain a lifestyle of ongoing enhancement based on client focused explanations of top quality (Kanji, 1990).

- TQM is described as fitness for use or objective. TQM is a way of handling the efficiency, versatility and competition of business as a whole TQM symbolizes the control over top quality as a ideal problem rather than an functional problem for 'abnormal' amounts of the structure (Engelkemeyer, 1993).

- TQM is described as conformance to need. TQM is a idea, the concepts on which to build a total top quality lifestyle, a trip that has no end, and top quality enhancement is the allowing procedure which must be ongoing and company wide (Jyotirmoy, 2008).

- TQM is a methodical strategy to the practice of control, demanding changes in organisational procedures, ideal main concerns, personal values, personal behaviour and personal behaviors (Oakland, 1990).

According to Maghaddam and Moballeghi (2007), TQM is the application of a number of actions with perfect collaboration. The various critical factors of TQM are:

- customer-driven quality;
- top control management and commitment;
- ongoing improvement;
- fast response;
- worker participation; and
- a TQM lifestyle

Use of TQM in the collection industry started in the delayed 1980's, though early research has shown that the TQM strategy was and unsuccessful in some collections.

The Four Basic Principles of Total Quality Management

- Pleasure the client. What service would delight the client?
  What are the specifications of the client?

- Control by fact. Knowing the current top quality specifications of the product is the first step in the Process of enhancement. Knowledge of information at all levels is an important aspect of ongoing enhancement.

- People-based Control. Systems, specifications and technology themselves will not provide top quality. Individuals must understand what to do, how to do and must be ready to review the improvement of their own work, for ongoing enhancement excellent.

- TQM targets ongoing enhancement

In the Content of Information Systems, Quality Pertains to:

- Performance of the system,

- Top quality and Quantity of the Document Store,

- Top quality of Details Products assessed in conditions of defined standards or criteria,

- Details content (cost-effectiveness).

Therefore, the Top quality Management Strategies should incorporate these various approaches for achieving improved Top quality Details Services.

Relationship Between Library Science and TQM

Top the very best, based to the products of areas, relies on raw materials, source elements, and different abilities of efficiency of workers and production methods, and devices that shows different amount of efficiency. In the same way, the very best based to selection and knowledge technology or based to the handling of data solutions in the range relies on:

- the variety of information and their technical handling by applying certain methods and methods;

- the skill-sets of employees;

- devices and processing;

- the time frame of service to be rendered; and

- the features of solutions which are to be provided.

From the above, it is eliminated that while high quality in regard of sectors satisfies the greatest objective of customer fulfillment, the same may be implemented in collection and knowledge facilities also.

Conclusion

This paper has mentioned the execution of total top quality management and its application to Educational collections. To apply TQM in collections there must be support at the very top and dedication at all levels. It is necessary that all categories of public libraries are involved at the same time. TQM execution needs tolerance and tolerance of the Collection staff and learners who involved in this procedure. Implementation of TQM is assurance of the finest top quality takes the library in the right route. TQM utilizes a viewpoint of strong management contribution, improved interaction among divisions, and the training and learning of all workers. TQM is proven to be successful when applied in a successful way.

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Librarians Role in Educational Institutions: An Overview

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Abstract

This paper discuss the Librarians role in different Educational Institutions. Professional competencies can be thought of as flexible knowledge and skills that allow the librarian to function in a variety of environments and to produce a continuum of value-added, customized information services that cannot be easily duplicated by others. They relate to the librarians knowledge in the areas of information resources, information access, technology, management, research, and ability to use these areas of knowledge as a basis for providing library and information services.

Keywords: Librarian , Competencies, Knowledge, Manager.

Introduction

The Library and Information Science Professionals are providing unique services in the academic Institutions. Application of new ICT in to the libraries immediately requires improvement of different kinds of skills and knowledge in library information science professionals. Continuous staff training on emerging technologies is essential to learn, improve and develop various kinds of professional skills, knowledge and competencies. The technology is complex and librarians have not developed the skills to understand it, exploit it or create it. Those few who do have such skills find they have a very marketable commodity and can make a better living elsewhere. There is an urgent necessity to learn a great variety of professional competencies to accomplish the role of professional librarian in the constantly changing challenging web environment. Professional competences enable librarians to respond effectively and efficiently to the constant development of new technologies. Some of the unique competencies of the LIS Professionals are discussed in the following sections.

Technical Skills

In the age of 21st centaury LIS Professional must be aware of emerging technologies. It has become increasingly important that librarians keep up with technology and have certain basic skills. In the current scenario library professional must have the knowledge of HTML, Networking, scripting languages, the ability to deal with the back-end of the OPAC, the ability to translate library services into the online medium, the ability to troubleshoot basic computer and printer problems, or just a good healthy knowledge of emerging technologies.

(a) **Online medium:** LIS Professionals need to do so much online these days, way beyond basic catalog and database searching (which sure isn't easy either). Librarians have to be able to use search engines and use them well. They need to be able to find quality online resources. They need to help patrons set up e-mail and teach basic Internet skills. They need to be able to troubleshoot problems users are having accessing online library resources, at least to the extent where they can figure out if the problem is on the library's side or the user's side.

(b) **Ability to troubleshoot new technologies:** It is just a part of the good user service we provide in libraries. Most of the time when you are working in library our user facing problem I using the scanner, fix the printer, and troubleshoot any other technology problems they may be having. As we get new computers, printers, scanners, etc. then we will need to learn how to troubleshoot those. The key is just being able to have a decision-tree in your head of what to ask or try when there is a problem. Many librarians cannot troubleshoot this stuff. Most of the time when we troubleshoot any technical problem, we would just throw up an out of order sign because we just didn't have enough computer knowledge to figure out what the problem was. It was really bad user service. Librarians should be able to play with the technologies in the library, to learn what problems commonly come up, and to fix them if necessary, because it is often our responsibility to fix them.

(c) **Ability to easily learn new technologies:** Most of the time people comment that there are so many new technological things at the library that they can't keep up. Whenever we intimated to use new gadget in library we always asked to IT team of that organization to send an expert to the library to teach library professional how to use it. The best way to play with that technology. It is hard to learn to use first time that when a user asking you to use it. Learning about new technology is definitely a skill. People need to learn how to learn about new technologies without having to ask other people for help all the time.

Time Management Skills

Time management refers to a range of skills, tools, and techniques used to manage time when accomplishing specific tasks, projects and goals. This set encompass a wide scope of activities, and these include planning, allocating, setting goals, delegation, analysis of time spent, monitoring, organizing, scheduling, and prioritizing. Initially time management referred to just business or work activities, but eventually the term broadened to include personal activities also.

As par fourth law of library science which is save the time of users. This also has become more important that librarian muse developed the time management skills. Because to provide better or effective services to our user time also a factor suppose if we do not provide a desired information to a user on its requires time so our whole effort to search that information would be useless if we could not provide their desired information on time. So library professional also need to developed time management skills also.

Presentation Skills

This is a huge one. LIS Professional must have highly effective presentation skills. Suppose when he wants to implement a new technology or service for Library clients firstly he must create a proposal for management he must show that what would be the consequence of this new technology which tool to use to train staff, market the service etc. he must show the role of that new technology in currently being used in libraries. he can develop & practice reader's advisory skills to promote reading habit among all level of users. Through his presentation skills he can increase awareness of the role of libraries & librarians in promoting information literacy. For that he can use variety of presentation techniques to convey information to his users with different learning styles.

Communication Skills

Communication has a great importance in providing better services to users. He communicates the value of library service to decision makers, staff and users. When he provides information to the user he must communicate clearly and respectfully with customers and colleagues. Always Demonstrates active listening skills with customers and colleagues in his workplace. Communication is not only must be effective with users only but must have ability to negotiate effectively with publishers, customers, management & vendors.

Customer Service

Nowadays librarians must be customer oriented. He can demonstrate a sincere commitment to customer service. Always he must try to observe customer needs & try to provide their desired information on time. Through continual design & improve

user oriented information products & competencies he can provide them better customer services. Always show them confidence & competence to deliver perfect customer services.

Evaluation and Assessment Skills

LIS Professionals need to understand how any changes in the way the library provides services will affect all stakeholders. Sometimes he focuses on the needs of one group and ignores the fact that the changes that will benefit one group will not benefit another. With any change, librarians should create a list of all of the different stakeholders and actually discuss how it will affect each of them. When we say stakeholders we must mean not only our patrons but staff, IT, and administrators. If you implement a project that library staffs don't support, the likelihood of success is poor. For that continually analyzes, investigates and assesses the information service needs of the users & according to our stakeholders needs we can designs and deliver specialized value added information products and services. Time to time we can evaluates the outcomes of the use of library and information resources and services for which we can conducts research to find solutions to the identified information management problems.

Managerial skills

In managerial skills we include technical skills, human skills & conceptual skills. Technical skills involve process or technique knowledge and proficiency in a certain specialized field. These skills are more important for Librarian also because library professional also dealing with a huge no. of staff doing the organization's work. The technical skill involves the Librarian's understanding of the nature of job that people under him have to perform. Human Skills involve the ability to interact effectively with people. Librarian interacts and cooperates with employees & staff also. Because Librarian deal directly with people, this skill is crucial. Librarian with good human skills is bale to get best out of their people. Conceptual Skills involve the formulation of ideas, conceptualization about abstract and Complex situations levels. Conceptual skills refer to the ability of a Librarian to take a broad and farsighted view of the organization and its future, his ability to think in abstract, his ability to analyze the forces working in a situation, his creative and innovative ability and his ability to assess the environment and the changes taking place in it.. Thus, technical skill deals with things, human skills concerns people, and conceptual-skill has to do with ideas.

Knowledge of Policies, Procedures, Issues and Standards

- Maintains current awareness of professional issues impacting libraries

- Demonstrates knowledge of library policies, procedures and service standards

Knowledge of Information Sources & Services

- Develop specialized subject knowledge about the purpose of the organization

- Identify materials appropriate to customers requirements and their abilities

- Identify materials appropriate to customers requirements and their abilities

- Expert knowledge in the content of information resources and ability to critically evaluate and filter them

- Develop and deliver convenient, easily accessible and cost effective information services to the users (CCFR)

Commitment to Life-Long Learning

- Take responsibility for the development of ones own professional career

- Remain knowledgeable in current events and technologies

- Pursues learning opportunities, personally or through formal training

- Flexible in adapting to new situations, systems, tools, environments

- Anticipates accepts, adapts and manages change effectively

Other Skills

- Marketing and promotion of library services

- Project management skills

- Digital rights management

- Knowledge management skills

For decades, LIS Professionals have been creatively managing the information and research resources of their firms on behalf of attorneys and clients. The evaluation, acquisition, organization, sharing and distribution of information in all formats, including books, periodicals, online services such as Lexis and Westlaw, internal work product documents and database resources, is an integral part of their expertise. Similarly, providing comprehensive research services utilizing a wealth of legal and

non-legal resources is a service of long standing. In addition, law firm librarians have extensive experience in training attorneys and paralegals in the use of the full range of information resources to minimize the amount of time involved and maximize the quality of the result.

Conclusion

On the basis of above points which, we have discuses i.e. Technical skills, leading skills, communication skills, project management skills, time management skills, digital rights management, knowledge management skills, user satisfactions of the manager and LIS Professional is the same. A manager's aim to marketing and promotion of their products but the LIS Professional aims to marketing and promotion of library service. We can say LIS Professional is playing the role just as manager.

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Quality Benchmarks Followed in Libraries of Non-Accredited Engineering Institutions in Coimbatore: A Study

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Abstract

Information Resource Management of the Library and information centre is the basic and core activity which helps the user community in identifying and accessing knowledge resources in an academic institution. Presently, educational institutions have realized that quality enhancement in all aspects are essential for institution survival. Libraries are playing a vital role at time of the process of the institutional accreditation. The services of the libraries have been expanding to the learning process, particularly the e-learning process. This type of study is needed to assess the quality indicators prevailing in non-accredited engineering colleges. The present study was conducted among the faculty members of the aforementioned selected engineering intuitions. The study result reveals that there is a big gap between the NAAC quality benchmarks and the prevailing qualities followed by the non-accredited engineering institutions in Coimbatore.

Introduction

Information services offered by the higher education institutionslibraries playingamajor roleto enhancing the quality of academic and research activities of the faculty members. The National Accreditation and Assessment Council (NAAC) has been strived for quality and excellence in higher education and also advocate the library and information centerfor improvingtheir library services. Though, it is institutional accreditation that the NAAC does, the assessment of a library, a vital sub-unit, is a key step that integrates itself with the overall evaluation. Library is the fulcrum of support for the entire range of academic activities on an educational campus. In todays high-tech learning environment, the library as a learning resource centre and it taking up more time in the life of a learner. Thus NAAC has recommended a set of best practices for library and information centers, with the help of a few case presentations from few selected libraries of the accredited universities and colleges.

NAAC Benchmarks

NAAC has been taking great initiative for formulating best practices suitable for libraries and also insist to adopt the best practices which are suitable for the individual library environment. Best Practices may be consisting of the following aspects:

- Philosophy,

- Policy,

- Strategy,

- Program,

- Process or practice

Libraries frame the own practices with above qualities will definitely help to solve a problem or create new opportunities and positively impact the library functions. In general, the use of information communication technology and innovative ideas will help to frame new best practices suitable to their own library. Performance evaluation of college libraries needs to be carried out at regular intervals in order to sustain and enhance the quality.

Objectives

The study conducted with the following objectives:

1. To assess the Non- Accredited Institution libraries on the basis of the NAAC Benchmark.

2. To find out the quality gabs between accredited and non-accredited libraries.

Methodology

The study comprises of six institutions having more than eight years of existence in the education field offering engineering courses in Coimbatore. The total faculty members population of the selected institutions was 472 as on 30.11.2017. Among the 472 faculty members, researcher distributed 120 questionnaires on the basis of convenience sampling method irrespective of Professors, Associate Professors and Assistant Professors. Out of the 120 questionnaires distributed, 114 questionnaires were received with full particulars. The respondent percentage is 95.

Data Analysis

The questionnaires collected from the respondents were scrutinized systematically, tabulated properly, interpreted carefully and presented in the following lines.

Sl. No	Attributes	Level of Acceptance					Total
		SA	A	N	DA	SDA	
1	The library function on Saturdays, Sundays and holidays to facilitate use by students and faculty.	0	0	0	67	47	114
2	The library have extended and appropriate working hours before/after the class hours.	27	36	21	13	17	114
3	The awareness of existence of college Library Advisory Committee.	1	18	16	36	43	114
4	The qualifications, experience and pay of the Librarian on par with that of the academic staff and as per government/UGC norms.	78	24	12	0	0	114
5	The library has separate premises of its own and it contains minimum infrastructure facilities.	34	27	21	19	13	114
6	The seating capacity to the users (students and faculty) is sufficient.	13	21	19	27	34	114
7	The generator facility extended to the library.	5	7	3	53	46	114
8	The overall maintenance and cleanliness of the library	34	39	12	19	10	114
9	The library has reasonable computers and Internet facilities.	39	28	34	5	8	114
10	The library functions automated.	21	19	27	34	13	114
11	There is a defined policy for collection development, stock verification, promotion and training of library staff.	22	34	24	21	13	114

Table 1: Attributes for Quality Enhancement in Libraries SA - Strongly Agree, A - Agree, N- Neutral, DA -Disagree, SDA - Strongly Disagree

Table 1 shows the attributes for quality enhancement in libraries. It is evident from the table 1 that among the listed eleven attributes most of the respondents are disagree

with the following attributes the library function on Saturdays, Sundays and holidays to facilitate use by students and faculty; the awareness of existence of college Library Advisory Committee; the seating capacity to the users (students and faculty) is sufficient and the Generator facility extended to the library.
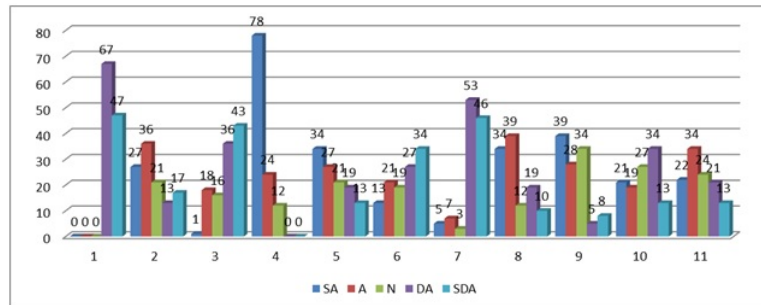
Figure 1: Attributes for Quality Enhancement in Libraries

The result also indicated that majority of the respondents were agree in terms of the library have extended and appropriate working hours before/after the class hours; the qualifications, experience and pay of the Librarian on par with that of the academic staff and as per government/UGC norms; the library have separate premises of its own and it contains minimum infrastructure facilities; the overall maintenance and cleanliness of the library; the library has reasonable computers and Internet facilities; the library functions automated and there is a defined policy for collection development, stock verification, promotion and training of library staff.

Table 2 indicates the best practices recommended by NAAC for college libraries. The result shows that majority of the respondents gave their dissatisfaction opinion about the following best practices recommended by NAAC in the studied instructions. The above said best practices are Computerization of library with standard digital software;Compiling student / teacher attendance statistics and locating the same on the notice board and Suggestion box and timely response.

The study also shows that the majority of the faculty members gave their satisfied opinion about Inclusion of sufficient information about the library in the college prospectus;Displaying newspaper clippings on the notice board periodically;Career/Employment Information/ Services; Internet Facilities to different user groups;Displaying new arrivals and circulating a list of those to academic departments and Conducting book exhibitions on different occasions practices followed by the institutions studied.

Sl. No.	Best Practices	Level of Satisfaction					Total
		HS	S	N	DS	HDS	
1	Computerization of library with standard digital software.	12	23	34	21	24	114
2	Inclusion of sufficient information about the library in the college prospectus.	28	41	18	14	13	114
3	Compiling student / teacher attendance statistics and locating the same on the notice board.	11	24	23	33	23	114
4	Displaying newspaper clippings on the notice board periodically.	32	41	22	10	9	114
5	Career/Employment Information/ Services.	28	37	31	12	6	114
6	Internet Facilities to different user groups.	36	41	21	9	7	114
7	Suggestion box and timely response.	12	23	21	34	24	114
8	Displaying new arrivals and circulating a list of those to academic departments.	32	37	27	13	5	114
9	Conducting book exhibitions on different occasions.	4	6	14	46	44	114

Table 2: Best practices for college libraries HS - Highly Satisfied, S - Satisfied, N - Neutral, DS - Highly Satisfied, HDS - Highly Dissatisfied
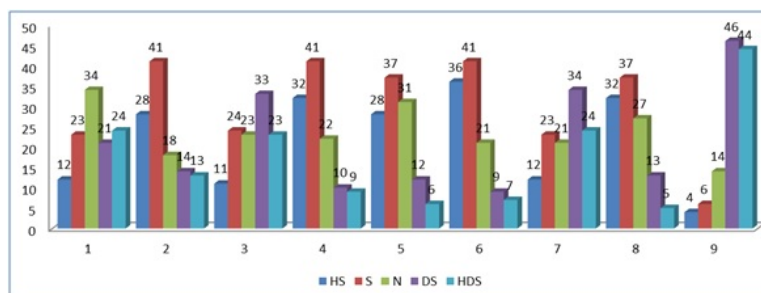
Figure 2: Best practices for college libraries

Findings

The study conducted with eleven attributes for quality enhancement in libraries and nine best practices recommended by the NAAC for college libraries.

1. The outcomes of the study based on quality enhancement in libraries indicates that the most of the respondents are disagree with the following attributes :

   - Library function on Saturdays, Sundays and holidays to facilitate use by students and faculty,
   - The awareness of existence of college Library Advisory Committee,
   - The seating capacity to the users (students and faculty) is sufficient and
   - Generator facility extended to the library

   And agree with following attributes:

   - The library have extended and appropriate working hours before/after the class hours,
   - The qualifications, experience and pay of the Librarian on par with that of the academic staff and as per government/UGC norms,
   - The library have separate premises of its own and it contains minimum infrastructure facilities,
   - The overall maintenance and cleanliness of the library,
   - The library has reasonable computers and Internet facilities,
   - The library functions automated, and
   - There is a defined policy for collection development, stock verification, promotion and training of library staff.

2. The outcomes of the study based on best practices recommended by the NAAC for college libraries shows that majority of the respondents disagree with the following best practices followed by studied instructions.

   - Computerization of library with standard digital software,
   - Compiling student / teacher attendance statistics, locating the same on the notice board, and
   - Suggestion box and timely response and agree with following best practices followed by the studied institutions:
   - Inclusion of sufficient information about the library in the college prospectus,
   - Displaying newspaper clippings on the notice board periodically,

- Career/Employment Information/ Services,
- Internet Facilities to different user groups,
- Displaying new arrivals and circulating a list of those to academic departments, and
- Conducting book exhibitions on different occasions.

Conclusion

The guidelines presented by NAAC are indicative and identify the principal factors influencing the development and maintenance of college library services and collections.The study indicated that there is big gap between NAAC accredited institutions and Non-accredited institutions. It also reveals that NAAC accreditation has become mandatory for all educationalinstitutions in order to provide quality education and service to society.

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Digital Libraries: Definitions, Issues and Challenges

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Abstract

This article derives from a review of key challenges confronted by libraries that are actively investing in online collections and services. Digital libraries are here to stay, and the conversion of traditional to digital is inevitable. A digital library is nothing but the transformation from traditional library. The digital libraries concept comes into existence in the 21st century. Virtual library, electronic library, library without walls and digital library are synonymous to each other. In this study, we have to discuss about the definition of digital library, its challenges and issues, etc. using digital library, access anyone, anytime, and in any form. Appropriate care should be taken to develop systems and managerial skills as well. Globalization of the digital concept will not be possible until we overcome the technological gap between developed and developing countries. Sufficient thought has not been given to attaining self-sustained growth. It is therefore essential to explore new avenues for funding, particularly since initial investment in digital libraries is high, as its maintenance. However, before digital libraries took over the library and information network, the country's archives laws needs to be changed to meet the current challenges in the areas of copyright protection of data and prevention of corruption of data.

Keywords: Digital Library, Electronic Library, Digitization in Library, Library Management System.

Introduction

A man will turn over half a library to make one book, said Samuel Johnson (Cohen and Cohen, 1960, p. 209). In other words, he expressed the difficulties of procuring materials for research and writing. He would certainly have envied his modern counterparts, who can make use of library facilities anywhere, thanks to the digital library concept and the application of the latest tools of information technology. Whereas a digital library is a computer-based system for acquiring, storing, organizing, searching and distributing digital materials for end user access. It is not network-based

but designed to be capable of being attached to a network. A digital library is not just a collection of material in electronic form; it includes a browser interface and perhaps a virtual space and society. It requires less space and the data can be made available through communication networks to anyone anywhere, while facilitating searches with speed. The digital library is not a single entity and as such it is linked to the resources of many such collections.

The digital library extends the breadth and scale of scholarly and cultural evidence and supports innovative research and lifelong learning. To do this, it mediates between diverse and distributed information resources on the one hand and a changing range of user communities on the other. In this capacity, it establishes a digital library service environment that is, a networked online information space in which users can discover, locate, acquire access to and, increasingly, use information. Although access paths will vary depending on the resource in question, the digital library service environment makes no distinctions among information formats. Books, journals, paper-based archives, video, film, and sound recordings are as visible in the digital library service environment as are online catalogs, finding aids, abstracting and indexing services, e-journal and e-print services, digitized collections, geographic information systems, Internet resources, and other electronic holdings.

Objectives of this Study

1. To identify workable modalities to overcome the problems arising out of converting traditional to digital.

2. To identify the role of digital libraries in making knowledge universally available.

3. To explore possibilities of private participation in terms of money and staff.

4. To explore avenues to promote income generating programmes.

5. To identify advantages and disadvantages.

6. To prevent unauthorized use of data in violation of intellectual property rights.

7. To explore avenues for attaining self sustained growth.

What is a Digital Library

With the advancement of information and communication technology, the rate of information explosion increases exponentially. Library digitization is nothing but the conversion of physical media of the library, i.e. books, periodical, articles, etc., into digital format (0 and 1 bit). Bits are the fundamental units of information in a computer

system. Flexibility is one of the chief assets of digital information. As a result, libraries have been constantly facing the problems of space, escalation in the cost of books and journals, budget shrinkage, inability to provide multiple copies and most important is retrieval efficiency of user being endangered for want of information. The digital library contains digital representation of the object found in it. Digital library is popularly viewed as an electronic version of a library. To some extent, it simply means computerization of traditional libraries. According to Larson, defined the digital library as global virtual library - the libraries of thousands of networked electronic libraries. Networked electronic libraries describe the collection of various library resources to the network so that any user can access the resources anytime in anywhere.

According to the American Digital Library Federation, digital libraries are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collection of digital works so that they are readily and economically available for use by a defined community or set of communities. The definition of a digital library can be given as a set of characteristics are as follows. The digital library is a collection of services, collection of information objects, supporting users with information objects, organization and preservation of those objects, availability directly or indirectly, and electronic/digital availability. The primary objective of digital library is to improve the access as well as it also includes the cost saving, preservation, keeping peace with technology and information sharing. A main benefit of digital library is to preserve rare and fragile objects by enhancing their access to multiple users simultaneously. There are several reasons for libraries to go for digitization, but the prime reason for the digitization is the need of the user for convenient access to high quality of information. Other important considerations for the digital library are quality preservation, multiple referencing, wide area usage, archival storage, and security measure. Digital collection, associated technology, and its work/services are the important characteristics of digital library. Stand-alone Digital Library, Federated Digital Library, and Harvested Digital Library are mainly three types of digital libraries are exist.

Conversion of Traditional to Digital Libraries

Historically, if we look into the development of libraries and reading rooms in particular, it is apparent that they came into existence out of necessity rather than by compulsion. There are no statistics showing how many libraries there are worldwide, but details of libraries in the developed countries and a few from developing countries are available. It is a similar case for the number of people using libraries and the number of books and periodicals each library has accumulated over a period of time, and the total number of librarians working and their staff. Constitutionally libraries in India are included in the State List. The central government has jurisdiction only over libraries it has

established and institutions declared to be of national importance. We cannot ignore the role of librarians and their supporting staff. Are they being provided with adequate training and the necessary guidelines to execute a smooth transition from traditional to digital? It is vital to look at the colleges and institutes training future librarians. Do they have common syllabi and training methods to meet the additional requirements of digital libraries? Upgrading information technology is vital and should be accorded high priority by each country. However, steps should be taken to narrow down the existing gap and to incorporate the latest developments without any time lag. If this ongoing process is not attended to, the whole system will fall into disarray. With the introduction of digital libraries, the library profession is changing. Librarians and their staff must prepare themselves for the transformation from an era of scientific management to systems and structural management. It is a combination of functionally related computer systems and sub-systems where conventional practices will give way to innovative organizational managerial formats. While planning for the change from traditional to computer based systems, it is necessary to take it in stages. Some of the points to be considered are: anticipated traffic to flow over the network; origin and destination of that traffic; types of applications that will be made available on the network; and set procedures if part of or the whole network fails. Apart from organizing materials in a format suitable for computers, it is necessary to develop safe methods to provide uninterrupted service. Sufficient fund allocations should be made for maintenance purposes, which is not only a high cost but also recurring. In the initial stages, librarians have to overcome psychological aversion from both users and support staff.

Digital Library Maintenance is More Difficult

The digital libraries containing informal and dynamic material including software architecture will have substantially greater maintenance problems that may even threaten their long-term viability. The traditional, or paper-based, library has established methods of maintaining access. However, we do not yet have maintenance methods for the digital library that include dynamic and informal materials. Traditional collections can be maintained with extension of traditional methods whereas maintaining the dynamic and informal documents will be possible only with new technical solutions. In the traditional paper-based library, there is considerable control over the collection as there have developed many practices such as circulation, technical services and even shelving to maintain access to the collection over time. This type of library could never cope with the limitations of traditional practices in dealing with ephemera and would require too many resources. Digital libraries may need to find new maintenance mechanisms. Traditional libraries are narrowly-construed, where the collection has known boundaries and possibility of control over the collection is easy. In the broadly construed digital library, users are able to access diverse material that leads to serious

control and long-term maintenance issues. The digital library is more than a set of technologies; it is also a social institution with long-term needs and maintenance requirements.

Universal Access to Knowledge

The core issue of IT development is the objective of providing universal access, in which libraries play a crucial role. India has launched an ambitious plan to achieve this within ten years. It is proposed to install Internet access in every school, university and public hospital (Ninth Five Year Plan Report, 1997-2002, pp. 100-44). IT is being made a compulsory subject in all courses at undergraduate level and networking facilities are being extended to all higher centers of education. Bringing Internet access to all is a daunting task. This is not only a problem in India but in other developing countries as well. For users of a digital library, it is essential to have a personal computer with an Internet connection.

Language Barrier

The limits of my language mean the limits of my world wrote Ludwig Wittgenstein (Hutchinson Encyclopedia, 1997, p. 611). If this is true, then all the written material in other languages is unavailable to us. There are about 6,000 languages spoken in the world, and of these nearly 90 per cent are dying out. It is estimated that just over half of the worlds population speak one of just five languages. In India alone there are about 18 official languages spread over. Is it possible to provide material through digital libraries in all these languages? Unless this is achieved digital libraries and universal knowledge will be restricted to the elite familiar with one of the major languages of the world. The challenge is to evolve a strategy so as to provide information in the language required by the reader. International institutions should work out a programme in close cooperation with governments in each country. Language is the embodiment of a culture and preservation of identity is important.

Private Participation

In the past libraries came into being at the behest of kings and nobles, and enjoyed aristocratic patronage. With the change to a democratic political system, the responsibility fell on the government. The private sector and the corporate sector especially, were not involved. Any contact was related to their own concerns, not the development of libraries. Now the private sector, particularly in advanced countries manufacturing Internet related equipment, is in a position to extend both material and financial support. Being the major producers of computer technology they are able to set

up such industries in developing countries. Developing countries could offer incentives such as tax breaks, investment subsidies and so on. This would provide sufficient inducement to the corporate sector in the developed world to get involved in producing goods on a mass scale and participate in development. This alone would help in reducing the cost of goods needed for constructing a digital library. In this regard India has the added advantage of an adequate number of computer technicians and software specialists. However, it has to attend to the other aspects too, for instance, ensuring an uninterrupted power supply and improvement in telecommunications systems.

Self-Sustained Growth Libraries

In developing countries in particular rely primarily on governmental funding. The resource crisis has affected every field of activity. The problem is further confounded by the increasing cost of books and periodicals in developed countries and the falling value of the currencies of developing countries in the international market. Further periodic increases in freight charges add to the strain on the already low budget allocations. Also, many public and departmental libraries are understaffed. It is clear that relying on the government is not conducive to self-sustained growth. Under these circumstances we have to explore ways to earn income so as to reduce dependence. This becomes all the more important in the context of globalization. It is therefore essential that adequate thought is given to finding resources for digital libraries and their upkeep. Apart from introducing user charges, it is useful to consider other avenues as well. In this regard insufficient consideration has been given to areas such as issuing bonds and shares while establishing a major unit centre. Also, the participation of the business community and international financial institutions needs to be explored. The business community could be offered tax incentives provided a portion of their profit is used for developing digital libraries. Local and international financial institutions could also be induced to offer interest free loans for the promotion of digital libraries.

Prevention of Unauthorized Utilization

Growth itself is not enough. Like a general, the librarian has to safeguard the very functioning of the system. Common laws and procedures must be adopted by every government so as to eliminate misuse and theft of information. Filtering systems should be used so that genuine users are not inconvenienced. An information product is intellectual property (Thurow, 1997). There is a huge potential for growth and new technologies have not been used, precisely because of inadequate intellectual property protection globally. One of the main tensions in international trade has been over intellectual property because one of the problems is massive piracy. Virtually everyone in the world is involved in the information industry in some way, either as a producer

or consumer of information. So, we must have a global legal system supporting the digital electronic market place which allows for the proper functioning of free market forces. This can only happen if intellectual property rights are protected. But the new global digital network environment creates special problems and strains on the traditional system of copyright. One of the strains is that national boundaries have become almost meaningless in the digital world. It is difficult to recognize a work of authorship distributed on the Internet.

Narrowing the Technological Gap

Adapting quickly to new technology is vital for success. The electronic revolution coupled with improvements in communication makes it imperative to look beyond today and prepare for tomorrow. Changing print material into digital form will be a difficult task. In this new millennium we are going to close the gaps between print and digitized documents, document libraries and knowledge based libraries, IT specialists and information specialists, and information seekers and information providers. Technological adaptation is one thing and growth is another. That has to come from within. In order to promote continuous upgrading of digital libraries, each country should set up a coordinating committee to interact with various agencies, especially computer and telecommunication people. India, in particular, where technologies of all ages are operating, needs a complete transformation in information policy to pave the way to the digital library era. The new global realities of information technology, political order and cultures should also be taken into account. No doubt, technology is bringing the world together, but many cultural factors fundamentally divide people. The existing tension between the technologically strong and the weak is already creating political pressures in the world that are not conducive to a peaceful world order in the twenty-first century.

Digital Library Advantages and Disadvantages

Advantages

The advantages of digital libraries as a means of easily and rapidly accessing books, archives, and images of various types are now widely recognized by commercial interests and public bodies alike. Traditional libraries are limited by storage space; digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain it. As such, the cost of maintaining a digital library can be much lower than that of a traditional library. An important advantage to digital conversion is to highly increased accessibility to users. They also increase availability to individuals who may not be traditional patrons of a library, due to geographic location or organizational affiliation. Some of advantages are

as follows:

1. No physical boundary: The user of a digital library need not to go to the library physically; people from worldwide can gain access to the same information, as long as an Internet connection is available.

2. Round the clock availability: A major advantage of digital libraries is that people can gain access 24/7 to the information, i.e., users can access the information anytime provided the proper network connectivity.

3. Multiple accesses: The same resources can be used simultaneously by a number of institutions and patrons.

4. Information retrieval: The user is able to use any search term (word, phrase, title, name, and subject) to search the entire collection. Digital libraries can provide very user-friendly interfaces, giving clickable access to its resources properly.

5. Preservation and conservation: Digitization is not a long-term preservation solution for physical collections but does succeed in providing access copies for materials that would otherwise fall to degradation from repeated use. Preservation and conservation of data in the digital library are one of an important issue.

6. Space: Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information; simply because digital information requires very little physical space to contain them and media storage technologies are more affordable than ever before.

7. Added value: Certain characteristics of objects, primarily the quality of images, may be improved. Digitization can enhance legibility and remove visible flaws such as stains and discoloration.

8. Easily accessible.

Disadvantages

There are some disadvantages of digital libraries also, which are as follows:

1. User authentication for access to collections

2. Digital preservation

3. Equity of access

4. Interface design

5. Interoperability between systems and software

6. Information organization

7. Training and development.

Conclusion:

Libraries around the world have been working on this daunting set of challenges for several years now. The library/information center has to overcome the inhibitions and look ahead for the betterment of information services to the user community by successfully adopting the digital technology - the need of the hour and keep pace with world. It seems that the days may not far when the whole world would have digital libraries interconnecting all libraries to meet the academic and research needs within the short time. However, before digital libraries took over the library and information network, the countrys archives laws needs to be changed to meet the current challenges in the areas of copyright protection of data and prevention of corruption of data.

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Preliminary Study to Implement the Cloud Library in Tamil Nadu Veterinary and Animal Sciences University

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Abstract

Cloud Library system inspects checks a lot of vital aspect conditions connected to the use of various types cloud computing and then analyzes the expertise of a single library moving along to cloud based system. Cloud computing pertains back up into the abstraction of information technology (IT) code plan and services from the hardware they operate on Libraries to form strategic decisions regarding the allocation of resources and to supply a higher service than would be attainable if hoping for in-house solutions and this articles appearance specifically at the expertise of one library in moving its IT infrastructure to cloud-based environments. The articles seeks to implement in all groups of Institutions under Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) after implementing the cloud library the accessing of books, journals , magazines, question papers, thesis, pamphlets, University publications will be stored in centralized cloud server and there informations can be accessed from anywhere by the users.

Keywords: Cloud Library, TANUVAS, e-Library, Information Technology, Cloud Computing.

Introduction

The ever increasing users information need of electronic resources forced librarians to increase their effort of collecting, organizing, preserving and disseminating huge amount of electronic materials, which require state-of-the-art infrastructures so that the electronic resources be deployed easily, quickly and economically. Cloud library is the best option for libraries; especially where electronic library services divide is highly visible, like the TANUVAS. Such library system allows the establishment of information technology infrastructure on demand and lowers the difficulty of control mechanism. The integration of existing library services can be implemented by clustering current library environment. The methodology employed for this work includes a rigorous

analysis of a recent research on one point cloud library service as an alternative to e-service provision and management. Cloud library is a model for enabling convenient and on-demand network access to a shared pool of configurable electronic resources, such as e-journals, institutional repositories, Digital libraries and other library services that can be rapidly provided and released with minimal effort of service providers.

Objectives

- To implement the cloud library that allows the users to access the digital information easily and globally.

- To design a user friendly, interface for accessing the books in easy manner.

- To design the well defined framework to manage the student database.

- To integrate existing library science by clustering the connected environment.

- To scrutinize possibilities for implementing cloud libraries in TANUVAS.

- To demonstrate library services to be provided through cloud library.

- To integration of existing library services can be implemented by clustering current library environment.

Review of Literature

A literature review is a description of the literature relevant to a particular field or topic. It gives an overview of what methods and methodologies are appropriate and useful.

International Status

Some of the literature works are summarized below:

- **Tilahun Shiferaw and Patrick D Cerna (2016)** in their work study the ever increasing users information need of electronic resources forced librarians to increase their effort of collecting, organizing, preserving and disseminating huge amount of electronic materials, which require state-of-the-art infrastructures so that the electronic resources be deployed easily, quickly and economically.

- **Tilahun Shiferaw and Worku Jimmu (2015)** they described about Cloud Library for Minimizing E-library Services Divide among Ethiopian Public Higher Learning Institutions explain academic libraries of Public Higher Educational Institutions in Ethiopia (PHEIE) suffer from common problems, like dissimilar distribution, duplication and superfluous procurement of e-resources as well as technological infrastructure among University Libraries. Moreover, information

poverty is what these Universities are epitomized by. The main aim of this study was to investigate ways to minimize e-resource divide between Ethiopian University Libraries through the use of cloud library. The methodology employed to conduct this study was surveyed research. Simple random sampling method was used to select samples from study population and a purposive sampling method was used to select study areas. Questionnaire, semi-standardized face-to-face interview and observation were used to collect data. The results of the research show that 76.5% of respondents need to have a cloud library system. The study also found that cloud library had a potential to minimize duplication of e-library projects with M=3.75; SD=1.28. The study also found that application of cloud technologies is at an infant stage in EPHI and thus it can be said that the impact of e-resources sharing had not been well recognized.

- **Richard Chukwhu Ogbu and Ahmed Lawal (2013)** this research study say about, Cloud Computing and Its Applications in e-Library Services: Nigeria in Focus Cloud computing is an evolving technology paradigm that facilitates conveniently, on-demand network access to a shared pool of configurable computing resources like network, servers, storage, applications and services etc. that can be presented as a service and released with minimal management effort. The model promotes availability of resources and creates a powerful distributed computing system with global reach and super computing capabilities. Cloud computing is enriching and will widen the horizon of human knowledge, empower human capital for sustainable scientific development as well as educational development of nations. This paper tries to explore the vast and immense benefits of cloud computing and its applications in e-library services in Nigeria today.

- **Faiz Abidi and Hasan Jamat Abidi (2012)** describes libraries all over the world suffer from common problems like flexibility associated with the digital data, lower levels of efficiency and huge cost involved in managing the entire IT infrastructure themselves. Few options are available when it comes to collaborating with other libraries as well, which is the prime reason for subordinate levels of efficiency. Cloud computing would help us in bridging the gap between digital libraries and IT. Sharing of data between the libraries will in principle reduce the overall cost and increase the efficiency. Capital expenditure done on infrastructure will chiefly be converted into operational expenditure. It will also enhance the users experience and will help in making the libraries it lot more scalable.

- **G Matt (2010)** in their paper cloud computing is a new technology model for IT services which many businesses and organizations are adopting. It allows them to avoid locally hosting multiple servers and equipment and constantly dealing with hardware failure, software installs, upgrades and compatibility issues. For

many organizations, cloud computing can simplify processes and save time and money. This article defines cloud computing and shows how it is different from other types of computing. It also discusses how cloud computing solutions could be beneficial to libraries in three basic areas: technology, data and community.

National Status

In India, few researchers have been working in this context of Cloud Library. In particular, they have worked in various applications. Related to the cloud library the following contributions are traced in the national level:

- **Shikha Mehta (2016)** had said about cloud computing is a new technology model for IT services which many businesses and organizations are adopting. It allows them to avoid locally hosting multiple servers and equipment and constantly dealing with hardware failure, software installs, upgrades and compatibility issues. For many organizations, cloud computing can simplify processes and save time and money. It also discusses how cloud computing solutions could be beneficial to libraries. The Latest technological development has brought a dramatic change in every field, and library science is not an exception to it. Information technology has impacted positively on the library & information system along with the services that it provides for users. To meet such challenges in this profession, librarians have to seek innovative ways to support the integrated Library system via applying different platforms in Library science filed for attaining economy in information handling and communication. The use of cloud computing in libraries and how cloud computing actually works is illustrated in this communication. Cloud computing is an evolving technological paradigm that facilitates convenient the on-demand network access, to a shared pool of configurable computing resources like virtual machines, servers, data storage, security mechanism etc. which are under providers control. This paper addresses the various aspects of cloud computing.

- **Subodh Kr. Bajpai et al. (2015)** defined that we are living in the technical era. We can see the effect of the technology in the daily life of a human being. Technology saves the time and helps us to complete a deed in minimum time. Like in other fields, the modern libraries are also using the various technologies in its housekeeping & technical works like acquisition, technological processing, circulation, OPAC etc. Today libraries are techno driven and yes Cloud computing is also one of them. In this paper, we'll present the detailed overviews and application of cloud computing in the services of modern libraries.

- **Rajendra Prasad M (2013)** in that work, they analyzed cloud computing is a rapidly developing and excellent promising technology. It has aroused the

concern of the computer society of the whole world. Cloud computing is Internet-based computing, whereby shared information, resources, and software, are provided for terminals and portable devices on-demand, like the energy grid. Cloud computing is the product of the combination of grid computing, distributed computing, parallel computing, and ubiquitous computing. It aims to build and forecast sophisticated service environment with powerful computing capabilities through an array of relatively low-cost computing entity, and using the advanced deployment models like SaaS (Software as a Service), PaaS (Platform as a Service), IaaS (Infrastructure as a Service),HaaS (Hardware as a Service) to distribute the powerful computing capacity to end-users. This paper will explore the background and service models and also presents the existing research issues and implications of cloud computing, such as security, reliability, privacy, and so on.

- **Nilratan Bhattacharjee and Sriparna Das Purkayastha (2013)** they described, cloud computing is a paradigm shift of computing and information technology to a new phase of platform to cater the clients more sophisticated manner and also more cost effective manner from a common pool of service providers platforms. Cloud computing technology continues to grow at a rapid rate with new applications and architecture. It is used to practice of storing, accessing and sharing data, applications and computing power in cyberspace. This technological development has brought a dramatic change in every field and libraries are not exception to it. Libraries have also started adopting this technology as a cost effective tool which involves delivering hosted service over the web. Budgetary provision for building collection development and procurement of computing resources and peripherals have been reducing gradually, so cloud computing is the best option for the libraries to solve the above mentioned problem. This paper aims to demonstrate and elaborate various aspects of cloud computing, its uses in the field of library and information centers. This paper also tries to give a clear idea that how cloud technology help libraries provide a better service to the user community.

- **Rupesh Sanchati and Gaurav kulkarni (2011)** was taken Libraries may soon be building and managing their own data centres. This model would let libraries maintain more control over the applications and data stores that contain sensitive, private information about patrons. Provisioning and maintenance of infrastructure for Web based digital library present several challenges. In this paper, we discuss problems faced with digital library and development efforts to overcome that problem. Infrastructure virtualization and cloud computing are particularly attractive choices which are challenged by both growth in the size of the indexed document collection, new features and most prominently usage. With the purpose of applying Cloud Computing to the university library, the paper describes the

current status of user service models in university libraries. Then it proposed to improve the current user service model with Cloud Computing. This paper explores some of the security issues surrounding data location, mobility and availability.

Importance of the proposed project in the context of current status

Cloud library is endowed with essential characteristics, among others on-demand self-service, broad network access and resource pooling. Thus, its implementation to effectively share the available e-resources is highly advantageous in a situation like TANUVAS, where electronic resources divide among the academic libraries is very high. Today's libraries are facing the challenges posed by a diverse and rapidly expanding information universe. Increased user expectations for faster and easier access to relevant information go hand in band with institutional demands for increased operational efficiency.

Resource sharing, integrated library system, financial problems, lack of IT resources and shortage of skilled human resources were identified to be the major problems of all libraries in TANUVAS. Because of these the aforementioned problems, the academic community of TANUVAS face obstacles to complete the tasks that involve library resources. Currently, most academic libraries in TANUVAS could not provide all the services requested by their patrons. Due to high initial cost as well as maintenance cost, establishing a digital library for every university is hardly possible under the current situation, given the fact that with a small amount of budget allocated to their university are struggling to continue providing services to users. However, the costs required to establish a library of the 21st century can be significantly reduced if cloud system is implemented. Thus, there should be a need to establish cloud library, which can be administrated by one institution in cooperation with all the stakeholders, whereby all the available e-resources can be placed at the cloud and then shared among all hosted universities.

Methodology

Cloud computing encourages libraries and their users to participate in a network and community of libraries by enabling them to reuse information and socialize around information. The cloud computing techniques and methods applied to libraries, not only can improve the quality of services and utilization of resources, but also can make more extensive use of cloud computing in our work life.

Cloud computing simplifies management of collective resources use, remote access

for multiple user selection, providing the necessary tools at some point of the training process. Collections of resources may be accessed through Software as Services (Saas)

When library systems are deployed as open cloud solutions then the library community itself can step up to create extensions to their core services and more importantly, share them throughout the community using cloud solutions, libraries can get out of the business of technology and focus on collection building, patron services and innovation. Servers can be decommissioned and no longer require replacement every five years. Staff no longer has to maintain the complex software stack necessary to run local systems and worry about the compatibility of the stack during upgrades. Instead, technical skills can be re-deployed for extending cloud services into their environment and their environment into other cloud services.

Cloud based library technology, coupled with different services such as online e-resource sharing system, integrated library management system, digital repositories, open URL resolver, citation management, web communication tools and database management system delivers more flexibilities and efficient resource utilization among the universities. The figure below shows a general layout of the cloud-based library service model of cloud computing with an interface layer in order to control user's access to different services.

Cloud computing infrastructure

Cloud virtual service

User interface

Users from different Colleges

| Students | Researchers | Staff | Scientists | Others |
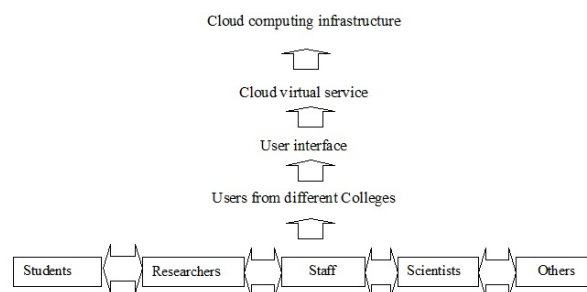
Fig.1. Cloud-Based Service Model

Research outcome

Cloud library will be implemented in all groups of Institutions under Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) after implementing the cloud library the accessing of books, journals , magazines, question papers, thesis, pamphlets, University publications will be stored in centralized cloud server and there information's can be accessed from anywhere by the users. The duplications of the information will be avoiding the unique set of information's will be stored in the cloud server.

Work Plan Schedule

Initially, when we start the work, we have to recruit one JRF, afterwards; the proper literature survey should be taken. This should be completed with first year. The total work is planned for 36 months. In the next year, user interface to interact with system must be started. The Following six months is testing period. Next, to complete the work within target period, we may recruit one more SRF in this period. With the help of JRF and SRF, next plan of work must be started. In the context of library, conversions of materials into digitized form play the major role. So, and it takes lot of man effort and time consumption. Hence, this kind of work will be started in the second year. Then, implementation should be done in one portion of TANUVAS. In testing phase, it should be examined that whether it is working properly or not. If it works successfully, next part implementations may be started in other group of institution.

Activities	Months					
	1-6	7-12	13-18	19-24	25-30	31-36
Recruitment of JRF	■					
Literature Survey		■				
Designing of Cloud Library		■				
Implementation of user interface		■				
Testing of experimental setup		■				
Recruitment of SRF			■			
Conversion of materials in to digital form			■			
Implementation in TANUVAS			■	■		
Testing of the experimental setup				■		
Implementation of group institutions				■	■	
Testing of the experimental setup					■	
Test Data collection					■	
Debugging						■
Documentation						■

Budget Estimates

The budget estimates that will be taken to implement the cloud library are given in the following table.

	Item	BUDGET			(in Rupees)
	Name	1st Year	2nd Year	3rd Year	Total
A.	Recurring				
	1.Salaries/wages	1,44,000	2,88,000	2,88,000	7,20,000
	2.Consumables	10,000	25,000	25,000	60,000
	3. Travel	15,000	30,000	30,000	75,000
	4. Contingencies	10,200	25,000	50,000	85,000
B.	Equipment	–	2,32,000	–	2,32,000
C.	Overhead charges	35,840	1,29,600	78,600	2,44,040
	Grand total (A+B+C)	2,15,040	7,29,600	4,71,600	14,16,240

Budget Estimates

List of facilities being extended by parent institution(s) for the project implementation

Infrastructural Facilities should be available in the parent institutions to implement the cloud library.

Sl.No	Infrastructural Facility	Yes/No/ Not required Full or sharing basis
1.	Workshop Facility	No
2.	Water & Electricity	Yes
3.	Laboratory Space/ Furniture	Yes
4.	Power Generator	Yes
5.	AC Room or AC	Yes
6.	Telecommunication including e-mail & fax	Yes
7.	Transportation	Yes
8.	Administrative/ Secretarial support	Yes
9.	Information facilities like Internet/Library	Yes
10.	Computational facilities	Yes
11.	Animal/Glass House	Not Required
12.	Any other special facility being provided	Not Required

Equipment available with the Institute/ Group/ Department/Other Institutes for the project

The following are the list of equipments must be available in the parent institutions.

S.No	Equipment available with	Generic Name of Equipment & Model, Make	year of purchase	Remarks including accessories available and current usage of equipment
1	Desktop Machines	Desktop Machines	2009-HP	Working
2	Linux server	Server	2009-HP	Working
3	Windows server	Server	2009-HP	Working
4	Routers	Routers	2009-Junifer	Working
5	Switches	Switches	2009-Sysco Lnksys	Working
6	Wi-fi Hot spot	Wi-Fi	2008=9-Aruba	Working
7	Ubuntu	Server	12.04/14.04 version	Working
8	MySQL RDBMS	Server	Latest version	Working
9	Apache 2	Web Server	Latest version	Working

Conclusion

The facilities, equipments, budget and technology needed to implement the cloud library have been discussed in various sections of this paper. Libraries are in a completely unique position to experiment with cloud computing given their service-oriented venture and want to find suitable solutions the usage of restrained resources. Cloud based library technology, coupled with different services such as online e-resource sharing system, integrated library management system, digital repositories, open Uniform Resource Locator (URL) resolver, citation management, web communication tools and database management system delivers more flexibilities and efficient resource utilization among the Universities.

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Awareness of Electronic Information Resources : A Study Among the PG Agriculture Students of Annamalai University:

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Abstract

The present study explain the use of e-resources by PG students of agricultural displine. The study focus on how the PG students using e resources and what extent they are depended on library e- resources for the study and research purpose. The study also revealed respondents awareness on varies e-resources that is available in agricultural sciences.

Introduction

Modern agriculture demands quality seeds, fertilizers, chemicals, assured irrigation and optimum energy inputs to ensure increased production. Agricultural engineering input play a major role in mechanization and modernization of agriculture by improving the efficiency of inputs and reducing losses at various stages of production and post production, besides reducing human drudgery in agricultural operations.

Electronic resources are valuable tools for study, learning and research. Electronic resources can provide many advantages over traditional print based resources: they contain current information because they updated frequently, they offer advanced search capabilities, they offer flexibility in the storage of the results, and they enable access to information without the restrictions of time and location.

Agricultural Databases

Database is a collection of factual, bibliographic or descriptive information on related objects, including tables, forms, reports, queries and scripts created for organized by a database management system. Some of the important agricultural bibliographic databases are mentioned below:

1. CABI

2. AGRIS

3. AGRICOLA

4. BIOSIS

5. Food & Human Nutrition

6. Food Science and Technology etc.

Access to e-resources has decreased the time spent searching for information. Access is only as good as the resources that can be afforded (e.g.,the number of computers and existence of network systems). The ability to work with the tools, and the network infrastructure that supports rapid and convenient connections. The ability to use e-resources efficiently depends on basic computer skills, knowledge of what is available and how to use it.

Scope and Limitation

The scope of the study is limited to the use of e-resources by the post Graduate students of Agricultural Faculty, Annamalai university. The study is confined only seven departments of agricultural faculty namely., agronomy, entomology, Agri extension, horticulture, Agri business, plant pathology and bio- technology. No other department and type of respondents included in this study

Objectives

The present study includes the following objectives.

1. To find out respondent's branch wise frequency of library visit.

2. To find out the respondent's branch wise awareness of various e- resources.

3. To find out the respondent's branch wise awareness of UGC- INFONET.

Methodology

A study was conducted among the PG agriculture students of Annamalai university to trace the frequency of library visit, awareness of e- resources such as e-book, e-journals, databases etc. questionnaire method was opted to collect the required data from the respondents. The data was cross tabulated towards their branch and age as explained in the objectives. Simple per cent was applied for the obtained frequencies. Chi-square test was opted to analyze the data and prove the hypotheses.

Data collection

Nearly 100 questionnaires were distributed among the selected branches - PG Agriculture students of Annamalai university, and in final 75 samples were considered for the present study. Study covers the postgraduate students' awareness of e-resources only and no other behaviors were traced.

S.No	Department	No. of Respondents	Percentage of Respondents
1.	Entomology	10	13.3
2.	Agronomy	20	26.7
3.	Agri - extension	11	14.7
4.	horticulture	14	18.7
5.	Plant pathology	7	9.3
6.	Agri - Business	4	5.3
7.	Bio - Technology	9	12.0
	Total	75	100

Table -1 Branch wise Responses Distribution

Table 1 shows the questionnaires distribution among the respondents of selected 7 branches of Agriculture. 100 questionnaires were distributed to the PG students of the selected branches and 75 questionnaires were returned. The response rate is given in the above table with the valid percent, Fig a shows the branch wise responses percent distribution.

S.No	Department	Library visit				Total
		Daily	2 Days once	Once in a week	occasionally	
1.	Entomology	1 (10.0)	6 (60.0)	0(.0)	3(30.0)	10 (100)
2.	Agronomy	5 (25.0)	8 (40.0)	5(25.0)	2(10.0)	20 (100)
3.	Agri - extension	9 (81.8)	2 (18.2)	0(.0)	0(.0)	11 (100)
4.	horticulture	4 (28.6)	4 (28.6)	6(42.9)	0(.0)	14 (100)
5.	Plant pathology	3 (42.9)	4(57.1)	0(.0)	0(.0)	7 (100)
6.	Agri - Business	1 (25.0)	2(50.0)	0(.0)	1(25.0)	4 (100)
7.	Bio - Technology	4 (44.4)	5 (55.6)	0(.0)	0(.0)	9 (100)
	Total	27(36.0)	31(41.3)	11(14.7)	6(8.0)	75 (100)

Table -2 Frequency of library visit

Table 2 shows the respondents' frequency of library visits. 50 % of the Agri business branch users visited the library 2 days once and 25% were traced for the options daily and occasionally. 81.8% of the Agri Extension branch users visited the library daily and 18.2% visited 2 days once. 40% of the agronomy branch users visited the library 2 days once followed by daily 25% once in a week 25% and occasionally 10%. 55.6% of the Bio Technology Branch users visited the library 2 days once and 44.4 % visited daily. 60% of the entomology branch users visited the library 2 days once followed by occasionally 30%, daily 10%. 42.9% of the horticulture branch users visited the library once in a week followed by daily and 2 days once followed by daily 28.6. 57.1% of the plant pathology branch users visited the library 2 days once followed by daily 42.9% orientation is required for the users, who visited the library once in a week and occasionally.

S.No	Department	Awareness of e-books		Total
		No	Yes	
1.	Entomology	4 (40.0)	6 (60.0)	10 (100)
2.	Agronomy	3(15.0)	17(85.0)	20 (100)
3.	Agri - extension	0(.0)	11(100)	11 (100)
4.	horticulture	1(7.1)	13(92.9)	14 (100)
5.	Plant pathology	3(42.9)	4(57.1)	7 (100)
6.	Agri - Business	2(50.0)	2(50.0)	4 (100)
7.	Bio -Technology	2(22.2)	7(77.8)	9 (100)
	Total	15 (20.0)	60(80.0)	75 (100)

Table -3 Awareness of E- books

S.No	Department	Awareness of E-Journals		Total
		No	Yes	
1.	Entomology	2 (20.0)	8 (60.0)	10 (100)
2.	Agronomy	2(10.0)	18(90.0)	20 (100)
3.	Agri extension	0(.0)	11(100)	11 (100)
4.	Horticulture	8(57.1)	6(42.9)	14 (100)
5.	Plant pathology	2(28.6)	5(71.4)	7 (100)
6.	Agri Business	1(25.0)	3(75.0)	4 (100)
7.	Bio Technology	1(11.1)	8(88.9)	9 (100)
	Total	16 (21.3)	59(78.7)	75 (100)

Table-4 Awareness of E- journals

Table 3 shows the respondents Awareness of e-books. All respondents from the branch Agri-Extension were aware of e-books. Regarding with the other branches, majority of the respondents were aware of e-books except the branches Agri-business [50%], entomology [40%] and plant pathology [42.9%]. Statistic measures for awareness are given in the table 3 though majority of the users have the awareness,

the variance is not in the satisfactory limit. The deviation is close to stable for the awareness.

Table 4 shows the respondents awareness of E- journals. All respondents from the branch Agri-extension were aware of e- journals. Regarding with the other branch, majority of the respondents were aware of e-journals except the branch horticulture [42.9%]. Statistic measure for awareness are given in the table 4. though majority of the users have the awareness, the variance is not in the satisfactory limit. The deviation is stable for the awareness. Chi-square test results indicate the significance at 5% significance level. Hence, the formulated first hypothesis won't be accepted.

S.No	Department	Awareness of CABI		Total
		No	Yes	
1.	Entomology	10(100.0)	0 (0.0)	10 (100)
2.	Agronomy	15(75.0)	5(25.0)	20 (100)
3.	Agri - extension	7(63.6)	4(36.4)	11 (100)
4.	horticulture	10(71.4)	4(28.6)	14 (100)
5.	Plant pathology	3(42.9)	4(57.1)	7 (100)
6.	Agri - Business	4(100.0)	0(0.0)	4 (100)
7.	Bio -Technology	4(44.4)	5(55.6)	9 (100)
	Total	53 (70.7)	22(29.3)	75 (100)

Table 5 Awareness of CABI

Table 5 shows the respondents awareness of CABI. Majority of the respondents from the branch plant pathology [57.1%] & bio- technology [55.6%] were aware of CABI. Regarding with the other branches, majority of the respondents were not aware of CABI. No respondents were found with the awareness of CABI for the branches agri-business and entomology. Statistic measures for awareness are given in the table 5 the deviation is stable for the awareness.

S.No	Department	Awareness of AGROBASE		Total
		No	Yes	
1.	Entomology	7 (70.0)	3 (30.0)	10 (100)
2.	Agronomy	9(45.0)	11(55.0)	20 (100)
3.	Agri - extension	4(36.4)	7(63.6)	11 (100)
4.	horticulture	8(57.1)	6(42.9)	14 (100)
5.	Plant pathology	2(28.6)	5(71.4)	7 (100)
6.	Agri - Business	1(25.0)	3(75.0)	4 (100)
7.	Bio -Technology	0(.0)	9(100)	9 (100)
	Total	31 (41.3)	44(58.7)	75 (100)

Table -6 awareness of AGROBASE

Table 6 shows the respondents awareness of AGROBASE. All respondents from the branch bio-technology were aware of AGROBASE. Majority of the respondents from the branches Agri business [75%], plant pathology [71.43], agro extension [63.64%], agronomy [55%] were aware of AGROBASE. 30% of the respondents were found with the Awareness for the branch entomology, statistic measures for awareness are given in the table 6 though half of the users have the awareness, the variance is not in the satisfactory limit. The deviation is stable for the awareness. Chi-square tests results indicate the insignificance at 5% significance level. Hence, the formulated second hypothesis won't be rejected.

S.No	Department	Awareness of AGRIS		Total
		No	Yes	
1.	Entomology	2 (20.0)	8 (80.0)	10 (100)
2.	Agronomy	2(10.0)	18(90.0)	20 (100)
3.	Agri-extension	0(.0)	11(100)	11 (100)
4.	Horticulture	5(35.7)	9(64.3)	14 (100)
5.	Plant pathology	0(.0)	7(100)	7 (100)
6.	Agri-Business	0(.0)	4(100)	4 (100)
7.	Bio-Technology	0(.0)	9(100)	9 (100)
	Total	9 (12.0)	66(66.0)	75 (100)

Table -7 awareness of AGRIS

Table 7 shows the respondents awareness of AGRIS. All respondents from the branches AGRI business, AGRI extension bio technology and plant pathology were aware of AGRIS. 90% of the respondents from agronomy,80% from entomology and 64% from horticulture were aware of AGRIS. Statistic measures for awareness are given in the table 7 though majority of the users have the awareness, the variance is not in the satisfactory limit. The deviation is stable for the awareness.

S.No	Department	Awareness of AgDB		Total
		No	Yes	
1.	Entomology	9 (90.0)	1 (10.0)	10 (100)
2.	Agronomy	17(85.0)	3(15.0)	20 (100)
3.	Agri extension	1(9.1)	10(90.9)	11 (100)
4.	Horticulture	10(71.4)	4(28.6)	14 (100)
5.	Plant pathology	3(42.9)	4(57.1)	7 (100)
6.	Agri Business	2(50.0)	2(50.0)	4 (100)
7.	Bio Technology	2(22.2)	7(77.8)	9 (100)
	Total	44 (58.7)	31(41.3)	75 (100)

Table -8 awareness of AgDB

Table 8 Shows the respondents awareness of AgDB. 90% of the respondents from the branch AgDB extension were aware of AgDB followed by bio technology [77.8], plant pathology [57.1], and Agri business [50%]. The respondents from remaining branches were secured less score. Statistic measures for awareness given in the table 8 the location indicates the low score and the deviation also not stable for the awareness. Chi- square test results indicate the significance at 5% significance level. Hence, the formulated third hypothesis wont be accepted.

S.No	Department	Awareness of LWRIS		Total
		No	Yes	
1.	Entomology	8(80.0)	2 (20.0)	10 (100)
2.	Agronomy	14(70.0)	6(30.0)	20 (100)
3.	Agri-extension	3(27.3)	8(72.7)	11 (100)
4.	Horticulture	6(42.9)	8(57.1)	14 (100)
5.	Plant pathology	5(71.4)	2(28.6)	7 (100)
6.	Agri-Business	1(25.0)	3(75.0)	4 (100)
7.	Bio-Technology	3(33.3)	6(66.7)	9 (100)
	Total	40 (53.3)	35(46.7)	75 (100)

Table - 9 awareness of LWRIS

Table -9 show the respondents awareness of LWRIS. Majority of the respondents were not aware of LWRIS. 75% of the respondents from the branch Agri business were aware of LWRIS followed by Agri extension [72.7%], bio technology [66.7%], and horticulture [57.1%]. The respondents from remaining branches were secured below 30%. Statistic measures for awareness are given in the table 9 the deviation is close to stable for the awareness.

S.No	Department	Awareness of UGC-INFONET		Total
		No	Yes	
1.	Entomology	4 (40.0)	6 (60.0)	10 (100)
2.	Agronomy	11(55.0)	9(45.0)	20 (100)
3.	Agri - extension	3(27.3)	8(72.7)	11 (100)
4.	horticulture	13(92.9)	1(7.1)	14 (100)
5.	Plant pathology	5(71.4)	2(28.6)	7 (100)
6.	Agri - Business	1(25.0)	3(75.0)	4 (100)
7.	Bio -Technology	0(.0)	9(100)	9 (100)
	Total	37 (49.3)	38 (50.7)	75 (100)

Table -10 awareness of UGC - INFONET

Table 10 shows the respondents awareness of UGC - INFONET . equal numbers of the respondents were identified for both the options. All respondents from bio technology were aware of UGC - INFONET services followed by the branches

Agri business [75%] Agri extension [72.7%], Entomology [60%], and [45%]. The respondents from remaining branches were secured less score. Statistic measures for awareness are given in the table 10 the variance is not in the satisfactory limit. The deviation is not stable for the awareness. Chi square test results indicate the significance at 5% significance level. Hence, the formulated fourth hypothesis won't be accepted.

Findings and Conclusions

It is concluded that the respondents from the branches Agri-business [50%], entomology [40%] and plant pathology [42.9%] were less aware of e-book majority of the respondents from all age groups were aware of e-books. It is concluded that horticulture and plant pathology branch users have less awareness. There was a difference among the users awareness and hence the first hypothesis was rejected.

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Internet Usage Pattern of the Post Graduate Students in Government Arts College Salem : A Study

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Abstract

The internet usage pattern of the present day post graduate students have transformed rapidly thanks to the penetration of ICT tools and techniques in their information seeking, searching, accessing,disseminating and strong information.The present study aims at understanding the internet usage pattern of the post graduate students in government arts college salem. Out of 100 questionnaires randomly distributed to the respondents, 93 duly filled in questionnaires were received and taken to the analysis. The study reveals that: Majority of the respondents were male. While 51 % (47) of the respondents are satisfied with the internet services offered in the college library, 34 % (32) of the respondents are very much satisfied with the quality of internet services being provided in the college library. Only 15 % (14) of the respondents are not satisfied with the internet services offered in the college library.

Keywords: Internet, Internet Today, Current Trends in internet Technology,

Introduction

The Internet has been a powerful feature in the information area since its inception in the last quarter of the 20th century. In recent years, computer has changed the whole process of information handling. Internet serves as a backbone and connects to these sources of information irrespective of their location and has taken all the responsibilities of controlling the problems like collection, organizing, storing, retrieving, and dissemination of information. It has allowed the scientists, researchers, students, journalists, businessmen and the common man as alive communication channel between computers and the people. Today Information is the most vital resources for any kind of activity.The internet provides access to valuable resources scattered in various forms in different parts of the world. Academic institution and their

libraries are experiencing massive change in the way they do business.

Libraries have the major responsibility of managing information resources enabling the users quick and convenient access to these resources and to Variety of on-demand and in-anticipation information services. Increasing use of information technology in the production of information has resulted in an explosion of electronic information sources. The internet and the World Wide Web (WWW) have enabled seamless access to these from any corner of the globe. While many libraries could afford to ignore online and CD-ROM revolutions, it is doubtful if any library today can remain untouched by the ongoing networking information revolution brought about by the internet and WWW.

Internet

The back bone of the information superhighway is the internet. The internet is a collection of thousands of computers and networks system of all sizes. We can simply refer to the internet as the international networks of networks. No one actually owns or runs it each networks is locally administered and in some cases, funded by volunteers. It is estimated that more than 200 countries are directly or indirectly involved in the internet. This number is increasing on a daily basis. The internet is a vast international network of network that enables computers of all kinds to share services and communicate directly as if they were part of one giant, seamless global com putting machine. One page of information is brought and displayed on the screen to discover it constants and has the option of bringing more pages of information .the internet also knows the NET is the worlds. It is the global communication system that connects millions of computers through the JCP/IP product .The internet could represent the interconnectivity of hundreds and cores of computer around the world.

Internet today

Today the internet has become one of the most important technological advancements in the history of humanity. Everyone wants to get online to experience the wealth if information of the internet. Millions of people now use the internet, and it's by the year 2003 every single person on the planet will have internet access. The internet has truly become a way of life in our time and era, and is evolving so quickly its hand to determine where it will go to next as computer and networking technologies improve day by day.

Current Trends in Internet Technology

- Internet it can provide all the services that internet provides but only within the organization.

- Extranet- when an organization intranet is made available to selected users outside its local area network.

- Web applications provide web browser to perform various functions.

There are many other technologies like push channel technology, streaming multimedia and multicast that are evolving and will enhance the utility of the internet. Other widely used internet tools and techniques are e-mail, file transfer protocol, telnet (remote logon),www, bulletin board, Usenet, Archie, gopher etc.

Objectives of the Study

- To show the gender and department-wise distribution of the respondents

- To know whether respondents are using internet or not

- To find out how long the respondents have been using Internet with what range of internet use skills

- To list the primary purpose of using the library by the respondents

- To identify the modes by which the respondents have learnt about internet use skills

- To list the kind of information sought by the respondents from Internet

Literature Review

Jagboro (2003) conducted a study on Internet usage in Nigerian universities: A case study of Obafemi Awolowo University, Ile-Ife, Nigeria;. The objective of this study was to evaluate the level of utilization of the Internet for academic research at the Obafemi Awolowo University, Ile-Ife, Nigeria. Questionnaires were administered to postgraduate students spanning art and science based programmes. The results from the analysis of the responses showed that the use of the Internet ranked fourth (17.26 percent) among the sources of research materials. However, respondents who use the Internet ranked research materials (53.42 percent) second to e-mail (69.86 percent). The study concludes that the use of the Internet for academic research would significantly

improve through the provision of more access points at Departmental and Faculty levels.

Maraddi & Konnur (2012) conducted a study on Internet use and its impact among the education colleges of Gadag city. Structured questionnaire was designed to collect data. Out of 100 questionnaires, 90 filled in questionnaires were received back. The survey found out that, 98.89% of the total respondents use Internet only for e-mail facility, 94.44% respondents are using Google as the favourite search engine for accessing information, and 52.22% were not satisfied with the printing facilities available in their respective colleges.

Kumbar, Hadagali & Gururaj (2007) investigated the awareness and use of the Internet by the members of the Social Science Faculty of Karnataka University in Dharwad, India. The present study deals with frequency of Internet use, purpose of using the Internet, use of different Internet services and impact of Internet on research / teaching. A questionnaire was prepared for this study and it was sent to 50 faculty members and the response rate was 84 %. The results indicate that the use of Internet services by the faculty members is associated with an increase in the number of research papers and with improvement in the quality of research and teaching.

Mahipal & Bairagi (2013) studied the use of internet by Students of Bastar Vishwavidyalaya, Jagdalpur . The study proved that 100% Students were aware to use internet services. Majority of the students are satisfied with internet service available to them.

Methodology

This study was based on stratified random sampling method adopted for Primary data collection. Accordingly a structured questionnaire was prepared keeping in mind the basic objectives of the study. The questions were framed in such a manner that it could be easier for the Post graduate student to answer them in the quickest possible time. A total number of 100 questionnaires were distributed among the Post graduate student in government arts college . Out of which, the author received 93 filled in questionnaires The collected data was analyzed and presented in the tabular form.

Analysis of Data

S. No	Sex	No. of respondents	%
01	Male	67	72 %
02	Female	26	28 %
Total		93	100

Table 1: Gender-wise distribution of respondents

Table 1 shows the gender-wise distribution of respondents. Out of Ninety three respondents under the study, 67(72%) respondents are male and the remaining 26(28%) respondents are female. Majority of the respondents of the study are male.
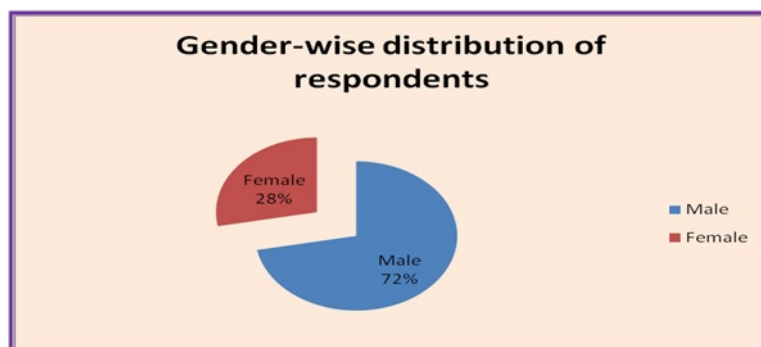
Figure 1:

S.No	Department	No. of respondents	%
01	History	13	14
02	Chemistry	10	11
03	Commerce	21	22
04	Economics	20	21
05	Mathematics	09	10
06	Computer science	11	12
07	Zoology	02	02
08	English	07	08
Total		93	100

Table 2: Department wise respondents

Table 2 shows that 22% of the respondents belong to Department of Commerce followed by 21% of the respondents from Department of Economics. While 14 % of the respondents are from Department of History, 12% of them are from the Department of Computer science. Just 08 % of the respondents belong to Department of English and 02 % of the respondents belong to the Department of Zoology. Thus, more than 50 % of the respondents belong to 3 departments namely Commerce, Economics and History.

S.No	Use of internet	No. of respondents	%
01	Yes	86	92
02	No	07	08
Total		93	100
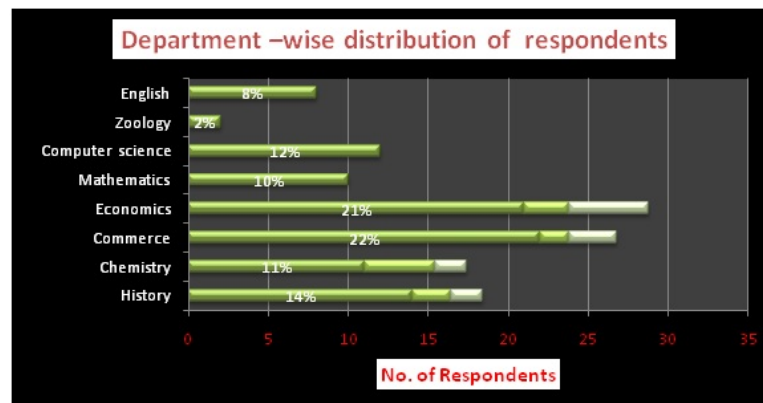
Figure 2:

Table 3: Use of internet

Table 3 depicts that 92% of respondents are using the Internet in the college and 08% of the respondents are not using Internet in the college. Thus, it is inferred that most of the respondents are using Internet in the college.
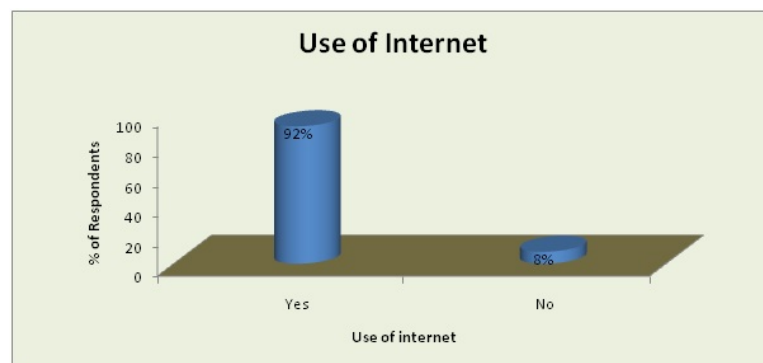
Figure 3:

S.No	Period of internet use	No. of respondents	%
01	< 6 Months	39	42
02	6 Months-1 year	14	15
03	1-3Years	17	18
04	3-4 Years	09	10
05	> 4 Years	14	15
Total		93	100

Table 4: Period of internet use

Table 4 describes the period of internet usage by the respondents in the college library. 39(42%) respondents are using the internet during the last 6 months and 17(18%) respondents use the internet since 1-3 years. While 14 respondents each use Internet during the last 6 months-1 year and >4 years. Only 09(10%) respondents have been using internet since 3-4 years.
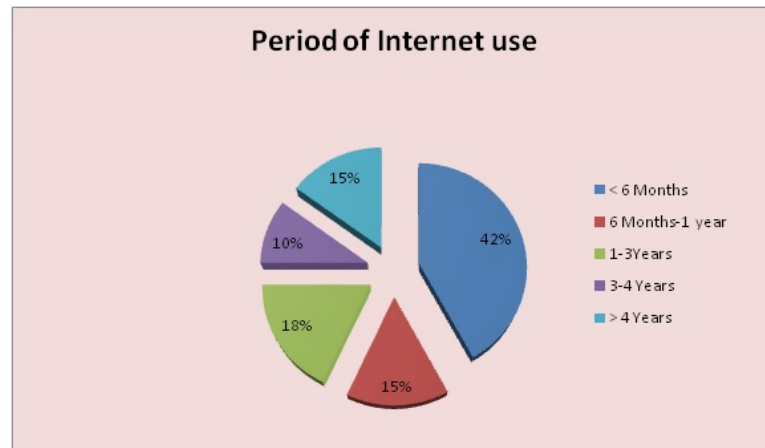
Figure 4:

S.No	Users Satisfaction	No. of respondents	%
01	Satisfaction	47	51
02	Very much Satisfied	32	34
03	Not satisfied	14	15
Total		93	100

Table 5: Overall Satisfaction on internet Services

Table 5 shows the overall satisfaction level of the respondents on Internet services in the college library. While 51 % (47) of the respondents are satisfied with the internet services offered in the college library, 34 % (32) of the respondents are very much satisfied with the quality of internet services being provided in the college library. Only 15 % (14) of the respondents are not satisfied with the internet services offered in the college library.

Conclusion

Information is wealth and it is our bounden duty to provide our student and children unrestricted physical access to the information available in the world. This helps them to take calculated risks and useful decisions.The students involves the use
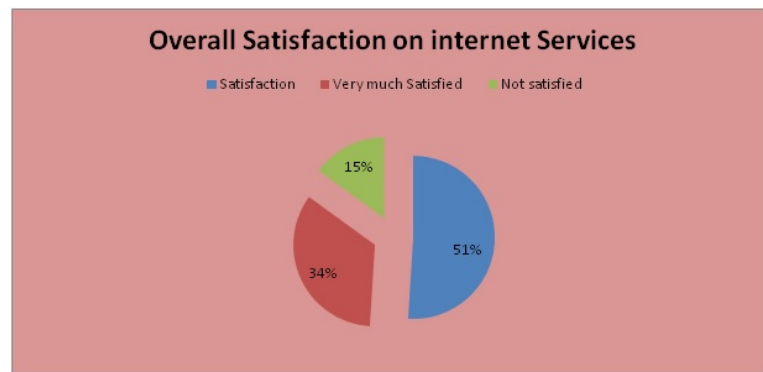
Figure 5:

of the modern electronic gadgets which will of immensely useful to the society. Hence it is in the best interest of the students that the teaching community should learned and try to implement what they have learnt using the Internet. It has become a potent tool for the student-centric education which may be emulated by student in other streams also. Information and Communication Technology (ICT) influences the role of college student and personal development. student intrnet skills are crucial for transforming information traditional to the electronic tools and apply. The present survey the study also found that there is a consensus opinion that finance, poor ICT infrastructure, overload of working hours, teaching attitude, insufficient funds, lack of time and power problem. The main problem is lack of facilities and lack of training in the information communication technology.It also identified platforms, interaction with mobile phone, telephones and video games as good strategy of instilling internet skills on the student.

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Assessment on Usage of Internet Sources among the Faculty Members of DRBCCC Hindu College

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Abstract

The purpose of this paper is to offer some insights to changes that are occurring in the expectations of teaching faculty members of Arts and Science College. It is also discussed the internet sources and activities currently taken at DRBCCC HINDU College, Pattabiram, chennai. The study was conducted using questionnaire method with a sample of 50 respondents to determine the usage of internet.

Keywords: Internet, internet sources, search engines

Introduction

Today the internet plays a vital role in the teaching, research and learning process. It is assumed that the Arts and science faculty members feel more dependent on the internet for their research purpose and for the latest information of their subject areas than conventional resources of information. College faculties also feel a bit handicapped in updating their knowledge base quickly without using the internet for their research activities. This paper based on a survey given to teaching faculties of DRBCCC HINDU College, pattabiram, chennai. In the era of network information, internet and large World Wide Web of networks has emerged as powerful educational tool for an instant access to information. Some suggestion is set forth to make the service more beneficial for the academic community of the arts and science colleges under study.

Internet / Sources / Search engines

The INTERNET is the name for a vast worldwide system consisting of people information and computers. The internet is so large complex as to be well beyond the comprehension of a single human being. Not only is there no one who understands the entire internet, there is no one who even understands most of the internet.

The roots of the Internet lie in a project called the ARPANET which was sponsored by the United States Department of Defense Advanced Research Project Agency (ARPA). The Department of Defense was interested in building a network that could maintain itself under adverse conditions.(A network is simply two or more computers connected together.

According to Wikipedia the free encyclopedia the internet is global system of interconnected computer networks that the standard internet protocol suite (TCP/IP) to serve several billions of private, public, academic, business and government networks of local to global scope, that are linked by a broad array of electronic, wireless and optical networking technologies. The internet carries an extensive range of information resources and services such as inter-links hyper text documents of the WORLD WIDE WEB and the infrastructure to support email.

A good search engine has to available for the users to utilize effectively to find the relevant documents by using keyword search. Desktop access can be provided by designing a suitable website with easier hyper links and can be published over the network environment using web technology. A resource is any physical or virtual entity of limited availability that need to be consumed to obtain a benefit from it. In most cases, commercial or even non-commercial factors require resources allocations through resource management.

Literature Review

Becker (1998) has conducted a study on the internet us by 2500 faculties form public and private schools of US. The study reveals that 90% of the faculties have internet access. A majority of the faculties with 59% of respondents have internet access at home. A majority of the faculties 68% of them use of the internet to find information resources for preparing their lessons. A majority of the faculties 62% respondents use web search engines to find information resources. Bavakutty and salih(1999) conducted a study at Calicut university which showed that research scholars and faculties used the internet for the purpose of study research and teaching respectively. Chadiha (1998) faculty and staff are increasingly utilizing information technology applications such as electronic mail. Carr, L.C.Marlowe (2001) has studied the utilization of on-line services by the social workers and compares their demographic characteristics with those NASW members.

Objectives of the study

1. To identify the frequency of internet use browsing

2. To analyze most frequently used location of internet usage

3. To identify methods of learning internet skills

4. To find out use of internet services

5. To assessment of ways to browse information from the internet

6. To determine level of satisfaction with internet facilities

Methodology

The scholar personally visited to collect the data from the faculty members of DRBCCC Hindu College. The questionnaire for internet users was filled by the faculties of in our college. A total sample of 50 numbers. was taken up for the present study, for sampling, random sampling methods followed for data collection. The sample was random in the sense that the faculties in DRBCCC Hindu College, Chennai-72.

Analysis and Discussion

	Frequency	%
Daily	20	40%
2-3 times a week	18	36%
2-3 times a month	7	14%
Once in a month	5	10%
Total	50	100%

Table 1. Frequency of internet usage

Table 1 - Pointed out the distribution of in this college faculty according to frequency of internet use.Out of all respondents, A total number of 20(40%) indicated that they used the internet daily, 18% of them reported that they used it 2-3 times in a week, 7(14%) used it 2-3 times in a month, while 5(10%) respondents reported that they used in once in month. Table indicates most of them use it daily.

Place	Frequency	%
College	20	40%
Home	18	36%
Other places	12	24%
Total	50	100%

Table- 2 Most frequency used location of internet usage

Table 2- Represents a total of 20 faculties (40%) that they accessed the internet from college, while only 18 (36%) accessed the from the home. Another 12 (24%) also used various places . In this table represents most faculties use internet from their colleges.

Method	Frequency	%
Trial	18	36%
Colleagues & friends	15	30%
Training from college	12	24%
External courses(workshop)	5	10%
Total	50	100%

Table 3- Methods of learning Internet skills

Table 3- Represents respondents were asked to indicate the methods used for acquiring the internet skills it was found the most popular of acquiring the necessary skills to use internet is trail methods. A majority of the respondents used these method 18 (36%) responses. A total number of 15 (30%) indicated that they took guidance from their colleagues and friends, 12 (24%) of users learning the internet skills through formal training offered by the colleges and 5(10%) joined in other training courses such external courses and workshops.

Internet services	Frequency	%
Electronic mail	20	40%
www	16	32%
Search engine	10	20%
Chatting	4	8%
Total	50	100%

Table- 4 - Use of internet services

Table 4 Indicates among the internet services, electronic mail has been chosen as the most popular internet service. It is being 20(40%) respondents, Browsing World Wide Web used 16 (32%) respondents, and another comes in search engine with 10 (20%) respondents. Most of them used by electronic mail.

Browsing ways	Frequency	%
Type the web address direct	24	48
Use of search engines	18	36
Use of subscription databases	8	16
Total	50	100

Table 5 Ways to browse information from the internet

Table 5 represents that a majority respondents with 24 (48%) response browse the needed information from the internet by using web address directly. A total 18 (36%)

required information from the using internet search engines. another one of the ways use of subscription databases is 8 (16%) respectively. Most of them used internet ways of directly.

facilities	Frequency	%
Fully satisfied	22	44%
Partially	17	34%
Least	6	12%
No comments	5	10%
Total	50	100%

Table -6 Satisfaction with internet facilities

Table 6 shows that only 22 (44%) respondents feel fully satisfied with internet facilities, 17 (34%) partially satisfied, 6(12%) least satisfied and 5(10%) have not expressed any opinion about internet facilities.

Findings

- Findings on distribution of faculties of DRBCCC Hindu college according to the usage of internet resource as reveal the following facts

   1. Majority of the respondents frequency of internet use 40%

   2. Majority faculties internet usage from the college 40%

   3. 36% respondents internet skills from the trail methods

   4. Most popular of internet used in electronic mail in 36%

   5. Most of respondents required information to browse from the type the web address directly 48% only

   6. Most of respondents satisfaction of internet facilities 44% respectively

Suggestion and Recommendations

- More computers with latest configuration and multimedia kit should be installed so that the users can use internet telephony, video conferencing and other useful service of the internet

- Websites providing only entertainment should be locked.

- More efficient technical staff should be appointed and they should always be present in the internet section for expert advice

- There should be complete campus networking with the internet browsing facility connecting faculties staff room

- The problem of slow connectivity should be overcome by increasing the bandwidth.

- Information regarding the popular and the latest websites with their addresses should be displayed on the notice board.

Conclusion

Internet has emerged as the single most powerful vehicle for providing to unlimited information. Internet is an inseparable part of todays arts and science educational system .The dependency on internet and its service is increasing day by day and the users of arts and science colleges .But the internet with its advantages makes the way for the developing countries to access information at very low cost. The search process of internet will provide maximum access to the various sources to provider i.e right information to the right users at the right time in a right manner. The use of the internet is an evolving phenomenon at this stage. We can very well visualize a situation when all the 100% users will have achieved a near perfection in the use of and full dependency on the internet for their information needs.

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E-Resoures in LIS: An Overview

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Abstract

Information can be described that the entire flow of information from author to reader is in machine readable form. The collection of Information is most important and it has to be used for further research, overall development of the society. E-resources are can access easily in remote areas also. Information is valuable because it can affect our behaviour, decision, or an outcome. Information is data that lead to an increase in understanding and decrease in uncertainty. Every resources gains value based on its need, demand, availability and accessibility. A basic resource of human beings need is air, water, food, clothing and shelter. Open Access and Electronic Resources is the part of Library Resources. Open Access removes restrictions on the access to journal articles and knowledge in general, to research community world-wide, particularly in Developing countries. Electronic information sources are turned into continually and increasingly important for the academic community. This paper presents an overview of electronic resources and their utility in library system.

Keywords: Information, E-resources, Library Resources, Information Technology, Computer.

Introduction

Information Technology has changed the world and acting as the important tool for retrieving information. In every field Open Access is play the most important role because of Open Access reach the information directly to the user. Present day library collections are not limited to printed document but also electronic resources. Information is accessible through the library cateloge, bibliographies, and different other sources in the libraries. Electronic resources have become the vital part of human life in 21st century. Availability of scholarly publications through electronic medium or internet has greater impact on information requirements of the scholars. Now a day, majority of the print and Electronic scholarly publishers and information disseminators are increasingly acting globally to produce e-information. They include full text database of journals, books, patents, standards or technical report, dissertations,

theses, annual report etc of a particular publisher or a group of publishers. Growth and use of ICT in the libraries make access to the information much easier and faster. Information is being published in new formats and the developed countries made use of the ICT tools and had remote access to the information.

Objectives of the Study

- To know E-Resources in Library.

- To outline the areas of operations

Research Methodology

- **Sources of Data:** For the present study only secondary data is used. The required data is collected through the websites.

Information and its Need

Information is bits and pieces of data used for communication in different formats and modes, when processed it becomes new knowledge. Information is obtained in many ways by seeking, listening, observing, interacting with others like friends, experts.

- Lack of access to information widened the division between the countries resulting into digital divide.

- There are plenty of information resources, which are authentic and valuable over the Internet.

- Gateways provide access to many valuable information resources wherever they are created.

- Internet facilities and WWW became a boon to the countries across the World.

- Developing countries have the opportunities to compete with rest of the world in the 21st century

Library e-resources

- Monographs

    · Books, conference proceedings, reports etc.

- Current periodicals

- Bound Volumes

- Theses and Dissertation

- Electronic Resources

- Open Access Resources

Electronic Resources

Those which can be accessed by computer - in particular, via email, CD-ROM, or more commonly, via the World Wide Web. Any Information resource that can be accessed using a computer, e.g.

1. Electronic journals

2. Scholarly databases

3. Information gateways

4. The Web resources

Also e-books, reports, magazines, grey literature

Electronic Journals

E-journal is in electronic form that is the mechine-readeble form. Present e-journals are rapidly increased day by day. E-journals can come in a variety of different formats.

Full text The complete texts of all the articles in a journal are available on-line. Around 90% of Science Technology and Medicine and 50% of Humanities journals are available online

Partial full-text only selected articles available as full text, and not the whole journal. In this case it is often things like the editorial, or the forthcoming events section that are missing. In other cases a few selected items from an electronic journal may be accessed for free, but access to the whole journal would only be available to subscribers.

TOCs/Abstracts you may find that only the Table of Contents and possibly abstracts of the articles will be available to you. This may be because your institution does not have a subscription to the full-text access rights, or possibly because there is a document delivery option, whereby you can pay online to have the full-text of individual articles to be sent to you. Can still be very useful for literature searches etc.

Why use e-journals?

- **Coverage:** they are current/Up-to-date

- **Convenient:** information at our desktop

- **Value-added features:** search facilities, links to other databases, supplementary information, graphics, etc.,

- **Access:** to wider range of materials than the materials available in our local library

Scholarly Databases

- **Bibliographic** references to published material

- **Numeric:** e.g. statistical tables

- **Full text:** complete publications

- **Audio:** collections of music

- **Image:** collections of slides etc.

- **Multimedia:** audio-visual, animation etc.

Information Gateways

- A web site where people have gathered together quality resources on a particular subject area.

- Experts select and classify the information

- You will get a smaller number of hits than if searching for example on Google, but they are likely to be of higher quality as an expert has evaluated them before placing them in the gateway.

- A gateway or way in to specifically selected web sites and documents.

The Web Resources

Anything that can obtain from the World Wide Web is called Web Resource.

The Internet

Another major e-resource is the Internet. Can be searched using search engines, such as Google, Alta Vista, Excite etc.

- Huge information resource

- Continually growing and changing

- No national, political, or scientific barriers

- Efficient search tools allow relatively easy navigation, e.g. www.google.com

The Web

- The Web changed everything

  - User-friendly interfaces
  - Hypertext linking
  - Easily accessible from outside the library
  - Different types of resources
  - More full text
  - Search Engines
  - Link resolvers
  - Statistics

- Need for new standards

Electronic Resources: strengths

- Huge range of information available

- Speed and worldwide distribution

- It is very much accessible by multiple users at a time

- Preservation of e-resources is very easy

- Timely, up-to-date information sources

- Value added functionality (e.g. searching)

- Additional skills development ICT skills

- Large volume of quality, free information

Electronic Resources: weaknesses

- Technical barriers to use

      need computers, network connection, software, etc.,

- Infrastructural problems

    – bandwidth and telecommunications issues

    – unreliable electricity supplies, etc.,

- Skills and training requirements

- Every one cannot have the accessibility.

- Costs can be high: technology and content

- Variable quality of information

Access of E-Resources:

The useful resources we can access through either

- Buy a subscription to get access to a journal for a year. Either individually of through for example our university

- Pay to look at a particular article (not always an option)

Conclusion

Every discipline in the universe of knowledge undergoes changes and new trends merge with existing structure. In present situation range of electronic resources is huge positively growing. It is free and fee resources. Whichever method we use, we will usually need to prove that we have the right to access the material by either entering a password or by identifying the machine we are working on via IP address.The costs dont go away even in electronic publishing; someone has to pay for the creation & distribution of the electronic journals. In open access, the access and publishing costs are shifted to the user and publisher respectively. Library professionals also help users to know what high quality free resources available on internet, how to search these resource more effectively and efficiently. Factors influencing scholarly communication process are multi-faceted in nature. Quality of education and educational practice is possible when the good resources are available. Library professionals responsibility is to identify and merge the new perspective in the library science discipline to handle exponential growth of information. We can save space of the library and time of the users by using e-resources.

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E- Learning initiatives in Veterinary Science

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Abstract

The development of computer and communication networks changed the learning environment into a different phase. E-learning plays a vital role in knowledge gaining. If the content of the E-learning resource is sufficient, a layman can understand some basic knowledge of his interest. This paper analyses the concept of E-learning in general and also specifies the various E-learning initiatives for Veterinary Science.

Introduction

Libraries in the modern age have the Digital information than the printed information. In olden days a person has to search each and every book in the Library till he gets the required information. Now a days in the Digital Environment people use computers to search information. Computers are used not only to get information but also for learning. Through e- learning anyone can learn anything with a mouse click in the Computer. E- Learning basically involves around computer that is connected with network to share information or content. It is an internet centered learning. The structured learning resources of E-Learning has reduced the distance between the trainer and the learner .This has encouraged the self-motivation of the learner.The cost require for e-learning is less compared to regular cost of teaching.

Literature Review

Kumbhar (2009) Use of E-learning in Library and Information Science Education, This article analyses in detail about e- learning, the way by which it has been created, tools by which it has been distributed. The paper also discusses about the traditional as well as e-learning and the role of Librarian in the changing environment. The main objective of this paper is to explain about the initiative in LIS e-learning education.

Tripathi and Jeevan (2010)e-Learning Library and Information Science: A Pragmatic View for India, This paper emphasise on the need for LIS, e-learning education, the components of e- learning in LIS. The study has come out with different steps to be adopted while designing e-learning program for Library Science students. This includes curriculum, creator, format, course delivery, podcost, webcasting, evaluation. This paper also discusses about the problems of e-learning.Pop, Bertea & Fafaneata (2012) E-Learning Tool for Modern Veterinary Teaching, this article demonstrates about e-learning in veterinary Medicine students before attending the practical classes. The e-learning platform developed by the faculties of Veterinary Medicine at University of Agronomical Sciences and Veterinary Medicine Bucharest, University of Agricultural Sciences and Veterinary Medicine The total population for the study comprises of 1600 students, 40 master teachers and 40 tutors and they have accessed the e-learning platform. The units covered in the e platform include farm Animals Breeding Units, research, diagnosis, food control, Slaughtering Houses, Rural Veterinary Clinics, after careful analysis the corrections have been carried out. Real life practical training also added in the modules. The e- learning module become very useful for the students.

E- Learning

Understanding eLearning is simple. E-Learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online. There are many terms used to describe learning that is delivered online, via the internet, ranging from Distance Education, to computerized electronic learning, online learning, internet learning and many others. E- Learning as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching.

Education via the Internet, network, or stand alone computer. e-learning is essentially the network-enabled transfer of skills and knowledge. Webopedia describes e- learning, e-learning refers to using electronic applications and processes to learn. e-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM.[1]

E- Learning refers primarily machine assisted learning. It is supported by Information and Communication Technologies.E- Learning may be in two forms. They are Synchronous e- learning : It is the learning process where the instructor and the participant are involved in the Course, Class or lesson in the same time. Web conferencing is an example of synchronous e- learning. Participants of this learning have permission to take copies of the lessons for their purpose. But it cannot be used for commercial purposes. For other purposes they have to get prior permission.

Asynchronous e-learning: In this type of e-learning the instructor and the participants involved in the course at different time. This type of e- learning include web based traing, blogs, e-mail list serve.

E- Learning components

1. Content for e- learning

2. E- Coaching

3. Combined learning

4. Virtual Classroom

Content for e- learning

Simple Learning Resources: Simple learning resources include Documents, Powerpoint Presentations, Videos and Audio Files. It is meant for readers to know basic details of a particular topic. These materials are easy to prepare. Another mode of learning is web based training consists of set of Interactive sessions. It include Graphic, Audio, Video files. It also includes interactive feedback for additional changes in the Lessons.

E- Coaching

E- Coaching refers to the interactive Session lead by a instructor with feed back mechanism.

Combined learning

Combined learning refers to knowledge learning with co-workers, Discussion through Social Media, Blogs, Listserv.

Virtual Classroom

A virtual classroom is an e- learning event where an instructor teaches remotely andin real time to a group of learners using a combination of materials. This method requires the least amount of effort to convert materials. Appropriate technology must be in place for both the learners.

Quality of e- learning

The Quality of e-learning course depends on the Learner-centred content. The quality of e- learning should be relevant to the specific learner. E- learning mainly should focus on the flexible timings. Instructional aid for a particular learner should be creatively provided and should motivate the learner to learn more and more. Attention should be given to each and every participant.

Advantages of e-learning

1. Location is not a barrier for e- learning. Attendance is not a criteria for e-learning. Time restriction is also avoided through e- learning.

2. Multimedia content used in e-learning is more interesting than the face to face interaction. Audio and Video effects attract the participants.

3. E- learning can be done without much cost. With cameras and use of microphones interaction can be created. If students missed any class, the same can be recorded and can be viewed later at any time.

4. Open sources packages can be used to develop the learning module.

Drawbacks of e-learning

1. Practical skills that can not be given through the multimedia require traditional way of class room teaching.

2. The Professor may feel lonely while creating the multimedia lessons. It become isolation for him.

3. E- learning can cause health related disorders. Same sitting position, Eyestrains, Desk height and everything has to be considered.

4. The learner and the teacher should have a basic knowledge of Computer skills.

Veterinary Science

Merriam Webster Defines Veterinary medicine as the science and art that deals with the maintenance of health in and the prevention, alleviation, and cure of disease and injury in animals and especially domestic animals[2]

Veterinary medicine is the branch of medicine that deals with the prevention, diagnosis and treatment of disease, disorder and injury in non-human animals. The scope of

veterinary medicine is wide, covering all animal species, both domesticated and wild, with a wide range of conditions which can affect different species[3].

Veterinary Learning India and other Countries

e- Learning at TANUAS Tamilnadu Veterinary and Animal Sciences University developed the e- learning course for the B.V.Sc and A. H Degree Programme students of this University. The e- Learning module consists of 79 courses. www.tanuas.org Kashvet.org

This website is developed by Society For Advancement of Veterinary Education Srinagar, Kashmir.   The e- learning module at Kashvet has educational CD-ROMS,Powerpoint tutorials, videos, e-books etc.
http://www.kashvet.org/e-learning.htm E-Learning portal on Agricultural Education Indian Council for Agricultural Research has developed a portal for Agricultural Education. It is a joint venture of ICAR-Agricultural Universities (AUs) System comprising State Agricultural Universities (SAUs), Deemed to be universities (DUs), Central Agricultural University (CAU) and Central Universities (CUs) with Agriculture Faculty.   Online and off line mode of Educational materials are available from this website.   http://ecourses.iasri.res.in/ The European School for Advanced Veterinary Studies (ESAVS) developed study programs in various veterinary Disciplines. ESAVS founded in the year 1991 in Luxembourg. It is affiliated to the Department of Science of the University of Luxembourg. the ESAVS conducts these programs for veterinarians in practice and academia from all over the world. http://www.esavs.net/en/kategorie.php?k=30

This website is developed by Dr. Probodh Borah, which is useful for the veterinary students of Assam. In this website e-books in PDF format and Powerpoint presentations are available. http://182.71.179.66/ Massachusetts Institute of Technology MITs Animal Behavior Department provides audio files of the calls sessions. It consists of Animal Learning, Genes, communication, Sociobiology and cultural determinism. Tufts Universityhttp://ce.vet.tufts.edu/ Tufts University Continuing Education for Veterinary professionals includes Histology, Human Animal Relationships, Law and Veterinary Medicine, Population Health, Veterinary Repository Pathophysiology, Zoological medicine. The lecture includes Slide Shows, PDF Versions of lectures, Images for Respiratory, Cardiovascular system, Reproductive System, Urinary System are available from system. Zoological medicine include amphibian, reptile, avian, and small mammal health, as well as topics like exotic companion animals and wildlife medicine.
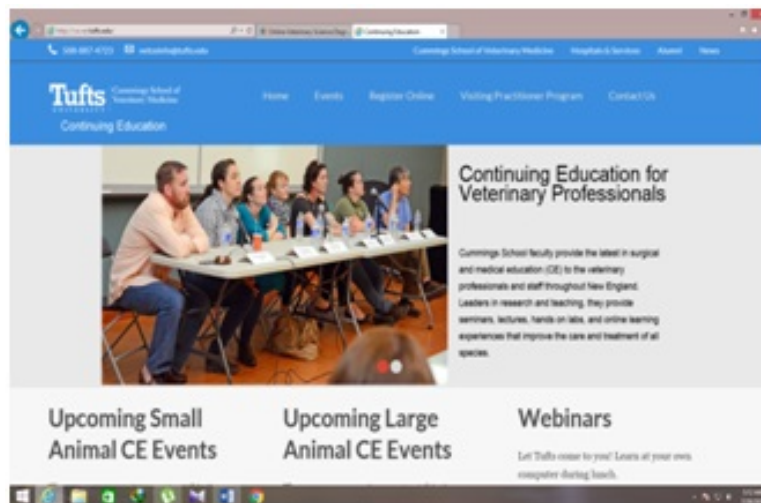
Conclusion

Learning is a continuous process in the Digital Era. E- Learning is the modest way of learning. It can be performed at a mouse click. As the changes in teaching grow, the role of Librarian also changes. The challenges ahead of a Librarian is mainly consists of Selection of e- material that suits a particular learner. E-learning has entered into every subject. E-learning in Standard Institutes is more beneficial to the learners. Mushrooming video in the Internet paved way for everyone to learn everything irrespective of their interest and ability.

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Use and Adequacy of E-Resources by Students of the Thiruvalluvar University in Science & Social Science Faculties: A Case Study

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Abstract

The study was an attempt to determine the use and satisfaction level with respect to the electronic resources provided by the Thiruvalluvar university to its users. A total of 200 questionnaires were distributed to collect the primary data from full time Research Scholars (M.Phil/ Ph.D) and post graduate Students of Science and Social science faculties, university of Kashmir. The findings reveal that Lack of awareness regarding different types of e-resources and Lack of library assistance are the major cause behind low usage of e-resources. The result shows that users of science faculty use e- resources adeptly than Users of social science faculty. The findings could be helpful to know the different challenges and concerns faced by users while accessing and using e- resources. The study also highlights the current scenario of the Science and Social science faculties in Thiruvalluvar university with reference to the awareness and usage of electronic resources.

Keywords: Thiruvalluvar University, E-resources; journals; problems; science; satisfaction; students.

Introduction

The rapid growth of information and communication technologies have gave rise to the evolution of several new jargons like paperless society, electronic resources, portal / gateway and global digital library. In the day context , all types of libraries viz: academic, public and special are not only providing printed resources to their library users rather they provide printed, electronic as well as other Internet resources like e-books and databases for fulfilling the day to day academic and research requirements of the library users. The traditional functions of libraries and librarians have undergone radical changes in the present day context of ICT. Now libraries and information centers have incorporated/ adopted various electronics resources for its collection developments

to fulfill the requirements of different category of library users in a better way.

Electronic resources refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. Over the past few years, a numbers of techniques and related standards have been developed which allow documents to be created and distributed in electronic form. The library and information centers are increasingly being called upon to provide more relevant, up-to- date and timely information to a wide range of users. In order to satisfy Kumbar (2004) libraries require availability and accessibility to a variety of information resources and formats (such as digital full- text, sound, graphics, images, multimedia and hypertext,as well as print documents). Electronic resources are invaluable research tools which complement print-based resources in any traditional library. Electronic resources provide access to information that might be restricted to the user because of geographical location or finances. Electronic resources proved to be more useful than print resources due to inherent capabilities for manipulation and searching. Users get increased access to databases of online refereed journal to the other resources which provides information that is up to date, international scope and sometimes not available elsewhere. Electronic resources have exploded in popularity and use. In addition (Bajpal et al., 2009) e-resources enable innovation in teaching and they increase discovery and creation of new fields of enquiry.

The Thiruvalluvar University was established at Vellore by Government of Tamilnadu in October 2002 under the Thiruvalluvar University Act, 2002 (Government of Tamilnadu Act 32 / 2002). The Post Graduate Extension Centre of the University of Madras, which was functioning in Vellore before 2002 formed the core of Thiruvalluvar University. The University was inaugurated on 16.10.2002 as a State University by our former Chief Minister Selvi DR. J. Jayalalithaa. The University is located in a Sprawling Campus of about 112.68 acres at the Serkkadu near Vallimalai about sixteen km away from the Vellore City on the Ranipet-Chittoor Trunk Road. The University named after the great Tamil Saint *Thiruvalluvar* is enshrined with the motto. In the University, every effort is harnessed to make Educational Institution as temple of learning. The aim of this University is to provide facilities for advancement in Research and dissemination of Knowledge with focus on the Economic and Social upliftment of the society.

Problem

In the present milieu, the e-resources are regarded as the back bone of any research institution as they are means to provide easy and simultaneous access to information at any time. The migration of print resources to electronic resources has possibly varied impacts on the users and intuitions that use them. The study was an attempt to measure

the usage and dependency of users on e-resources available through the Allama Iqbal library (central Library). The study also finds out the perceived impact of the e-resources on the academic efficiency of users and problems encountered by them while accessing and browsing thee-resources.

Objectives

The following are the objectives of study:

- To know the frequency of VisitingLibrary.

- To know the Awareness and use of different types of electronicresources.

- To find out the Satisfaction level of user with the present collection electronicresources.

- To gauge the use of library website as a gateway toe-resources.

- To identify the reasons and importance electronic resources against print resources.

- To uncover the problems faced by users while accessing the electronic resources

Scope

The study was limited to the full time Research Scholars (M.Phil /PhD) and Post graduate Students of science and social science faculty, Thiruvalluvar University.

Methodology

In order to achieve the above laid down objectives. The study adopted descriptive survey research method and used structured questionnaire and observation as instruments for data collection. The sample was drawn from the population of full time M.Phil/ Ph.D Research scholars and Post graduate students of science and social science faculty of Thiruvalluvar University. A total of 200 questionnaires i.e. 50 questionnaires were randomly distributed to the Research Scholars (25 questionnaires of each faculty) and 150 questionnaires were randomly distributed to the Students (75 questionnaires of each faulty). The filled questionnaires were collected from the users. The collected data was analyzed and presented in the tabularform.

Data Analysis

Frequency of visiting Library

The study found that all 100% the research scholars of science faculty are regularly visit to the library while the 40% of research scholars of social science faculty visits library regularly and 52% visit library sometimes and 8 rarely visits library. 60% of the students of the science subjects regularly visit library while in social science subjects it was merely 26.66% of students who visit library regularly. A clear insight is endowed with table 1. The users of social science faculty rely mostly on the notes collected from their seniors or teachers and they feel to waste their time to visit libraries. On the other hand users of science faculty are spending most of their time in departmental or central library to acclimatize to themselves with the latest information available to their area of interest.

Respondents	Science				Social Science			
	Total	Regularly	Sometimes	Rarely	Total	Regularly	Sometimes	Rarely
Research Scholars	25	25 (100)	0(0)	0(0)	25	10 (40)	13 (52)	2 (8)
Students	75	60 (80)	15 (20)	0(0)	75	20 (26.66)	30 (40)	25 (33.33)

Table 1: Frequency of Visiting Library

Awareness of Different Types-resources

E-resources	Research sholars(M.Phil &Ph.D)				Post graduate Students			
	Science		Social Science		Science		Social Science	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
E-Journals	25	100	25	100	75	100.0	60	80.0
E-Data archives	21	84	25	100	40	53.3	10	13.3
E-Manuscripts	20	80	18	72	21	28.0	10	13.3
E-Maps	25	100	20	80	34	45.3	24	32.0
E-Books	23	92	18	72	57	76.0	49	65.3
E-Magazines	20	80	10	40	57	76.0	30	40.0
E-Thesis	13	52	15	60	51	68.0	46	61.3
E-Newspaper	13	52	20	80	70	93.3	38	50.7
E-Mail	25	100	24	96	72	96.0	63	84.0
E-Research Reports	17	68	14	56	4	5.3	4	5.3
E-Bibliographic Databases	4	16	1	4	0	0.0	0	0.0

Table 2: Awareness of Different Types e-resources

Table 2 provides a detailed version of awareness regarding the different e- resources by faculties - science and social science users. The data reveal that 25(100%) research scholars and students of science faculty aware of e-journals while as in social science research scholars 25(100%) and students 60(80%) are aware of e-journals. Similarly 21 (84%), 20 (80%), 25(100%), 23 (92%), 20(80%), 13(52%), 13 (52%), 25(100%), 17 (68%), 4(16%) Research scholars and 75 (100%), 40 (53.3%), 21 (28%),34(45.3%), 57 (76%), 57(76%), 51 (68%), 70 (93%), 72 (96%), 4 (5.3%),0(0%) of students of science faculty aware of E-data archives, E-manuscripts, E-maps, E-books, E- magazines, E-thesis, E-newspapers, E-mail, E-research Reports, E-bibliographic Databases. while as in social science 25 (100%), 18 (72%), 20 (80%), 18 (72%) 10(40%), 15 (60%), 20(80%), 24(96%), 14 (56%), 1 (4%) research scholars and 60(80%), 10 (13.3%), 10(13.3%), 24 (32%), 49 (65.3%), 30 (40%), 46 (61.3%), 38 (50.7%), 63 (84%),

4 (5.3%), 0(0%) students aware of them. It was concluded from the data that the awareness level of science faculty users are far better than users of social science faculty. The reasons that took behind the unawareness are less exposure to computers and internet. Another reason was the lack of library professionals which will guide them and another important flaw was lack of departmental computer labs almost all departments.

Use of various e-resources

DATABASES	Respondents			
	Research Scholars (M.Phil&Ph.D)		Post graduate Students	
	Science	Social Science	Science	Social Science
E-Journals	25(100)	12(48)	75(100)	36(48)
E-Data archives	20(80)	9(36)	60(80)	12(16)
E-Manuscripts	10(40)	6(24)	16(21.3)	20(26.7)
E-Maps	22(88)	4(16)	55(73.3)	12(16)
E-Books	20(80)	9(36)	48(64)	59(78.7)
E-Magazines	22(88)	20(80)	60(80)	40(53.3)
E-Thesis	10(40)	9(36)	36(48))	45(60)
E-Newspaper	18(72)	20(80)	69(92)	50(66.7)
E-Mail	25(100)	22(88)	75(100)	47(62.7)
E-Research Reports	25(100)	3(12)	63(84)	12(16)
E-Bibliographic Databases	16(64)	2(8)	27(36)	4(5.3)

Table3: Use of various e-resources
Figures in the Braces denote percentage

While analyzing data, it was found that research scholars and post graduate students of science faculty use e-resources more efficiently and decisively than the Research scholars and students of social science faculty. All research scholars and students of science faculty use e-journal (100%), while in social science faulty it was nearly 50%. Research scholars and students of science faculty use mostly used e- journals(100%), e-mails(100%),e-research reports(100%) followed by e-magazines (88%) e-maps(88%), e-data archives(80%), e-newspaper(72%), While as Research Scholars of Social science use e-mail (88%), e-Newspaper (80%), e-magazines (80%) followed by e-journals(48%). The students of science faculty use e-journals (100%), e-mail (100%) followed by e-newspaper(92%), e-data archives(80%), e-magazines(80%), e-maps(73.3%), while as students of social science faculty not use much e-resources they mostly use e- books(78.7%), e-newspaper(66.7%), followed by e-thesis(60%), e-journals(48%). It was ascertained from the study that a very small number of students of both faculties use of e-bibliographies databases. A clear picture is provided by table 3.The results indicate that the users of social sciences are not much use of e-resources.

The reason for low of usage e-resources by social science users as compare to users from science faculty may be the lack of awareness to different types of e-resources and computer literacy that become obstacle for the optimum use. The other immense factor was that teachers in social science faculties uses old traditional book, black board and chalk methods in their class rooms and are less inclined to latest sources and technologies of modern information. on the other hand teachers of science faculty uses internet, installing Wi-Fi devices in their respective departments and uses all latest Hi tech gadgets in their labs and also having very well maintained computer labs which was totally lacking in social science departments.

Ease of Access to E-Resources

The finding reveals that Research scholars (72%) and students (73.33%) of science faculty find it easy to retrieve information while in social science faculty the users find it difficult to use e-resources i.e. research scholars(36%) and students(34%). The reasons are that the social science faculty uses traditional methods of learning and are very rare uses internet or other digital offline resources for retrieving information as science background often exploit internet and new Hi tech gadgets in their labs. A clear picture is depicted by table 4.

Respondents	Science			Social Science		
	Total	Yes	No	Total	Yes	No
Research Scholars	25	18(72)	7(28)	25	9(36)	16(64)
Students	75	55(73.33)	20(26.66)	75	34(45.33)	41(54.66)

Table 4: Ease of Access to E-resources
Figures in the Braces denote percentage

Use of the Library Web Site as a Gateway to Access Electronic Resource

Respondents	Science			Social Science		
	Total	Yes	No	Total	Yes	No
Research Scholars	25	11(44)	14(56)	25	15(60)	10(40)
Students	75	20(26.66)	55(73.33)	75	11(14.66)	65 (86.66)

Table 5: Use of Library Website as Gateway to e-resources
Figures in the Braces denote percentage

While investigating the user's approach for searching information on the internet, it was found more that 44% research and 26.66% students of science faculty search their information through library website while the large number of users gained access through other libraries' web sites or other free websites. In social science faculty 60% of research scholars and very little number of students search through library website. The library website is not designated as such to give the users an easy way to navigate

and access their required information. The lists of e-resources are not organized in a convent way like subject wise categorization. The users feel tedious job to navigate through library website. A clear vivid picture is offered by table 5.

Satisfaction with present collection of E-resources

Data analysis reveals that 72% of research scholars of science faculty are satisfied, while in social science faculty 44% of research scholars are satisfied with current E-resource collection. On the other hand 60% of students from science faculty and 30.66 % of students from social science faulty are satisfied with the e-resource collection. The results reveal that the most of students (69.33%) of social science are not satisfied with E-resource collection university library. A clear picture is offered by table 6. The library prior to develop e-resources collection consulting all members of university by commune to all department heads and department head in alliance with teachers, research scholars and students and make a list of demanding e-resources on priority basis and send it to the library. The library purchase e-resources in the view of there question.

Respondents	Science			Social Science		
	Total	Yes	No	Total	Yes	No
Research Scholars	25	18(72)	7(28)	25	11 (44)	14(56)
Students	75	45(60)	30(40)	75	23(30.66)	52(69.33)

Table 6: Satisfaction with present collection of E-resources
Figures in the Braces denote percentage

Training Taken Related to Electronic Resources

Computer Training courses should be played an important role for the efficacy of e-resources. The results found that the user who has computer background efficiently and easy use e-resources. The research scholars and students (60% R.S & 54% ST) from science faculty has possessing computer training so use e-resources more in number as compare to the users(28% R.S & 24% ST) of social science faculty, Rest of users who lack computer training face many problems while accessing e-resources. A vivid picture is provided by table7.

Respondents	Science			Social Science		
	Total	Yes	No	Total	Yes	No
Research Scholars	25	15(60)	10(40)	25	7(28)	18 (72)
Students	75	41(54.66)	34(45.33)	75	18(24)	57 (76)

Table 7: Training Taken Related to Electronic Resources
Figures in the Braces denote percentage

Do E-Resources Diminish the Importance of Traditional Resources?

The response of users revealed that 19(76%) of research scholars and 50 (66.66%) students of science faculty, while 20 (80%) of research scholars and 37 (49.33%) of students of social science faculty are in the opinion that the advent of e- resources ebb the importance of printed information resources. A lucid picture is provided by table 8.

Respondents	Science			Social Science		
	Total	Yes	No	Total	Yes	No
Research Scholars	25	19(76)	6(24)	25	20 (80)	5(20)
Students	75	50(66.66)	25(33.33)	75	37(49.33)	38 (50.66)

Table 8: Importance of E-resources
Figures in the Braces denote percentage

Reasons for Using E-Resources

The data analysis of the study depicts that the majority of users of sciencesubjects in the opinion that e-resources saves time and proves to be more informative than traditional resources, while the majority of Social science users in the opinion that e-resources are time consuming, difficult to use and expensive. A clear picture is provided by table 9.

Reasons for Using E-	Science		Social Science	
	Research scholars N=25	Students N=75	Research scholars N=25	Students N=75
Time Saving	25(100)	50(66.66)	10(40)	23(30.66)
Easy to Use	17(68)	27 (36)	8(32)	20(26.66)
More Informative	25 (100)	67 (89.33)	16(64)	45(60)
More Expensive	20(80)	67 (89.33)	23(92)	73(97.33)

Table 9: Reasons for using E-resources
Figures in the Braces denote percentage

Problems Faced By Users In Accessing And Retrieving Information from Internet

Table 10 reveal that maximum number of both faculties agrees that lack of library professionals (92%; 98%) and lack of assistance by library staff (90%; 96%) are the important quandary to be faced while accessing e-resources. Users as such don't know the search techniques to increase the precision of their search results or the sources from where they got exact information which they are in want. Other problems they encounter are awareness, slow bandwidth, coverage and quality of e-resources, lack of time and lack of computer terminals.

S.NO	Problems	Science Faculty N=100		Social Science Faculty N=100	
		Agree	Disagree	Agree	Disagree
1	Sow internet speed	50	50	90	10
2	Lack of computer terminals	17	83	75	25
3	Awareness of different types of e-resources	60	40	96	4
4	Lack of relevant information sources	40	60	84	16
5	Lack of assistance by library staff	90	10	96	4
6	Lack of knowledge to use	42	58	78	22
7	Lack of library professionals	92	8	98	2
8	Lack of time	38	62	22	78
9	Frequent power cuts	10	90	60	40
10	The level of quality of e-resources is not good	13	87	40	60
11	The e-resources doesn't cover my area of my interest	21	79	79	21

Table10: Problems Faced By Users In Accessing And Retrieving Information
N=Total number of respondents in each case agree or disagree

Major Findings and Conclusion

The major findings of the study are enumerated as:

1. 100% Research scholars and 60% students of Science Faculty Visit library regularly whereas as 40% Research Scholars and 26.66% Students of social Science Faculty visit library regularly. It indicates that very less percentage of

social science users visit library.

2. Majority of Research scholars and Students of Science Faculty are aware of e-journals, e-emails, e-maps, e-newspapers as compare to Social Science Faculty. Both the faculties are less aware of indexing and abstracting databases.

3. Majority of users of both faculties make recurrent use of e-journals, e-books, e-maps and emails.

4. Users of Social science faculty find a difficult task to access information from the web.

5. Both the faculties find library website a lackluster in navigating the desired information resource.

6. Both the faculties find a computer training or course an imperative role to play in finding information effectively from the web.

7. Users of Science Faculty find e-resources as time saving and extra informative while as users of social Science Faculty declare it a time consuming and less informative.

8. The major problems faced by both faculties of Science Faculty and social Science Faculty are Lack of awareness ,lack of assistance from the resource personals and library professionals in the libraries.

Conclusion

The library authorities should conduct awareness and orientation programmes and circulated pamphlets and display list of subscribed e-resources so that users acknowledged and familiar with the various e-resources and different facilities/services provided by university library. Each department should maintain a well-equipped computer lab. Basic training in hardware and software such as MS Office, Internet searching, and use of electronic resources should be included in the curriculum of each department. Departmental libraries should provide access online journals and electronic resources. The library managers at academic libraries should advocate faculty-librarian collaborations in order for the library to facilitate greater usage of available electronic resources. The library prior to develop e-resources collection consulting all members of university by commune to all department heads and department head in alliance with teachers, research scholars and students and make a list of demanding e-resources on priority basis and send it to the library. The library purchase e-resources in the view of the requisition. The university authorities should hire trained professional assistants for departmental libraries so that every students and research scholar whether

enrolled through regular or distance mode get benefited from the e-resources and lead to increased use of electronic resources.

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Effectiveness of Learning Management System for Medical and Para-medical courses: A Case Study

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Abstract

This paper presents an analysis of learning effectiveness for the Medical and Para-medical courses in Christian Medical College, Vellore. In recent years, Computer technology altered the landscape of the educational field particularly in higher education. Students interactions are hopeful through Learning Management systems. The learning management system (LMS) is responsible for integrating all learning services . It consists variety of tools and functions to support teaching and learning processes like course management tools, online group discussion, evaluation and grading.

Introduction

IT enabled learning in new dimensions. Recent advances in multimedia technology, high performance networking enhance the e-learning technology. With this enhanced technology the learning has become easy for our students via LMS. Christian Medical College and Tufts University of Health Sciences have worked collaboratively for the last 7 years to use E-learning to strengthen and enhance medical education with particular emphasis to undergraduate medical education at Christian Medical College. The focus of this work has been on developing technical capacity, creating locally appropriate content, increasing faculties use of e-learning methods both within and outside the classroom, manage the curriculum more efficiently, making these resources available to mission hospitals and to disseminate this information to other medical colleges in India.

Curricular Office Administration

1. The entire MBBS schedules are uploaded on the E-learning website

2. The majority of MBBS lectures are uploaded on the E-learning website and students can seamlessly access the entire teaching resources of CMC.

3. All student feedbacks are conducted on the E-learning website

4. Announcements and assignments are conducted on the E-learning website All these have enhanced educational administration, making many processes paper less, more efficient in manpower and time.

5. 4058 scientific files (lecture presentations; quizzes, feedback and evaluations; sample interactive cases; scientific publications of CMC; working papers; teaching materials; and images from anatomy, biochemistry, microbiology and physiology) have been created for use by undergraduate MBBS students. There are 3580 study materials (representing 25 different file types) that have been uploaded on the e-learning website.

6. The total hit rate over the last year was 435976.

Departmental Projects

Departmental projects in Anatomy, Biochemistry, Microbiology and Surgery have involved developing locally relevant resources and using these in the undergraduate training. These resources include: Anatomy – histology slide library, dissection videos, digitizing of Anatomy diagrams, resources for teaching cross-sectional anatomy using MRI; Biochemistry – interactive cases, image library of biochemical disorders, interactive site for recent articles and asking the biochemist questions; Microbiology – videos of laboratory procedures, slide library, interactive cases, microbiology newsletter. These resources have been developed and their use in the curriculum is currently being evaluated. These are examples of departments where E-learning is well incorporated into the process of teaching and learning.

Curriculum Innovation Projects

The E-learning project has stimulated the faculty to develop locally appropriate learning resources, use these in their teaching and promote active teaching and learning processes in the classroom. 20 innovation grants have been awarded to faculty to develop innovations in E-learning and these have spanned the areas of undergraduate, postgraduate, distance education and patient education .Educational research projects are underway such as the use of hand held devices for delivery of distance education and processes for developing of open educational resources are underway.

Support for Postgraduate and Distance Education

The E-learning website is now used to support the Fellowship in Secondary Hospital Medicine, the PG Diploma in Family Medicine and MPH programme of the Community health department.

Electronic platform for supporting education in mission hospitals

Infrastructure has been developed in 10 Secondary hospital programme hospitals to use the E-learning website. Two staff from each of these hospitals have been trained to develop courses on the E-learning website. Now all these hospitals have access to all the learning resources within the CMC E-learning website. These hospitals are in the process of planning and implementing projects towards developing management guidelines for junior doctors and developing resources for their educational courses. An electronic platform based on a hub and spokes model to enhance educational networking between CMC and the mission hospitals is envisaged.

Report of current status of project and outcomes

The goal of this project is to strengthen medical education at CMC. The specific objectives of this project were:

1. Develop and deliver high-quality curricula that are appropriate and relevant to local health care needs in India

2. Increase CMC faculty's capacity to manage both the technical and content creation components of e-learning.

3. Share these resources with secondary hospitals networked to CMC so as to reach needy areas of the country and to disseminate this work to other medical colleges in India

4. Work towards self-sufficiency through the resources and capacity that have been created through the project

Faculty and departments

1. Faculty have enhanced skills in be able to use the E-learning website, producing electronic educational resources, using it in their teaching, developing courses on the E-learning website

2. 424 faculty from 44 departments have been trained in the use of E-learning website

3. 20 faculty have been trained at Tufts University in the use and incorporation of the E-learning website in the curriculum

4. Anatomy,
Biochemistry, Microbiology and Surgery have undertaken departmental projects

to create locally appropriate electronic resources including slide libraries, videos, interactive cases, quizzes, interactive sites, newsletters and incorporate these into their curriculum. All these departments have been using the E-learning website to promote active learning by students.

5. 20 innovation projects have been funded to develop electronic resources and use it in teaching in various areas including undergraduate medical, allied health science, distance education, postgraduate and patient education.

6. E-learning has been incorporated as a skill to be learnt at the Medical Education technology workshops.

7. Several postgraduate departments are using the E-learning website for conducting staff and postgraduate training and uploading their learning resources. Eg. Radiology, Rheumatology, Radiation physics, Nephrology.

Students

1. Students have improved skills in using the E-learning website

2. All students in their I MBBS and II MBBS receive training in the use of the E-learning website. They all received user names and passwords on entering medical colleges.

3. E-learning user support staff meets regularly with student curriculum representatives to obtain their feedback and suggestions.

4. Students in their departmental feedback have indicated the usefulness of the E-learning website in facilitating their learning:

   - Uploaded lectures, interactive cases, slide libraries have been found to be extremely useful

   - Departments such as Anatomy have encouraged students to make dissection videos. This helps them to retain better what they study

   - Students say they are able to listen better in class

   - It also helps them in preparation for the examination particularly the lectures, slide libraries and Frequently asked questions

5. The total hit rate for 2016-17 was 435976. The student hit rates are very high in the I MBBS, II MBBS and final MBBS. They also peak particularly before the University examinations.

Educational Administration

Educational administration has been facilitated in the following ways

1. Uploading of schedules

2. The lecture presentations of the entire curriculum can be reviewed

3. Announcements are made on-line

4. Assignments are given online

5. Weekly on-line quizzes and case of the week are put up

6. Student feedback has become completely electronic. This has improved the feedback loop between conducting the feedback and availability of summarized feedback to Departments and the Principal's office.

7. On-line tests can be conducted

Educational processes and innovations

1. Faculty and students can seamlessly access educational materials across the curriculum through the E-learning website.

2. Faculties are using resources of other departments in their teaching thereby enhancing integration.

3. E-learning is enabling departments to work together on educational projects.

4. E-learning website is encouraging faculty to promote active learning in and outside the classroom as opposed to didactic teaching through interactive cases, case based discussion, discussion forum.

Educational innovation

The E-learning website has spurred educational innovation at CMC in the following ways:

1. Department projects

2. Innovation grants

3. Use of hand held device for supporting distance education in mission hospitals

4. Creating digital libraries eg. Histology library, historical diagrams, video libraries, case libraries

5. Faculty are developing locally appropriate electronic learning resources that will eventually be made available as open educational resources.

6. Creating on-line courses that staff and postgraduates can undergo

Use in distance education and postgraduate education

1. The E-learning website supports the Fellowship in Secondary hospital medicine, the PG Diploma in Family Medicine and MPH course conducted by the department of Community health.

2. In the distance courses the E-learning website is being used to delivery course materials, submit assignments, conduct on-line discussions, discuss cases, make announcements and maintain data base of marks.

Conclusion

The Learning Management system can be used effectively when the management,staff and students co-operate and work together. Team sprit is the essential factor for every organization. And also user awareness among the library users and students, Research scholars also one of the main activity for effective utilization of the e-learning centres.

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Public Library Systems and Services

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Abstract

A public Library is a library that is accessible by the general public sources (such as taxes) and operated by civil servants. Public libraries exist in many countries across the world and are often considered an essential part of having an educated part of having an educated and literate population. Public libraries are distinct from research libraries, school the general publics information needs (rather than the needs of a particular school, institution, or research population). Public Libraries also provide free services such as preschool story times to encourage early literacy, quiet study and work areas for students and professionals, or book clubs to encourage appreciation of literature in adults.

Keywords: Public library, library legislation, development, Raja Ram Mohan Roy Library foundation, Public library services.

Introduction

Public libraries exist in many countries across the world and are often considered an essential part of having an educated and literate population. Public libraries are distinct from research libraries, school libraries, and other special libraries in that their mandate is to serve the general public information needs. Public libraries also provide free services such as preschool story times and professionals, or book clubs to encourage appreciation of literature in adults. Public libraries typically allow users to take books and other materials off the premises temporarily; they also have non-circulating reference collections and provide computer and Internet access to patrons.

Development of Public Libraries

Pre-Independence era

The coming up of Muslim power in India during the 13th century A.D. marked the dawn of another era of learning and scholarship. Mughal rulers attached considerable

importance to libraries. This is evident from the fact that scholars were appointed as librarians and they were very much honored. During the latter half of the 18th century, the Mughal Empire gradually declined and the country became fragmented. This was a serious setback to the development of libraries too. Remnants of this old library heritage can be found in the Saraswathy Mahal Library of Tanjore and Khudabaksh Manuscript Library of Patna. But most of the library collections of ancient and medieval period were removed by the British people and housed in the India Office Library, London.

In 1808 the Government of Bombay proposed to register libraries which were to be given copies of books published from the funds for the encouragement of literature. According to the *Sinha committee*, this was the significant date from which public library development in India started its first phase.

During the first half of the 19th century, the three presidency towns of Bombay, Calcutta, and Madras had their public libraries. These libraries were mostly financed by the Europeans residing in these towns. Almost simultaneous to this development, sub-scription libraries ere started in many a cities of the country of all the earliest library development, the development of public libraries in Baroda was unique. Baroda development a network of public libraries to serve the entire princely state. The system organized by Borden, consisted of a central library at the apex, many branch libraries and travelling libraries and travelling libraries, with special provision for women and children and audio-visual section for the semi-literates.Although the public library movement that flourished in Baroda was a glorious one, it was not a general trend of that period. Because, in no other part of India a parallel development occurred. When Baroda was merged with the former Bombay State, the Central Library of Baroda lost its importance and the system gradually declined.

The pioneers of the modern library movement in India are Mothi Bhai Amin, who struggled hard to make libraries popular in Baroda and Gujarat; Munindra Deb Roy Mahasaya, founder of Bengal Library Association who tried hard for a Bengal Library Act; Asa Don Dickinson, who organized the first training course in India in librarianship, and Dr S.R. Ranganathan, who introduced the concept of establishing public library systems in India on the firm foundation of law and whose accomplishments have earned the unique, distinction as one man library movement. These were the main events that contributed towards the developments of Public libraries prior to independence.

Post-Independence Era

After independence the growth of libraries in general, have been remarkable. But if we take into consideration the development of public libraries along. It can be observed that the growth is not as remarkable as that of academic and special libraries. At the

time of independence, India had to take into consideration several constraints. In 1947 the number of books published in India was only 6450. 85 out of every 100 persons were illiterates. The rural population which constituted 88% of the total was almost illiterate.

The establishment of the Delhi Public Library; involvement of the Union Government in public library movement, and enactment of public library laws are the main factors which contributed towards the improvement of public libraries after Independence.

The public library was started in 1951 as the first UNESCO public library pilot project under the joint auspices of UNESCO and the Government of India. The purpose of this library was to adopt modern techniques to Indian conditions and to serve as a model public library for Asia. The Delhi Public Library provides completely free service to all taking into consideration the modern concept of public library service. The Government of India took interest in the public library development of the country in 1957 by appointing an advisory committee for libraries under the Chairmanship of K.P.Sinha. This committee was appointed to enquire into the reading needs of the people and to recommend of the future library structure in India.

Although the Government of India allotted funds in the five year plans for the development of public libraries it was not on the basis of the public library requirements of the country. The First Five Year Plan included a Scheme of *Improvement of library Service*. This scheme envisaged establishment of a central library for each state and union territory with district central libraries and circulating libraries in each district.

Library Legislation in India

Act means preparing the format of law or legislation. In the context of libraries, the Library Act means to give legal provision for establishing a library system, its maintenance, services, functions, right and management under any state or a national government. Library legislation is capable of regulating various organs of public library services. It is an instrument for the development of public libraries in a planned manner to ensure establishment, development and maintenance of libraries in a uniform pattern. It can help in promoting a sense of self-consciousness among the people who would feel it obligatory on their part to use services offered by the library.

In the year 1850 the first library act was passed in Great Britain. At present most of the countries specify free use of public library services. Provision of public library service is a natural corollary to the democratic way of life. Free communication is essential for the preservation of a free society and creative culture. A public library

expects its users only to spend time and not money for the utilization of services. In that situation, the question arises from where will the finance come? It has been experienced that public library service can be effectively offered only through legislation. Library Legislation is needed because:

- A law helps in creating necessary conditions under which public libraries can be established nationwide.

- To put the public library on a sound and sure financial footing by way of levy of library tax.

- To make the public library independent from subscription, donation or private gift and to save the library from political influence.

- For a sound administrative setup permanent, uniform, efficient, balanced and coordinated library service and also for proper line of growth.

- To solve the problem of land, building, legacies, etc.

- For centralized services like acquisition, processing, etc.

The library legislation has the provision of financial support to the public libraries, but the provision to be made in library legislation would depend upon the social, political and economic environment. There are mainly two ways of making provision of finance to public libraries through library legislation. They are

- Annual budget allocation by the state out of its total funds with capital grants from central government.

- Levying of library chess with a matching grant from the state government.

Raja Ram Mohan Roy Library Foundation

The positive and welcoming step taken by the central government of India is the establishment of the Raja Ram Mohan Roy Library Foundation at Calcutta on May 22 1972 as a part of the bicentenary celebrations of the birth of Raja Ram Mohan Roy a social reformer of the early 19th Century. It was founded with basic objectives of separating library movement in the country in general and the rural libraries in particular. Its main programe is to provide financial assistance to public libraries a matching grant basis. At present it is assisting the State Central Libraries, District Central Libraries. Under which many states and Union Territories have been developed the rural public library services in the country.

- The foundation has another programme of assistance to libraries towards organization of workshops, conferences and exhibition of books. The foundation had taken a major initiative for formulation of a National policy on Library and Information system by the Government of India.

- The establishment of the Raja Ram Mohan Roy Library Foundation has given an impetus to the development of public libraries in India. The foundation seeks to assist to state government for rural libraries. Thus in comparison with the conditions on the eve of independence, even after the celebration of Golden Jubilee of Indias independence the present conditions are more conducive to public library development. But it requires proper organization, co-operation, adequate staff and finance under government patronage.

Public Library Services

Libraries were in existence even in the pre-historic days both in our country and abroad but with the advent of the European education and culture libraries in its present form emerged as an inalienable element of our present education system.

- The first significant date in the development of public libraries in India is 1808 when the Bombay Government initiated proposal to register libraries which were to be given copies of books published from the Funds for the Encouragement of Literature.

- The Second phase in the story of the library movement in our country lasted from the beginning of the 20th century to 1937. In the first stage of library movement was remarkable for the official backing and patronage of scattered libraries here and there, the second phase was characterized by the Indian intelligentsia taking up the cause of libraries.

- The third phase of the library movement began in 1937 when the Congress came to power in many provinces. This phase was really a synthesis of the previous two phases. The main trend of this phase was setting up of village libraries through governmental effort. Assam, Bihar, Bombay, Orissa, Punjab, Cochin and some other provinces and states set up village libraries even travelling libraries. It is estimated that in 1942 there were 13000 village libraries in India.

- The fourth phase of the Indian Library Movement may be described as one of consolidation with a view to husbanding our sources so as to yield a library service to the maximum number of people. Three epoch making events took place since Independence in the arena of library services of our country in between 1948-1951.

- The fifth and the most remarkable phase of the library movement in our country is the year 1972 when the Raja Ram mohun Roy library Foundation was established by the Government of India, in memory of the great social reformer. The Foundation was established to spread library services all over the country in active cooperation with state Governments and Union Territory Administrations and Voluntary Organizations (NGOs) working in the field.

- During these years though several public library systems have developed but the irony of the situation is that neither any effective public library system providing meaningful library services to the enormous rural masses nor an integrated chain of library network has so far developed in the country.

Conclusion

Apart from finance, there are several problems which stand in the way of public library development in India. In which of the for-most is multiplicity of languages, low level of literacy and pro-existed in the wake of 1947, the prevailing conditions have become improved considerably. Establishment of the Raja Rammohun Roy Library Foundation has given Impacts to the development of public libraries. The foundation seeks to assist stage governments in the establishment of rural libraries. Thus, in comparison with the conditions on the eve of independence, the present conditions in India are more conducive to public library development.

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The Emerging Trends of Libraries in India

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Introduction

A library has innovative educative values. It shapes and educates the minds of people in different branches of learning. It also provides pleasure and delights to people who are involved in reading. It is a continuous process which aims for the public utility in every aspect of its involvement. The Library system has a major role to play in propagating literacy, in supporting formal role to provide education to the weaker sections and in providing facilities for continuing education for the working class. Public, community based libraries are what most people think of when they think of libraries. But even these vary widely, from huge national libraries housed in imposing buildings, to small community libraries held in temporary buildings, or even mobile libraries that travel to their patrons. University, academic or college libraries vary in size and shape depending on the institution they serve. They may also have several branches across physical campuses, or may offer primarily digital services. School libraries are similar to university libraries in that they serve a defined group of people for a particular period of their life. However of course as their communities are radically different, their spaces and services can be very different as well. Special libraries are where expectations about what is a library can really get turned around. This umbrella term usually refers to the wide range of libraries or information services seen in government, corporate, and not-for-profit environments. They can be rich historical collections or agile digital services; they can serve large or small populations; they can be well-funded or operated on shoestring budgets. They could even be the private libraries of those dedicated to knowledge. They can, at times, look amazing.

Public Libraries

The public libraries act as a learning centre to enable the public to access the information. Majority of the people learn through the sources of public libraries. The goals of public library are:

- Access to tools of Information and Education

- As an instrument of Informal self Education

- Promotion of Cultural and Social Activities

- Preservation of Local Cultural Materials

- Development of Understanding

- Strengthening of Democratic Spirit

The modern public library is to identify and collect cultural materials of importance available in its areas. These may be works of art or sculpture, paintings, documents, musical instruments etc., In short, by using Public Library goes in search of all such materials which link the people of the locality with its cultural past.

National Library

The National Library, India is the largest library in the country. It is an institution of national importance under the Ministry of Culture, Government of India. The library is designated to collect, disseminate and preserve the printed material produced in the country. The library is situated on a scenic 30 acres Belvedere Estate, in Kolkata. Calcutta Public Library had a unique position as the first public library in this part of the country. Such a tidy and efficiently run library was rare even in Europe during the first half of the nineteenth century. Thanks to the efforts of the proprietors of Calcutta Public Library, the National Library has many rare books and journals in its collection.

The Imperial Library

The Imperial Library was founded in 1891 by combining a number of Secretariat libraries. Of these, the most important and interesting was the library of the Home Department, which contained many books formerly belonging to the libraries of East India College, Fort William College, and the East India Board in London. But the use of the library was restricted to the superior officers of the Government.

State Central Library of Tamil Nadu

Connemara Public Library at Chennai is one of the four National Depository Libraries which receive a copy of all books, newspapers and periodicals published in India. It also serves as a depository library for the UN.The library which was started in 1860 at Museum by Captain Jesse Mithchell was designated as Connemara Public Library after the Madras Public Library Act of 1948.This library was shifted to the new building in 1973 and named after Lord Connemara. The library has a vast collection of books, a much sought after text-book section, a periodicals hall, a reference room, a

video room, an entire floor for books from the Indian languages, a Braille Library and an IAS study Centre.

Modern Public Library of Tamil Nadu

The Current science books, New Publications, Historical works as reference books still remain beyond the reach of common man and poor students and therefore, to ensure their easy accessibility, the government has established a Modern State Library of International standard at Chennai inaugurated the world class Anna Centenary Library at Data Center, Kotturpuram, Chennai on 15th September 2010. This library holds 5.7 lakh books on a wide range of subjects and internet based publications with modern infrastructure.

Academic Libraries

Academic libraries are ranging from school libraries to University Libraries. They are considered as backbone or heart of an educational system in a country. Education and libraries are the two joint sisters and hence they cannot be separated from each other. For recognizing an institution, the higher education bodies such as UGC/AICET (All India Council for Technical Education), first inspect the library of an institution rather than any teaching departments or Research and Development department of the institution or university. The level literacy rate in a country is also weighed from available library facilities and services in the educational system of a country.

College Libraries

The College libraries in India have a significant role to play in higher education. Majority of the undergraduate students. When India attained Independence many among the 533 affiliated colleges did not have their own libraries, but at present, every college in the country has a library. Majority of the college libraries do not have proper facilities to meet the needs of their users. Their collections are not up-to-date, budgets are inadequate and limited, and a large number of them are single libraries. Many do not have any qualified librarian on their staff and have closed stacks only.

The several commissions and committees, like the Radhakrishnan Commission of 1948, did not stress the importance of the college libraries in their reports. However, the University Grants Commission (UGC) gives more importance to the college libraries. As the quality of higher education and research, especially at the graduate level, depends upon, among other things the standards of the college libraries and their services. Therefore, the UGC has played a significant role in the growth and development of

college libraries since 1953 by giving grants for books, equipment, staff and library buildings and has done a remarkable job in salary improvement of the college librarians.

University Libraries

University libraries all over the world have their own place of importance in the scheme of higher learning. Libraries are not only repositories of knowledge but also dispensers of such knowledge. There is no doubt that where libraries of universities and institutions of higher learning are ignored or not given due to recognition, the country as a whole suffers because of the standards of study, teaching and research very heavily depend upon the qualitative and quantitative service rendered by the university libraries.

The growth of university libraries since Independence can be seen in respect of the initiatives taken by the Central Government considering the vital importance of higher education and role of libraries in the educational development, commitment to fulfill the demand of higher education, and the foundation of the UGC in 1953 by an Act of Parliament.

One of the most remarkable and identifiable development in the history of higher education and libraries was the foundation of the Information and Library Network (INFLIBNET) in 1991 with its Head Quarters at Gujarat University Campus, Ahmedabad. Initially started as a project under the IUCAA, it became an independent Inter-University Centre in 1966. Another very important and significant landmark in the history of higher education and development of libraries in India is the establishment of UGC-INFONET DIGITAL LIBRARY CONSORTIUM by the UGC on the concluding day of its Golden jubilee celebrations by his Excellency the then President of India. Dr. A.P.J. Abdul Kalam at Vigyan Bhawan on 28th December 2003. UGC-INFONET is an innovative project launched by UGC to facilitate scholarly e-resources to Indian academies through joint partnership of UGC, INFLIBNET and ERNET. The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)". This includes interlinking of universities and colleges in the country electronically with a view to achieve maximum efficiency through Internet enabled teaching, learning and governance. This was created to help and benefit more than 310 universities and about 14,000 colleges affiliated with these universities and approximately 10 million students with e-journals. Thus, is a boon to higher education system in many ways. Shodhganga a digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre. Theses and dissertations are known to be the rich and unique source of information. The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2016) dated 5th May 2016 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and

dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would overcome serious problem of duplication of research and poor quality resulting from the "poor visibility" and the "unseen" factor in research output.

Research Libraries

Research Library is a library which contains an in-depth collection of material on one or several subjects. A research library will generally include primary sources as well as secondary sources. Larger university libraries are considered research libraries, and often contain many specialized branches. Research libraries can be either reference libraries, which do not lend their holdings or lending libraries, which do lend all or some of their holdings. Some extremely large or traditional research libraries are entirely reference in this sense, lending none of their material. Here the Research Library are mainly fulfill the fourth law of Library Science as enacted by Dr. S. R. Ranganathan (1931) Save the Time of the Reader. The examples of research libraries are libraries are The Asiatic Society of Bombay, Victoria Technical library at Nagpur and The Madras Literacy Society has founded its library in 1812.

Special Libraries

Special libraries exist in a wide variety of organization, most of them being units of larger organization. Special libraries are that which are specialized on a particular subject or group of subjects. They are formed in research and development establishments, government departments, directories, bureaus, industrial and business undertakings, learned societies and professional association, trade and business associations, hospital and health services, social and welfare organizations, museums etc., The examples of special libraries are libraries for blind children or hospital patients, a library of films, video cassettes or manuscripts, Libraries of any IITs of India, Library of Indian Institute of Forest Management, Bhopal, Library of Indian Institute of Petroleum, Dehradun etc.,

Digital Library

In digital libraries, services are fully automated and all resources are in digital form. It enables users to interact effectively with information distributed across a network. It may be based on a subject, a vocation or procession, a region or a nation. Digital Libraries are electronic libraries in which large number of geographically distributed users can access the contents of large and diverse depositories of electronic

objects. Electronic objects include networked text, images, maps, sounds and videos. They also include hypertext hypermedia and multimedia compositions. A digital library is a distributed technology environment, which dramatically reduces barriers to the creation, dissemination, manipulation, storage, integration, and reuse of information by individuals and groups provides facility for downloading and printing. As such, the cost of maintaining a digital library can be much lower than that of a traditional library.

One of the largest issues in creating digital libraries will be the building of digital collections. Digital imaging is an inter-linked system of hardware, software, image database, and access sub-system with each having their own components. Information accuracy, compatibility of hardware and software, shelf life. Apart from these, problems like developing electronic catalogues that can retrieve information across digital libraries over a network, finding a cost effective way to digitize the material without spoiling the original in the process, and making the digital material available while protecting the literacy rights of articles, writers and publishers are to be addressed.

Virtual Libraries

These are the libraries without resources but resources simply may be a collection of web sources. It is the library with little or no physical presence of books, periodicals, reading space or support staff, but disseminates information directly to the distributed users, usually electronically. The virtual library is the output of virtual reality, which is a substitution of manmade input to one or more of the sense. The graphical representation of the total architecture of the library in different angles and from different distances is created. So the user feels that as if he is moving inside the library when he moves the mouse. When the user clicks the book on a shelf, then the book floats from the shelf and opens up before him. The user can turn pages, copy or make print the materials. Multimedia is now largely used in the virtual environment to enhance the user believability, so that the user can feel like a real-life situation. The multimedia virtual environment is being used in libraries for providing resources to the users. A digital library is nothing but the transformation from traditional library. The digital libraries concept come into existence in the 21st century. Virtual library, electronic library, library without walls and digital library are synonymous to each other. The basic problem lies in virtual library is that it in very difficult to digitize all the resources of library which takes a lot of time and also expensive.

Challenges faced by the Libraries

The face of libraries is changing as content is moving toward a digital platform and Internet access is becoming more of a human necessity than a privilege. While this

presents innovative and creative ways for libraries to remain relevant to students and researchers, it also carries its fair share of challenges. The major challenges are :

- Becoming familiar with a wide range of digital content

- Preserving material on a digital scale

- Digital licensing

- Handling research data management tools

- Making services engaging to researchers and students

- Nailing down library policies

- Demonstrating your value

- A growing and diverse spectrum of customers

- Role development

- Subject-matter expertise

Remedial Measures taken by Government

The National Knowledge Commission (NKC) Working Group on Libraries gave ten recommendations. Out of those, three that need to taken up on priority basis:

- Establish the National Mission on Libraries;

- Undertake a Census of the Libraries in India;

- Establish the Indian Institute for Library and Information Science.

The action plan for the National Mission on Libraries took place on modalities of proposed National Census of Libraries in India is now carried out by RRRLF (Raja Rammohun Roy Library Foundation) and Indian Institute of Library and Information Science. The RRRLF is a Central Autonomous Organization established and fully financed by Ministry of Culture, Government of India. The library advocacy campaigns for different social segments with slogans like Each Village a Library, No School without a Library, Roots to Research and READ India. This will facilitate access to knowledge and learning at local level to both basic and advanced users.

Conclusion

Libraries with international service levels can be instrumental in facilitating many government plans. A key component of overall strategy for country-wide development of libraries is advocacy for policy changes at local, national, international levels that support the use of best practices and offer feasible solutions to advance library work. A country-wide network of players at various levels and strategic partnership between all stakeholders will lead to successful advocacy campaigns.

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News Paper Reading Attitude and Habits in the Academic Library : A Study

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Abstract

General Knowledge is an essential part of education. The newspaper is the best means for acquiring knowledge. The students can know very interesting things by reading a newspaper. The reading of newspaper is very useful for the students to develop their language ability and knowledge of the world. The study used a well-structured questionnaire for collecting the data from the PG students and faculties of G.T.N. Arts College, Dindigul, India. This constitutes 91.00% (91/100) of the total response. While selecting a sample, random sampling method has been adopted. The finding for the majority of respondents 95.8% read the daily Dhina Thanthi, The highest numbers (73.63%) of respondents prefer editorial section, the majority 98.6% of the respondents read the newspaper to get the information. Concerned authorities of the college must take proper actions to make sure that students can read newspapers without facing any problem.

Keywords: Newspaper, Electronic environment, Reading habits, education.

Introduction

Newspapers help to improve reading habits, knowledge, and awareness. They can be part of good study habits for students in any area of specialization. India is a developing country with many ethnic communities who wish to live together. Efforts to solve cultural adaptation problems should be the multi-dimensional and long term. Reading and library use habits have an important role in building the multicultural structure in a country. According to Stadler (1980), reading;

- Will develop the source of word of children in both mother language and householder language.

- Will contribute the thinking in both languages.

- Will raise the communication in both languages.

- Will help the children to learn the rules of behavior and lifestyle of householder country.

Library use can have these functions in cultural adaptation:

- To develop the intercultural understanding and relationships.

- To facilitate the intercultural passing.

- To increase the cultural diversity.

- To provide social integration.

- To give an educational support to language development. (Mylopoulos 1985).

Review of Literature

Praveen Patel, Devendra Patel & Haresh Patel (2014) surveyed Reading habits of newspaper in pharmacy college: An analytical study. They found in the time spent for reading newspaper among Pharmacy professional in SKPCPER. Out of 301, 50.17% undergraduate students, 13.62% postgraduate students and 6.98% faculty members are spent less than 30 minutes per day to reading the new paper. 23.59% Pharmacy professionals are spent 30 minutes to1 Hour to read the newspaper. Moreover, It is evident from the table, among 301 respondents 5.65% are spent more than one hour to read the newspapers.

Kishore Basumatary (2014) examined Information literacy and reading habits: a Case study of same angst, Howraghat and Langsomepi Development blocks under Karbi angling Autonomous council of Assam, India. He found The educated people read mostly newspaper, magazine, locally published journal and general books like novel and other leisure books indicates the source or mode of acquiring the print reading materials. Newspaper is the most popular reading material among the educated people of the study area. Table-4 indicates that (80.5%) of the respondents including male and female reads newspaper by shelf purchasing, followed by books (48%) and Magazine (45%). This study also indicates that among males reading newspaper by self-purchasing is (56.5%) followed by and Magazine (36%) books (29%). On the other hand, among females reading newspaper by self-purchasing is (24%) followed by books (19%) and magazine (9%). Acquiring or accessing newspaper, magazine, and books from library and other means by both male and female are meager and not significant.

Akanda, et.al (2013) surveyed about Reading habit of students in social sciences and arts: A case study of Rajshahi University. They found The World Wide Web has grown in popularity and use in recent years. The respondents of this survey, like other young people, are regular users of the web. It is an encouraging sign that the majority of them

browse the web for reading purposes. Cyber caf's have become major places for people to use the Internet. Many young people prefer cyber caf's because they are affordable and comfortable. On the other hand, a substantial number of the respondents access the Internet from home. The pattern of their Internet usage is also noteworthy, because, contrary to the popular belief, the majority of the students surveyed indicated that they use the Internet only for one hour a day.

Eamin Ali Akanda and Armanul Haque (2013) conducted a study Newspaper Reading Habits of University Graduate Students In Bangladesh: A Case Study. They found expresses that majority 130 (11.85%) number of the respondents read newspaper to obtain information while the second largest 125 (11.39%) respondents read newspaper to broaden the horizon of general knowledge and 122 (11.12%) respondents read for educational purpose while 120 (10.94%) respondents read for the purpose of searching new jobs and to know the sports news respectively. The least number of respondents i.e. 10 (0.91%) for improving the status in the society. That hall libraries are the most common sources of paper-based newspapers of students i.e. 35.91% students depend on hall Libraries while 30.39% students depend on individual subscription, and 13.81% students rely on university library. And the least number of students i.e. 4.97% students depend on public library and 14.92% students depend on other sources for getting newspapers.

Njeze, Miracle Eka (2013) did a case study on Use of Newspapers and Magazines in the Academic Pursuits of University Students of Covenant University in 2013 and his findings revealed that the most consulted newspapers by both male and female students are the Punch, the Nation, Guardian, and Complete Sports, while the most consulted magazines by both students are PC World, Popular Science, Leadership and Time magazine, but female students have more interest in fashion magazines like Ebony, Style, Allure and Life etc .

Background of the Study

Objectives

The following objectives are evolved for the purpose of the present study:

- To Prepare to read which language newspaper.

- How much time is spent reading newspapers?

- Which newspapers are read most by students and faculty?

- Which sections of newspapers are read most by students and faculty?

- To Purpose of reading Newspaper.

- Users Opinion about the Electronic environment is very useful to read the online newspapers at any time and anywhere?

Methodology

The study used a well-structured questionnaire for collecting the data from the PG students and faculties of G.T.N. Arts College, Dindigul, India. A total number of 100 questionnaires were distributed among the Post Graduate students 75 nos and 25 nos Faculties. They are personally requested to fill up the questionnaire at their earliest convenience in order to help the investigator to collect the same during his next visit. During these visits, the investigator could collect questionnaires from only 91 out of 100 students and faculty among whom the questionnaires were distributed. This constitutes 91.00% (91/100) of the total response. While selecting a sample, random sampling method has been adopted.

Data Analysis

Users	Distributed	Received	Percentage
Post Graduate Students	75	69	92.00
Faculty Members	25	22	88.00
Total	100	91	91.00

Table 1. Size of the sample
Source: Primary data.

The Table-1 shows that the size of distribution and received a questionnaire from the students and faculty. Total numbers of a questionnaire distributed among Post Graduate students 75 and Faculty members 25. Out of these the responses from the respondents are Post Graduate students 69 (92.00%), Faculty members 22 (88.00%) and the sample 91 (91.00%) of the total respondents in this study.

Gender Wise Respondents

Gender	Post Graduate n & %	Faculty n & %	Total n & %
Male	44 (48.35%)	13 (14.29%)	57 (62.64%)
Female	25 (27.47%)	09 (09.89%)	34 (37.36%)
Total	69 (75.82%)	22 (24.18%)	91 (100.00%)

Table 2 Gender wise Respondents
Source: Primary Data

Table 2 shows that among 91 respondents, 57 (62.64%) were male and 34 (37.36%) were female. It is clear that this study got more male respondents read the newspaper.

Preferred Language For Reading Newspaper

Language	Post Graduate		Faculty		Total	
	n & %		n & %		n & %	
Tamil	69	75.82%	22	24.18%	91	100.00%
English	39	42.86%	17	18.68%	56	61.54%

Table 3 Preferred language for reading newspaper
Source: Primary data.

Table 3 shows that average 100% of students and faculty members use Tamil language and whereas 61.54% of respondents prepare to use the English language for newspaper reading.
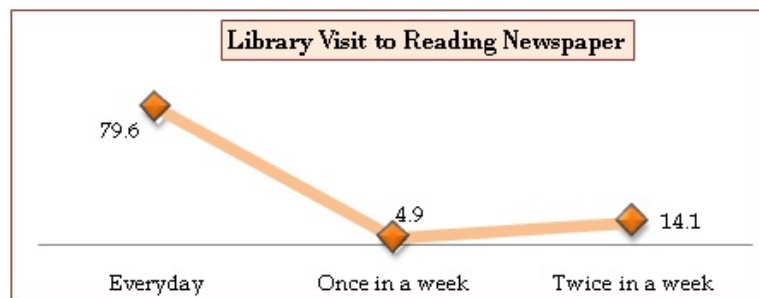
Frequency of Visit the Library to Read Newspaper

Figure 1.Library visit to the reading newspaper. Source: Primary data.

Figure 1 does not offer an encouraging finding, because of nearly half of the respondents 79.6% visit college Library every day. On the other hand, the number of students 4.9% who visit the library once in a week and 14.1% go to the library at least twice in a week.

Read Newspaper Daily (Multiple Responses)

Newspaper	Percentage (%)
Dinakaran	74.6
Dina Thanthi	95.8
Dinamalar	83.8
Dina Poomi	31.7
Dinamani	64.8
The Hindu Tamil	69.7
The Hindu English	60.6
The New Indian Express	57.0
The Economic Times	57.0
Business line	39.4

Table 4. Read Newspaper daily (Multiple Responses)
Source: Primary data.

Table 4 attempts to disclose the information on the name of the newspaper that the users read daily where the majority number of respondents 95.8% read the daily Dina Thanthi, while the second largest number 83.8% of respondents prefer the daily Dinamalar. Moreover, the daily Dinakaran is being preferred by 74.6%, 69.7 % respondents read the daily The Hindu (Tamil), while 60.6% respondents read the daily The Hindu English, The New Indian Express and The economic times both respondents rate is same. That is 57%.respondents choose to read other newspapers. Dinaboomi and Bussiness line newspapers are the very lowest rate of respondents rate is respectively 39.4% and 31.7%.

Most like Area of Newspaper

Area	Post Graduate		Faculty		Total	
	n	%	n	%	n	%
Sensational News	32	35.16%	20	21.98%	52	57.14%
Editorial	45	49.45%	22	24.18%	67	73.63%
Advertisement	29	31.87%	17	18.68%	46	50.55%
Letter to Editors	13	14.29%	14	15.38%	27	29.67%
Politics	31	34.07%	19	20.88%	50	54.95%
Sports	42	46.15%	18	19.78%	60	65.93%
Cinema News	47	51.65%	11	12.09%	58	63.74%

Table 5. Most like Area of Newspaper
Source: Primary data.

The above table 5 represents the information regarding the area of the newspaper that the users usually wish to read in their day to day newspaper reading. Different people prefer to read different sections of newspapers. Table 8 shows that the highest number 73.63% of respondents prefer editorial section for the purpose of gathering the day to day editors thinking followed by 65.93% sports, 63.74% cinema news, sensational news 57.14%, politics section 54.95%, Advertisement 50.55% The lowest portion i.e. 29.27% of the respondents prefer the letter to editors section of newspaper.

Purpose of Reading Newspaper

Purpose	Percentage (%)
To get the information	98.6
To broaden the horizon of the general knowledge	95.8
For educational purpose	85.2
For searching new jobs	69.7
For entertainment	71.1
To know the sports news	86.6
As usual task of the day	64.8
To pass the time	37.3
To improve the status of the society	54.9
To improve the health consciousness	61.3
To keep abreast with the present happenings of all over the world	87.3
Others	54.2

Table 6. Purpose of reading newspapers
Source: Primary data.

Newspapers are a vital source of information in enlightened societies; providing the most recent information to readers. Newspapers serve various purposes for different categories of users. Respondents were asked about the various purposes of reading newspapers and they mentioned different reasons for reading newspapers. Table 6 expresses that majority 98.6% of the respondents read the newspaper to get the information while the second largest 95.8% respondents read the newspaper to broaden the horizon of general knowledge and 11.12% respondents read to know the sports news while 85.2% for educational purpose. The least number of respondents i.e. 37.3% for pass the time.

Findings and Suggestions

- Out of these the responses from the respondents are Post Graduate students 69 (92.00%), Faculty members 22 (88.00%) and the sample 91 (91.00%) of the total respondents in this study.

- It is clear that this study got more male respondents read the newspaper.

- 100% of respondents read Tamil language newspaper and 61.54% of respondents prepare to read English language newspaper.

- The majority number of respondents 95.8% read the daily Dina Thanthi.

- The highest numbers (73.63%) of respondents prefer editorial section.

- The majority 98.6% of the respondents read the newspaper to get the information.

Newspaper reading also improves the communication skills and creative faculties and help the readers achieve an unbiased and informative worldview. Therefore, newspapers are considered essential for university students. This study reveals that both Tamil and English newspapers are frequently read by the under and postgraduate students and faculties of G.T.N. Arts College and they prefer international section to the national section for the purpose of keeping abreast of the day to day happenings in different parts of the world. The study also indicates that, in spite of their interest in newspaper reading, students are prevented from newspaper reading because of various socio-cultural, administrative and environmental problems. Concerned authorities of the college must take proper actions to make sure that students can read newspapers without facing any problem.

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Academic Library Building Initiatives in Preservation Techniques: A Case Study

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Abstract

The librarians are often encouraged to maintain and keep their collections accessible through digitization as their stock in trade is their collection. This study examined capacity building initiatives in preservation techniques in selected libraries and assessed the level of training received by different library staff. Four university libraries were randomly selected and a descriptive survey method using a self developed questionnaire. The respondents comprised librarians and non-librarians. The study revealed that there were no professionals to manage the preservation section of the university library and as such, most institutions make do with Para-professionals. Analysis from the respondents show that Universities in Nigeria are not exposed to capacity building in preservation. Finally, regular trainings are vital for the development of all staff and for any university to stand out amongst others; there must be provision for usual capacity building of both faculty and staff.

Keywords: Capacity Building; Librarian; Preservation; Academic Library.

Introduction

Preservation is the art of keeping safe, maintaining, retaining and keeping alive. Preservation, as it applies to library and archive collections, can be defined as all managerial, technical and financial considerations applied to retard deterioration and extend the useful life of (collection) materials to ensure their continued availability. Library building is very important because it gives staff the knowledge to decide which resources to digitize and not to digitize, while obsolete resources are weeded, in terms of content, date of publication, and date of acquisition.

The building of the library plays important role in rending libraries effective service towards readers. Library building houses library collections of various kinds, chiefly books and other printed material, seating accommodations and other facilities for library users. Quarters for library staff that acquires catalogues, and serves the collections and in addition also leaves some non-assignable space. An academic library meet the study needs of undergraduate, postgraduate students, research scholars and renders up to date and exhaustive information to faculty members. It also plays the direct and indirect role in organizing seminars, conferences and lectures library is the basic source for information and inspiration for whole institution. Hence the library building should be planned so meticulously that it can render its service for all types of academic needs with the modern techniques.

Readers Convenient in Library Building Planning

Reader's convenience should be given top priority in the planning of the library building. Five different groups of readers should be kept in mind in planning space and seating accommodation in an academic library. They are;

- Undergraduate students

- Postgraduate students

- Research scholars

- Faculty members

- Visiting scholars and other public visitors

Location and Protect of Library Building

Library should be located at the central place of and academic institution. But this consideration does not suit in the case of industrial libraries because the industrial pollution may cause serious damage. Building should be erected well. So that the material will be protected well. There are negligible number of insects found below 400F. so that it is better to air condition the library. Air conditioning protect the material from Temperature, Humidity, Air motion, Air distribution, Dust, Bacteria or fungi, toxic gases etc.

To avoid termites, great care has to be taken to avoid wood work. As far as the shelves should be of steel and well finished. Building should be construct with good grade cement and all cracks and crevices should be cemented. It should be treated with

termite proofing materials such as coaltar, caeosola zinc chloride, mercury chloride, pentachlorophenol etc.

Spread of Neem and Tobacca leaves behind bookshelves. Ventilation of the library building is advisable. Flood can be eliminated by proper way planning the building. To prevent from fire, there should be no smoke, removed the waste materials, kept in number of fire extinguishers and electric wiring should be checked regularly and the electrical equipments used with much care.

Security

The preservation policy should include a statement on responsibilities for the security of the collections, both those of the staff and the users.

Literature Review

According to **Doyle (2005)** there are different types of librarians that specialize in preserving library materials these librarians are recognized as preservation librarian, conservation librarian, reformatting librarian and preservation consultant. They ensure smooth running of their section and effective management of resources at their disposal, but in most Nigerian Universities we hardly have librarians with such specialty. **Simpson, (2011)** observed that one of the biggest assumptions or oversights people make is to overlook how important it is to be personally prepared for an emergency. The first 72 (seventy-two) hours is the most crucial, and self-preparedness can make a lot of difference when disasters strike hence the need for having a functional and workable preservation department. It also is expedient to initiate a robust training package for the library. According to **Donata (2011)** capacity building enhances job performance and management efficiency. The advantage of capacity according to **Anunobi (2012)** and **Stoner (2002)** is that it reduces cost of production, enables staff make prompt decisions, boosting of ones morale, reduces supervision, rapid growth in staff status and organizational stability.

Statement of Problem

It is a popular saying that prevention is better and even cheaper than cure. This is true even in the library setting; replacing library materials when possible, is expensive. Preservation makes good economic sense. Considering the huge risk librarians stand to face in the case of any loss/disaster in the library, this study therefore attempts to identify whether librarians are taking proactive steps especially by receiving the

necessary training in order to prevent the occurrence of loss or damage of any kind.

In carrying out this study, the researcher intends to put forward the following questions, which will guide her in conducting the study. These include:

(a) Does the library have a functional preservation department?

(b) What category of staff is responsible for preservation?

(c) Do librarians attend international workshops/conferences on preservation?

(d) How often does the library conduct capacity building on preservation?

(e) What capacity building initiative is available for library staff?

(f) Which preservation technique is used in the library?

Research Methodology

The study used questionnaire, observation and interviews as the instruments for collecting data. The population of this study covered 120 (one hundred and twenty) librarians and non-librarians in academic libraries in Ogun State, Nigeria. The random sampling technique was used to select respondents from each of the libraries to represent the sample of the study. This presents the demographic variables used in this study. All the variables selected and tested as independent and dependent variables were described in the tables 1-11.

Sex	Frequency	Percentage (%)
Male	23	46
Female	27	54
Total	50	100

Table 1: Sex distribution.

The analysis on Table 1 depicts that 54% of the respondents are female while 46% are males. This is expected as there are more female librarians compared to their male counterparts in the library profession. Asserts that women are in the majority in librarianship.

Qualification	Frequency	Percentage (%)
Bachelor of Library Science (BLS)	17	34
Master of Library Science (MLS)	24	48
PhD in Library Science	9	18
Total	50	100

Table 2: Educational qualification.

The data above reveals that the highest respondents are professionals first degree bachelor of Library Science (BLS) 34%, master in Library Science (MLS) 24%, while the least 18% possess doctorate degree.

Years of Experience	Frequency	Percentage (%)
1-5	11	22
6-10	13	26
11-15	24	48
16 and above	2	4
Total	50	100

Table 3: Years of experience

Table 3 shows that 48% of the respondents ranging between 11 (eleven) and 15 (fifteen) years, 4% of respondents ranging 16 (sixteen) years and above have work experience in the field of research, 26% of the respondent representing between 6 (six) and 10 (ten) years, and 22% representing between 1 (one) and 5 (five) years have experience in the field of study.

Job Status	Frequency	Percentage (%)
Library Assistant Library Officer		28
Assistant Librarian Librarian II	16	32
Librarian1 Senior Librarian	18	36
university librarian	2	4
Total	50	100

Table 4: Job status

From the classification of the respondents library assistant and library officer represents 28%, while assistant librarian and librarian II represent 32%, librarian I and senior librarian represent 36%., and university librarian represent 4% of the respondents.

Institution staffs	Frequency	Percentage (%)
Arts and Science Colleges	19	38
Engineering colleges	15	30
Universities	03	06
Polytechnic colleges	13	26
Total	50	100

Table 5: Distribution according to institution staffs

The Table 5 shows the total questionnaires completed and returned by the institution participating in the survey. A total of 60 questionnaires were distributed to individuals from various institution. These, only 50 have been completed and returned, representing 93.3% of total, which were used for analysis.

Does the library have a preservation department?	Frequency	Percentage (%)
No	24	48
Yes	26	52
Total	50	100

Table 6: Presence of preservation department

The Table 6 shows that 48% of the respondents observed that the library does not have preservation department but they do, it is because it is not functional, while 52% of the respondent agree having preservation department.

What category of staff is responsible for preservation?	Frequency	Percentage (%)
Para professional staff	14	28
Professional staff	36	72
Total	50	100

Table 7: Category of staff responsible for preservation

The Table 7, clearly shows that 28% of the task on preservation and has been enormous on para-professionals, this is so because librarians/professionals do not possess enough skills to manage the section effectively, while only 72 % of the professional staff are knowledgeable and have skills to match in preservation.

Does librarians attend workshops	conferences on preservation? Frequency	Percentage (%)
Yes	17	34
No	33	66
Total	50	100

Table 8: Attendance of workshops for library staff on preservation

The Table 8 indicates that the negative response to workshops and conferences by librarians is very high about 66% compared to their colleagues in the developed world that is conversant with modern trends in the profession. On the other hand only 34% of librarians attend conference and workshops which is quite low for an academic library.

How often does the library conduct capacity building in preservation?	Frequency	Percentage (%)
Quarterly	04	08
Once in six months	08	16
Once yearly	10	20
Once in three years	28	56
Total	50	100

Table 9: Capacity building in preservation

The Table 9 shows that capacity building is not being organized for librarians and non-librarians because within one to three years, only 56% and 20% of staff have been exposed to training while in the duration of six months only 16% and 8% were exposed to trainings. This is very low because knowledge is power, therefore as information providers we must be abreast with current trends in our profession.

What capacity building initiative is available to library staff?	Frequency	Percentage (%)
Seminars	08	16
Conferences	12	24
In House	14	28
Formal	12	24
E-Learning	04	08
Total	50	100

Table 10: Capacity building initiative for library staff

The Table 10 highlights that libraries surveyed conduct seminars (16%) and in-house training (28%) for its employees. Capacity building initiatives related to conferences (24%) appear in the background. Finally, it appears personal development (24%) and e-learning (8%) demonstrating initiatives that are little used.

What capacity building initiative is available to library staff?	Frequency	Percentage (%)
Care of Collections	23	46
Conservation	14	28
Digitization	08	16
Disaster Preparedness Plan	05	10
Total	50	100

Table 11: Current preservation techniques used in the library

The Table 11 shows that all the libraries have exposed their staff to capacity building in scanning (46%), though more trainings needs to be conducted in attempts to take appropriate care of library materials, because it is considered that conservation (28%) and disaster plan (10%) are very low rates.

Findings

The study revealed that majority of the libraries studied do not have functional reservation department perhaps this is because the direct impact of wear and tear and its effect on library materials have been underestimated by the Librarians.
Library building should be protected from fire hazards, for this purpose following things can be used.

- Fire extinguisher

- Insulation

- Fire alarm

- Water tank and water circulation tape.

The library design is to be such that adequate proper exit controls are maintained to reduce theft. Water leakage should be protected and other types of water hazards should be pre cautioned. The low priority accorded preservation in most of the libraries studied may not be unconnected to the relegation of preservation to the non-librarians after all; if there are professionals involved it would go a long way to justify the need to establish functional preservation department which would be headed by a qualified professional.

Conclusion

Library being a place of beauty and utility has become the most important part of educational institution campus. It is the pivotal place of current information, research workshop and inspiration for intellectual development. Hence library should have all types of such facilities like air- conditioning of the library building, lift to go up and come down and dust proof atmosphere inside. It construction should allow the free movement and maximum convenience to the user and thus should be a place of learning and comfort. National and international training on preservation techniques must be made compulsory for all library staff irrespective of their sections in the library. Capacity building should be done in two phases: the first phase should be for the newly employed staff, while the second phase for staff that has worked for more than five years and above. After training, it would be expected that the performance of the non-professionals will improve as they will strive to apply the techniques and knowledge

they have acquired from the training. Regular update of library science curricular must be introduced in our universities, both in undergraduate and postgraduate levels and the lecturers equipped with the latest trends in information communication technology (ICT). Staff must be trained on types of disaster, prevention and conservation strategies. It is the duty of all library staff, beginning from the University librarian, to safeguard the welfare of their collections. This training must be supported and encouraged by all categories of staff. Capacity building is necessary in every academic university especially for new staff, because it equips them with the relevant skills in their profession.

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Library Systems: An Overview

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Introduction

In the modern world, library systems have been changed in many ways. An explore method of teaching and learning process made void social ethics, educate people. Book generations have been turned to massive advancement of library systems. Many institutions come an end debate about library is a heart for every either learner or teacher. There are many systems in library profession. it may be variable for different places but path would be same. Learn learn till alive. Doctor Who: You want weapons? We're in a library. Books are the best weapon in the world. This room's the greatest arsenal we could have. Arm yourself! **Russell T. Davies**. Here I have mentioned about Two major kinds of library in the world.List has been give below.

1. Public Library

2. Academic Library

Public Library

Public library has different kinds of libraries. Central Library, State Library, District Library, Village Library and Panchayat Library. Each library has their own library system. It could be manual system or digital system. There rules and regulation vary for according constitution.

Academic Library

Academic Library depends only about education inquiry about knowledge. Academic library has many dimension school, college and university. As a School librarian, my perceptions about school library systems are extinct then other academic libraries. In School Library there are many ways followed by different curriculum State Board, CBSE, ICSE, IGCSE and IB. how they differentiate between these curriculum.

State Board Library Systems

Different states have own system. In Tamil Nadu samacheerkalvi library should have all subject. Ratio of the library would be 1:4. There is no compulsory to read library period and no restriction to update book and technology. State board library can follow manual or digital.

CBSE Library System

CBSE Library System is very systematic and scheduled one. They have proper rules and guide for CBSE Schools Library.
1. Library Should have reader corner.

- Book and activities.

- Allotment of fund.

- Library Period.

- Qualification of Librarian.

ICSE Library System

There is restriction for ICSE Library. Most of the concept is similar to CBSE Board

CIE School Library
CIE Library entirely different from other libraries. They have own rules and regulation. It depends up on school basis.

IB School Library
There are two library systems in IB Schools.

1. PYP (Primary year Programme)

2. IBDP(International Baccalaureates diploma Programme).

PYP Library:

This type of library unique from other library systems. Usually library setup should be based on subject wise like maths, English, science, etc. but this library should be in theme wise.

1. Who we are

2. Where we are in place and time.

3. How the world works.

4. How organize our selves.

5. Sharing the planet.

These library setup for only kindergarten and primary students.

IBDP Library:

IBDP Library system for only higher class student. These kind of library should have research based library and updated digital education app. these system should have TOK and EE (theory of knowledge and extended essay). Here librarian should take class about research book.

Conclusion

Here as my perception library would change their library system. Adaptation of new technology method will be served for new learner and new readers. Government takes initiative to give proper training to library professionals make efficient for new technology.Librarian should have updated knowledge about new modern library. They will try to learn new technology for modern world. So as my conclusion is librarian will have more service to build communities *Bad libraries build collections, good libraries build services, great libraries build communities.*

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Application of metric Study in Library and Information Science Research Field

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Abstract

The twentieth century may be represented as a centaury of the advance of metric sciences. On this centaury itself there had been the tendencies of bibliometrics, Scientometrics, Webometrics and informatics. Library and statistics science could be a multidisciplinary school of thought field of interest. it's the power to assimilate relevant concepts from exclusive field of understanding. The paper affords a Scientometrics study of library and facts science to standardize the techniques of library and records science to acknowledge the economical sample of authors. Scientometrics is expounded to and has over covering pursuits with bibliometrics, informatrics and webometrics. Webometrics could be a quantitative analysis of internet phenomena, which contains link analysis, internet citation analysis, request engine so forth. Those terms discuss with issue fields related to the study of dynamics of disciplines as meditated within the producing in their literature. These phrases square measure won't to describe comparable and overlapping methodologies. Various definitions of each of the terms square measure provided from associate degree test of literature. Therefore, bibliometrics is that the check out of quantitative issue of production, dissemination and use of recorded facts.

Keywords: Bibliometrics, Webometrics, Scientometrics, Informetrics, Multidisciplinary, Multicultural, discipline quantitative aspect.

Introduction

The twentieth Century is referred to as a result of the century of metric sciences is same metriometrics science. on this century there are the tendencies of biblometrics, Scientometrics, biometric, Webmetries and information processing etc. The term bibliometric become 1st utilized by Pritchard in 1969,

1. As the utility of mathematical and applied math strategies to books and alternative media of language. It enclosed relationship among range of papers boom of literature and designs of library info usage. Biblographic databases are advisor samples of book hobby within the field of experience (Vijay Kumar p. 2004)

2. Bibliometric techniques are most often used with in the topic of library and facts technology: several studies fields

3. Use Bibliomaniac methods to find the impact in their discipline. Bibliometrics has modified out all name since 1958. It's taken into accounts in a number of countries whereas creating essential coverage decisions regarding the destiny of presidency funded analysis. Its co-related with Scientometrics additionally. Webometries is that the chemical analysis of web phenomena consists of link analysis. It become prompted by victimization the conclusion that internet is associate widespread record repository with several those documents being instructional-associated. The complete Scientometric improvement is for community internet paintings for medical data. Several bibliometric, Scientometric analysis are recommended among the world of technological ability and Engineering analysis in Republic of India. Webometrics is associate undiscovered space involved with WebPages, link structure of internet sites then forth. The establishments with out its computing device aren't doable nowadays. These forms of scientometric technology ar interlinked and having tons importance in analysis the knowledge. in step with Hood and wilson the techniques of Bibliometricsar closely connected specialised of Scientometric and Webometrics.(four) studies in library and statistics technology manner the gathering and analysis of knowledge on a functions & operational of professional and library managers.

Bibliometrics

Bibliometrics is a fixed of quantitatively examine academic literature with the arrival of Bio technological know-how bibliometric techniques formed a new software inside the nation-states of technological know-how administration as a studies control and coverage equipment. Bibliometrics methods are most often used within the subject of library and statistics technological know-how. Aside from this it used in different areas also. Many studies fields use this technique to explore the effect of their area of researches. Traditionally bibliometric techniques were used to hint relationships among instructional journals citations, which allow customers to search forward in time from available articles to greater recent publications. It determines the recognition and effect of particular articles, authors and guides. data Scientists also use quotation evaluation to quantitatively assets the center journal titles. in line with Henderson, M.Shurville, S. and Fernstorm, okay. (2009) Bibliometrics at the moment are used in quantitative research evaluation workout of instructional out positioned. Through quotation analysis, all of the details of articles like authors, their distribution and contribution, 12 months of guide, institutional association and so forth, may be accessed. Citation analysis and content material analysis are usually used bibliometric strategies. Monitoring citations and information their trend in context is a key to evaluating the impact and impact of studies.

Definition of Bibliometric

There are numerous definitions of the time period bibliometrics out of them few super may be considered. The quantitative observe of physical posted gadgets or of bibliographic devices or of surrogates of either In evaluation to this Brokes (1990, P. 42) defines it- Bibliometric ought to now be conceded to library studies simplest its works now not but ended as libraries maintain to evolve to the converting world round them. White & Me Cain (1989,p. 119) explained it bibliometrics is the quantitative look at of literatures as they're reflected in bibliographics.Through the years, a number of evaluations and bibliographics of the bibliometrics were published some are general in their scope where as others are unique. one of the interesting capabilities of bibliometric time period used to describe element or all of this discipline. Bibliometrics is a fixed of equipment for analyzing e-book statistics. This approach of evaluation and study has created opportunities for librarians to truly engage with their academic colleagues. University librarians can plan and recast service fashions, refocus series and increase body of workers abilities to aid research needs in their instructional groups by demonstrating expertise that can aid different regions along with statistics literacy packages for students. Librarians need to apprehend the uses which might be being fabricated from bibliometrics and to ensure that professional development for library group of workers is supplied. Historically, librarians have targeted on palms on searching instruction through workshops, responding to request from lecturers and studies students. The University of recent South Wells library has taken a one of a kind approach with more specialised supply application Statements for instructional personnel. At the University of Melbourne, the era initiative provided the impetus for librarians to forge links with teachers chairing the assessment clusters. Victoria College has undertaken number activities to provide assist for educational body of workers. Like sensible many other universities of many nations have followed and molded their packages as per their desires and necessities. Studies are a method of constantly developing a discipline with ability. It makes use of clinical techniques. In this context Tejomurthy & Kumar explained studies as the gathering and evaluation of authentic facts any problem of librarianship done with in library schools in line with scientific and scholarly requirements.

Application and Adaptation of Bibliometric Technology in Indian Libraries

Libraries and library colleges in India have been sporting out research sports on varied topic of library and facts science. Dr. S.R. Rangnathan, the daddy of library science, laid down the inspiration of studies in India along with his pioneering efforts. He introduced formal education in library and information science area in universities.

Bibliometrics take a look at of research out put is the maximum commonly used studies techniques in India. Maximum of these research used Bibliometric techniques which include citation analysis to evaluation library and information science research. One of the well known relational bibliometric strategies is co-word analyses, which tasks a specific visible representation of the facts. Co-wards evaluation as a feasible technique for identifying studies traits. Its outcomes have produce a top notch deal greater than statistical artifact indicating that there is excessive hobby in bibliometrics / Scientometries / informetrics library machine university libraries.

Information and Library network (INFLIBNET) is likewise presenting bibliographic statistics services through extending technical assist and steering occasionally to academic libraries in automation and net running. The aim of the education program is to present the individuals sound overview of bibliometric techniques, overall performance indicators and tools & techniques related to bibliometrics analysis and mapping. As bibliometrics is a department of library and facts science which provide an explanation for out puts resources and inputs in phrases of organizational structure its object is to evaluation the number of papers posted (yr smart) as proven in following table to look at the reference made with the aid of author and to recognize the authorship pattern.

Webometric Analysis

The unique metrics research inclusive of bibliometries, Scientometries and informatrics are well known and used to degree scholarly communication pick out users of various problem, authorship and its developments in documents on various subjects of a whole area. Bibliometrics research methodologies of library and facts technology have always been used to provide equipment for knowledge the dynamics of disciplines, developing policy and justifying research funding. Latest years have witnessed the emergence of webometries or cybermetrics, which covers studies of all internet paintings-primarily based conversation the usage of Informetrics. The globalization has made a brilliant effect on educational schooling gadget and net is the regular supply of power.

The webometrics is a new concept with growing dimension and primarily based on bibliometrics but some part of welometrics examine is beyond the boundaries of bibliometrics. As far as situation of bibliometrics technology which itself is a completely broad phenomenon but webometrics examine is measurable and beneficial take a look at device related with seek engine performance. As a result it may be said that, on the premise of starting place, the bibliometrics. The base of all different metrics however because of some particular functions it differentiates among they all. In reality webometrics is a science based totally on informatricsstrategies.On this technological

know-how the content material analysis of internet pages are finished thru calculating and studying their out hyperlinks and in hyperlinks. Websites have grow to be powerful manner of conversation, which is hosted on at least on net server, handy through net or non-public neighborhood region community.

Scientometrics

The period Scientometrics is especially used for the observe of all factors of the literature of technological ability and generation. It consists of all quantitative parts of the technology, speech communication in technology and technological ability policy (nine) (Wilson 2001) Scientometrics has usually been delineated because the Quantitative study of technology and generation: (Van Raan (1998, P.5)(10). in step with Brookes (1990-P.42). The term Scientometries has return to be fruitful in technological ability policy studies. The term has currently established a large position within the social sciences. Identifying it with bibliometrics he superimposed equally that although the techniques of scientometrics and bibliometrics square measure fastidiously comparable their one-of-a-kind roles square measure distinguished through their terribly one among a form context.Every different definition is fitted out by means that of Tague-sutcliffe (1992 a, p.1) as a discipline or monetary activity. It entails quantitative analysis of medical sports. As in line with definitions it's miles clear that Scientometry could be a wider period of study having symmetrical and clinical out look of the articles. It's terribly systematic examine of the matter and via this device library will be ready to improve its nice of classy.

Informatrics

The maximum latest metric term, Informatics comes from the German term Informatics and become 1st projected in 1979 by Nacke to cowl that a vicinity of data technology addressing the activity of facts phenomena and also the utility of mathematical ways to the disciplines troubles, Bonitz (1982) sees this new term as important to tell apart informatrics most significant problems i.e. with scientific communication from the science of science and humanities. Nacke bear in mind it as a well-known fundamental measure for every bibliometrics and scientometrics. Brookes (1990) counseled informetrics as a regular fundamental measure for scientometrics and bibliometrics with scientometrics taken as learning to policy analysis and bibliometrics conceded further to library studies. The term informetrics is presumably the foremost modern of the 3 phrases. Informetrics may additionally subsume scientometrics and larger especially bibliometrics. Informetrics could be a quantitative methods in library, documentation and data science It covers the empirical studies of literature and files. Informetrics is that the observe of the quantitative aspects of facts in any type, no

longer simply records or bibliometrics, and in any structure, it might utilize and amplify the many analysis of the dimensions of facts that lie out of doors the boundaries of each bibliometrics and scientometrics. those definitions square measure inserting a comparative read of scientometrics elements.

Relationship Between Metric Sciences

Between these metric sciences bibliometrics first got here in lifestyles in 1969. It is a statistical analysis approach of book sample. The alternative metric sciences also are statistical techniques and feature their foundation on the basis ofBibliometrics, but all of them have their special subjects regions. all of the metric systems are having quantitative evaluation however their challenge are special. in this following determine it's miles clean that informatics covers all the metrics circles at the same time as bibliometrics and scientometrics are over leaping to every other, like wise webometrics is likewise over lapping the bibliometrics.

Conclusion

International, library practices area unit below going trendy modifications that stem from the proliferation of the web and its futures. Professional person will currently effectively perform antecedently labor intensive endeavor over Infobahn mistreatment packages consisting of e-mail, matter content pictures and sound documents. Technological development in records era and communication delivered nice changes within the realm of library options and management. It's born-again the library form and started at one in every of a sort stage of widespread based mostlyaltogether on scientometrics designs. As a result of those improvement new phenomena of metric gizmo emerged with a number of trendy parameters remarked as Bibliometrics, webometrics, Scientometrics and informatrics.

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Scientific Methods in Library and Information Science

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Abstract

The Discoveries of Copernicus, Kepler, Galileo and Newton in the 17th century not only brought scientific revolution, but also established a new method in research which in many ways was in direct contradiction to the ancient philosophical method. Though this method, slowly but surely, a body of knowledge has been built-up which we call science and now to be scientific has become a great desideratum. Every branch of knowledge is tending to become a science, just as everything was philosophy before.

Keywords: Scientific Method, Formulation of Hypothesis, Observation

Scientific Method Aims

Every inquiry arises from some felt problem, so that no inquiry can even get under way unless some selection or shifting of the subject matter has taken place. Such selection requires, we have been urging all along, some hypothesis, preconception, prejudice, which guides the research as well as delimits the subject matter of inquiry. Every inquiry is specific in the sense that it has a definite problem to solve, and such solution terminates the inquiry. It is idle to collect facts unless there is a problem upon which they supposed to bear.

The facts for which every inquiry reaches out are propositions for whose truth there is considerable evidence. Consequently what the facts are must be determined by inquiry, and cannot be determined antecedently to inquiry.

Limits and Value of Scientific Method

It is obvious, that when authorities conflict we must weigh the evidence in their favour logically if we are to make a rational choice. Certainly, when a truth is questioned it

is no answer to say, I am convinced, or, I prefer to rely on this rather than on another authority. The view that physical science is no guide to proof, but is a mere fiction, fails to explain why it has enabled us to anticipate phenomena of nature and to control them. scientific method is the only way to increase the general body of tested and verified truth and to eliminate arbitrary opinion. It is well to clarify our ideas by asking for the precise meaning of our words and to try to check our favourite ideas by applying them to accurately formulated propositions.

In raising the question as to the social need for scientific method, it is well to recognize that the suspension of judgement, which is essential to that method, is difficult or impossible when we are pressed by the demands of immediate action. When my house is one fire, I must act quickly and promptly- I cannot stop to consider the possible causes, nor even to estimate the exact probabilities involved in the various alternative ways of reacting. For this reason, those who are bent upon some specific course of action often despise those devoted to reflection; and certain ultramodernists seem to argue as if the need for action guaranteed the truth of our decision.

Bacon

The great scientific philosopher Francis Bacon (1561- 1626) was the firs systematizer of the scientific procedure.

John Stuart Mill

The aim of science is to find the order of nature. As John Stuart Mill (1806-73) put it, the search for the fewest and simplest assumptions, which being granted, the whole existing order would follow. Scientific method leads to the discovery and establishment of such laws.

Karl Pearson

As Karl Pearson, the great grammarian of science defined- The classification of facts, the recognition of their sequence and relative significance is the function of science; the habit of forming a judgement upon these facts unbiased by personal feelings is the scientific method.

Science is ideally a pyramid like system based on observed phenomena or more general theories, theories from which less general theories are deduced.

Ranganathan's Scientific Method

Dr. Ranganathan said that science is the name given to a domain in the universe of knowledge whose development is characterized by a method called scientific method. In other words science is ultimately bound-up with the way it is built-up.

The Three Processes

The system of theories in modern science has been built-up on three processes namely:

1. Observation or accumulation of facts;

2. Formulation of hypothesis; and

3. Verification of hypothesis.

Observation

Observation may be defined as the scientific procedure of comprehending things, qualities, qualities and relationship. The purpose of observation is to obtain more and more facts.
The three modes of observation in science are:

(a) Visual;

(b) With suitable instrument; and Experiment.

(c) Experiment.

Visual; Receiving a datum or data by sense experience. But, sense experience is subjective. But science results in unrelinquishable search for objectivity. Science reaches the objectivity in three ways:

(i) The observation of different persons under similar conditions must lead to the same results;

(ii) It must be repeatable; and

(iii) The quantifiable datum observed by one person should agree with the observed by the other.

With suitable Research Instrument: This mode of observation entails assisting the senses with suitable aids. (Telescope, microscope, photographic plate, etc. have been of tremendous help in recording facts which would be otherwise unobservable).

Experiment: in nature, the conditions under which we have to observe a phenomenon may occur in its own time. But in an experiment, we can arrange the conditions under which an observation is to be made. An experiment make possible:

(i) A more reliable analysis;

(ii) The observe may repeat the experiment over and over again, at will, and greatly lesson the probable error of his determinants; and

(iii) The investigation may be easily divided into parts, facilitating research, deducing inference to the connection between various phases of the experiment.

Formulation of Hypothesis

Active interrogation to discover the cause of a given event in nature often makes to resort to a preliminary supposition or hypothesis, which is proposed as an unverified conjuncture in an effort to explain the basis of the unknown phenomenon, subject to ensuing proof

A hypothesis is a tentative generalization, in the form of a proposition and formed by the process of induction. Inductive inference is concerned with the derivation of general prepositions from the evidence of scientific cases which come under the induced generalization.

The theory of induction suffers from two defects:

(a) A single instance can nullify the generalization

(b) Induction is based solely on observation, But, in a highly developed science, the cause may not be an observed phenomenon. It may be a creation of the mind.

E.g; The hereditary theory of Mendal by means of genes. The genes were never observed by Hendal. Yet no one can deny the helpfulness of his theory.
Qualities of Hypothesis

- (a)It must explain or describe the known facts;

- (b)It must be fruitful, i.e., consequences derived from the hypothesis must also confirm to new facts brought to light from time to time.

- (c)A good hypothesis should contain the least number of undefined terms or unproved assumptions. Simplicity of the theory is often a measure of its potency.

Testing of Hypothesis

A hypothesis is tested and accepted in two ways:

(a) It must include the other accepted theories and concepts in the field; and

(b) Consequences derived from it must tally with observation or the experiment.

Consequences from hypothesis are derived by names of deductive logic and the process is called deduction. The method of deduction proceeds in the following fashion:

  (i) The general principle is stated;

 (ii) A special case is cited;

(iii) Inference or conclusion or proof or demonstration results there from.

Thus, when we say, that, hypothesis is verified, it means that, the hypothesis explains concepts or facts which it sets out to explain. In science it may mean the hypothesis gives the causes of the phenomenon explained-thus, we land upon the concept of cause and effect, which is the touch- stone of the scientific method.

Spiral of Scientific Method

Dr. Ranganathan had characterised the working of scientific method by a never-ending spiral movement. For convenience the four cardinal points of the cycle have been denoted by the terms nadir, Ascendant, Zenith and Descendant and were called as the four sectors of the cycle. First Sector (use of primary sense to accumulation of data)

1. Use of primary senses either in their native state with the aid of instrument.

2. Observing the knowees either with or without experimental inference and conditioning.

3. Progress towards particularization and regression from generalization.

4. Progress towards concreteness and regression from abstractness.

5. Facts found and recorded.

Second Sector

(With the aid intellect to the formulation of and recording of inducted or empirical laws)

1. Use of intellect.

2. Reasoning with the aid of inductive logic to boil-down the numerous facts (collected at step 1) to a small number of inducted and empirical laws.

3. Progression towards generalization from particularization.

4. Progression towards generalization from concreteness.

5. Formation of empirical laws and their recording.

Third Sector

(With the aid of intuition- to the formulation of, and recording of fundamental laws)

1. Use of intuition unmediated by the intellect.

2. Boiling down of the inducted or empirical laws to the very small number of fundamental laws.

3. Progression towards ultimate generalization.

4. Progression towards ultimate abstractness.

5. Seizing of fundamental laws and their recording.

Fourth Sector

(With the use of intellect to the formulation and recording of deduced laws)

1. Use of intellect aided by itself or aided by machinery.

2. Reasoning with the aid of deducting logic including mathematical and other calculuses.

3. Progress towards particularization

4. Progress towards concreteness.

5. Derivation of deduced laws and their recording.

6. Deduced laws must include one and all the induced empirical laws.

7. The number of deduced laws exceed the number that of empirical laws if fundamental laws have been seized with intuition of adequate intensity.

Thus we find that the process of observation correspond to sector 1 and 2 in the spiral; the process of formation of hypothesis to sector 3 and testing of hypothesis to sector 4 in the cycle .

Re-entrance into the Spiral

Two things happen in the re-entrance:

1. Observation and experimentation are made to verify empirically the validity of new deduced laws.

2. Further continuous observation and experimentation leads to accumulation of new empirical facts.

So long as the deduced laws are verified empirically to be true and the new imperial laws are found to be in conformity with implications of the fundamental laws, there is no movement in the spiral. But as and when the new empirical facts appear to contradict the fundamental laws every effort is made to ensure absence of any kind of fallacy in the process of deduction even then, if the contradiction persists, a crisis is declared in the application of the scientific method. A new cycle gets into full swing and carries and spiral of scientific method further. Thus, the cycle is liable to be repeated without end. Thus, any domain in the universe of knowledge which admits of the above described spiral of scientific method in the course of its development is a science.

Helpfulness of the Spiral of Scientific Method

1. It helps in knowing the intrinsic attributes of subjects.

2. It helps in understanding the kind of work involved and the kind of ideas produced in the different stages of development of subjects;

3. It helps in ascertaining the different patterns of development in the universe of subject.(some start at stage 1; some start at stage 2 and so on);

4. It helps in studying the modes of development of subjects and groups of subjects)

5. It helps in predicting the likely development in a subject in the near future;

6. It helps in learning the affinity among long regions of knowledge which helps the classificationist in placing these subjects in helpful position in the universe of subjects and thereby, in the scheme for classification;

7. Gives a proper historical perspective of the development of subjects and thereby of the universe of subjects as a whole; and

8. It characterizes a discipline on the basis of its method of development, rather than, on the basis of its subject of study or the method used in studying.

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Library and Information Science Education Research and Development in India

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Abstract

Library and information science (LIS) education in India. It deals briefly the issues, challenges, common problems, structure of LIS programme, and it explains the quality of LIS education. The topic has chosen with a view to discuss the current trends in LIS programme being offered by departments of Library and Information Science in Indian universities and colleges. It also emphasizes the redesigning of the curriculum based on the emerging needs to match the new technological age. In this article, a detail analysis has been made on recent progress in Library and Information Science. This includes processing of knowledge acquisition, knowledge of computer, internet, information literacy and change in management. This article is highly useful for teachers, students and research scholars in LIS education.

Introduction

Library and Information Science (LIS) education in India will be completing 100 years in 2011. It is time for introspection and a need to know the present status of LIS and areas that need improvement. History provides a picture of the growth and development, which lends a perspective to such a study. This article presents an insight of these historical developments in LIS education in India since its inception.

During the recent past, quite a number of research activities have been carried out in the universities and research institutions in various parts of the world. In India, due to the establishment of University Grants Commission, AICTE and other similar bodies and their active support, many students are caring out M. Phil. and Ph.D. degrees. During pre-independence, there were only few doctorate degree holders, but after independence the research output increased drastically in every field. In India

about 125 universities and research institutions are offering Ph. D. programmes in Library and Information Science. Considering the available data, attempt is made to analyse research productivity of the various universities in India.

LIS Education in India

The Library and Information Science (LIS) education in India may be said to have taken place with the introduction of a training course in 1911, in the erstwhile State of Baroda. The real beginning of systematic education in LIS can be traced to the initiatives of Dr. S.R. Ranganathan during the period 1926-1931 at the Madras University Library in association with Madras Library Association. The summer school leading to certificate in library science, which Madras University continued under the stewardship of Dr. S.R. Ranganathan till 1937. Later, Andhra University, Banaras Hindu University, Bombay University, Calcutta University and Delhi University introduced Post -Graduate Diploma Courses in Library Science in the year 1935, 1941, 1944, 1946 and 1948 respectively. Apart from these universities, DRTC in Bangalore and NISCAIR in New Delhi started the library science education programmes. During 1947, altogether 27 universities were offering diploma courses in Library Science. In 1957, for the first time in the country, Aligarh Muslim University started B.L.Sc Course. The courses were offered at different levels such as Certificate, Diploma, Bachelors, P.G. Diploma, Masters and research degree programmes i.e. M Phil and Ph. D under different modes (on regular/on campus or distance/off campus or sometimes both) and schemes (annual or semester). The growth of universities during post-independent India ensured improvement in the quality of education. It is due to the importance of libraries in various institutions, research centres and government departments, the demand for librarians also increased. This actually gave boost to Library Science Education in India.

Library and Information Science (LIS) Research

Research is a prime developmental activity of any discipline and profession including the profession of librarianship. LIS research helps in identifying issues that affect the growth and development of librarianship as well as that of the LIS education. The genesis and development of LIS research in India may be traced back to the year 1924 when Dr. S.R. Ranganathan joined this profession. His seminal contribution to various facets of LIS enriched the discipline and elevated its status from art to a discipline in social sciences. Library Science which was started as a school now grown up to a full fledged department renamed and called as Library and Information Science. In due course of time many universities in India including open universities have introduced M.Phil and Ph.D. programmes in LIS. Now LIS has become a full fledged discipline like other social sciences discipline and enriching itself day by day. Research initiatives

in Library and Information Science are also increasing day by day. Research in Library and Information enables to know the needs and expectations of the actual and potential users. The extent of users satisfaction or dissatisfaction could only be known through research. The most important advantage of LIS research is to improve the status of LIS professionals. In India LIS has changed its traditional mode of providing services to the users into a new scenario. In LIS, as other fields requires constant innovation and research so that new techniques can be discovered and the same can be applied for uplifting its professionals. Major changes in the trends related to LIS research commence during 1980 to 1990 where there was a continuous shift of research related to various areas from traditional based systems to machine operated systems. In LIS traditional manual techniques started declining and new ICT enabled techniques started growing for serving users. LIS in global scenario has reached up to a superior level and the professionals of LIS have started working towards the practical aspects of modern libraries.

LIS Research: History

Dr D.B. Krishna Rao was the first research scholar to obtain Ph.D. degree in LIS from the University of Delhi in 1957 under the able guidance of Dr. S.R. Ranganathan. For nearly two decades no other university in the country seems to have either introduced Ph.D. programme or conferred a Ph.D. Degree. It was Punjab University, Chandigarh which turned out the second Ph.D. in 1977. He was Dr. Pandey S.K.Sharma who was awarded Ph.D. under the supervision of Dr. J.S. Sharma.

Academic Libraries

Libraries are the heart of any Academic Institution rightly quoted by Dr. S. Radhakrishnan, former President of India. Academic library serve the informational needs of the students and teachers of its parent institution. Seven theses have been found related to the working conditions of University Libraries. Some of the notable areas are, Analysis of web based library services in University Libraries in India; Growth and Development of Journals in economics with special reference to E- Journals: A study of the Libraries of central universities in Delhi; A study of organizational structure of University Library in Rajasthan; Development of University libraries in Gujarat state: A study; Engineering College Library System: A futuristic study of College Libraries under the jurisdiction of University of Pune; Development and management of Engineering College Libraries in Western Vidharba region: An analytical study; An evaluative study of information sources and services in University Libraries of Punjab and An evaluative study of transit from print to e-print journals and their effect on Library services in University Libraries of Western U.P. Most of the topics found

under this area are related to the analysis of university libraries in terms of applicability of Latest advancement in the field of Library and Information Science because there are continuous demands from the students and faculty members to improve academic library services. Research in this area is also necessary to formulate certain ways to cope with the current demands of users in the age of information explosion.

Digital Library

Digital Libraries use latest techniques to render library services in todays Information and Communication Technology environment. Much research is going on relating to this area but few research scholars are studying about the technology involved in creating digital libraries. The main focus of research under this area is only on finding out the initiatives of digitization in libraries and the related aspects. Three titles have been found related to this area such as, Digitization and Open Access initiatives: A study of special libraries in national capital region; Trends and development of Digital Libraries in scientific and research institutions in Delhi: a comparative study and Design and development of digital database of homoeopathic information resources in India: a plan proposal.

Public Libraries

Public libraries play a very important role in dissemination information to the people of community. It gives free information services for the lifelong learning of its patrons. In this area some research has been done so far. Notable topics are, Information management in Public Libraries of Tehran: a study in the changing environment and the role of Village Libraries in development: A case study of Mizoram North Eastern Hill University, Shillong. It is found that a few researchers have taken this area for research and more research is required in this field.

Open Access and E- Journals

Open access and E- journals have become important topics for research in almost every University. Some of the topics covered under this area are, Open sources movement in India with special reference to digital library software: a study; Use of Electronic Journals in Agriculture Libraries by the Agricultural Scientists in Delhi; Electronic Journals: a study of UGC Infonet E- Journals Consortium with special reference to University Libraries in Delhi: a study; Use of E- Journals by users of ICMR labs in Delhi; Use of E- Journals in the field of chemistry by faculty members and research scholars in select university libraries in Delhi: a study; Use of resources in the field of geography by the users in select university libraries in Delhi; Electronic resources:

A survey of current practices in university libraries in Delhi and Electronic resources in Physics in selected libraries in Delhi. Open Access resources are becoming popular because of their unrestricted access. Research in this area is important to find better service conditions for users.

New Challenges

Curricula remodelling is a process whereby the choices of designing a learning experience for students are made and then activated through a set of coordinated activities. Curriculum development for the professionals is a logical as well as practical process to reach the problem solving stages ultimately. Today, information professional is required to be informed evaluator, instructor, service marketer, innovator, data miner, information aggregators, information consultant, effective communicator and knowledge manager. He is supposed to have workable knowledge of handling ICTs, web based library and information services, digitization of document and IPR issues. He is also supposed to train users in making effective use of networked electronic information services, organize library outreach services etc. With such countless responsibilities, only multi-skilled information professionals can survive and thrive in the emerging information era.

There is need to change the LIS education system in order to face the new developments in the profession, the following important points may be useful;

- Practical orientation is an essential concept to be incorporated

- The concept of creating, managing and maintaining databases is helpful in LIS students current job.

- Model curriculum based on the cutting edge course contents and ICTs.

- Teaching and evaluation methods must internalize the spirit of the emerging mechanism.

- Information literacy and knowledge management must be integrated into the LIS course and reflected in the nomenclature.

- Collaboration with the information and data providers to provide trail run for digital resources and training to the students to develop the skills.

User Studies

Users are the most important component of a Library system because without users there is of no use of collecting, processing and managing informational content. Many

topics have been found which are related to user studies or its related area. It has become a prominent area to work and pursue a Ph.D. Main topics are Reading Habits among Science college teachers in Vidarbha region; Information Seeking behavior of researchers in Bio Sciences of the University of Chhattisgarh; Information seeking behaviour and reading habits of high court lawyers of Madhya Pradesh; Information needs and Information seeking behaviour of professionals in medical field: A case study of Jammu and Kashmir State, Information seeking behaviour and reading habit of secondary student in changing academic environment: a case study on Saharanpur district and A study of Information needs and information seeking behaviour of vertenary scientists in University and Research Institutes of Haryana, Uttaranchal and Uttar Pradesh; Information seeking behaviour of faculty members and research scholars with reference to Punjabi Literature: An analytical study and Information seeking behaviour of managers working in financial institutions in India: A study. This area has been in trend for PhD research.

UGC's Role in Promoting Libraries in India

One topic has been found regarding relating to this area and it is The role of University Grants Commission in the development of the University Libraries of the Gujarat State: A study. A few researchers are taking University Grants Commission's role in promoting libraries as a topic for their study.

Conclusion

LIS education in India is fortunate to have its torch bearer none other than the father of library science, the great Prof. S.R. Ranganathan. Of all his qualities, his being a teacher was a boon to library science in India. Research in Library and Information Science plays a very important role in shaping the future of this profession. LIS research has given a new height to this profession and given a chance to the professionals for uplifting their career. As far as trend in choosing a PhD topic is concerned, User's services and ICT related area are the choice of researchers. Researching an area ensures some new clarifications of the earlier problems. In LIS research, Libraries and their services in ICT environment are most important topics for research. The continuity of research in LIS helps the profession to go higher in terms of providing better services to users.We learn from our tradition; what led to a name for the country in LIS education throughout the globe. One obvious reason is S.R Ranganathan. But library professionals need to ponder over what he taught us and continue on those lines. Canons of context and currency are some of his important teachings. Library science need to change according to the needs of the time. It is high time, librarians and teachers should come together to overcome all shortcomings and take LIS education to greater heights.

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Can Practising LIS Professionals and Preaching LIS Professionals Come Together for Providng Better Learning Experience for Students? - A Model

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Abstract

Bringing professional practice and practitioners expertise into the classroom has always been the core idea behind all kinds of industry-academic collaboration activities. Teaching by a professional practitioner has its own impact on the minds of energetic students. Students get engaged with practising preacher who is currently working / specializing in the topic being discussed in the classroom. This paper discusses about a new model called Industry Fellows which brings the industry experts in to the joint planning and co-teaching of various concepts in LIS classrooms. The Industry Fellows model pairs a university teacher and a professional practitioner to teach a course together. This helps the faculty members and the students to learn the current technologies being used in library and information centres their initiations, planning, implementations, obstacles, lessons and feasibilities. The students clarify on what can be actually practised in real-life situations. They can have healthy interactions with the industry experts. This paper focuses on : meaning and objectives of IF model, modus operandi of initiating IF model in a typical classroom, comparison of IF model with other models for industry-academic collaboration, impact of IF model on experts, faculty members and the students, the application of IF model in LIS education and the infrastructure required for introducing IF model in librarianship.

Keywords: Industry Fellow, professional practice, joint-planning, classroom, co-teaching, interactions, feedback, industry partnership

Introduction

Education policy makers are increasingly stressing that faculty and professional practitioners need to cooperate more closely in educating the next generation. Both the National Research Council, in their report How People Learn and the Carnegie Foundation's report from their Preparation for the Professions Program emphasize the importance for educators to work with professional practitioners in practice-based fields such as engineering.

Challenges in bring professional practice into the classroom

There are three interrelated challenges in bringing professional practice more fully into the classroom.

(a) While college professors have expertise in teaching, they often lack the modern practices required in fields that are constantly changing. The workaday demands of the full-time academic make it difficult for college teachers to keep up with state-of-art practices.

(b) While professional practitioners possess state-of-art technical skills, their professional demands prevent them from being able to devote time to moonlight as university instructors. Even for those who do, their effectiveness is limited by their lack of teaching knowledge and their isolation from the rest of the faculty.

(c) Simply introducing students to professional practices does not alleviate the challenge associated with relating and integrating these practices with students academic knowledge. But such integration is necessary if they are to fully benefit from their educations over their professional careers.

Industry Fellows model is a novel attempt at addressing these interrelated challenges in an integrated manner.

The Industry Fellows model

Meaning

Industry Fellows involves a university faculty member and a practicing industry professional (the industry fellow) in the joint curriculum review, planning and teaching of a course related to the professional's domain of expertise.The Industry Fellows model pairs a university teacher and a professional practitioner to teach a course together.

Why to bring faculty member and industry fellow together?

The faculty member has broad expertise in the discipline, deep expertise in teaching, and local knowledge about students and the university context. Practicing computing professionals, on the other hand, have up-to-date knowledge of specific technical areas of practice, expertise in making pragmatic trade-offs to meet workaday constraints, and skill in navigating organizational culture. By working together, the Industry Fellows program exploits what each does best.

Roles of faculty member and industry fellow

The faculty member retains full responsibility for all academic aspects of the course: planning and writing the syllabus, developing the assignments and examinations, and assigning grades. The practicing professional joins the faculty member in the classroom or remotely via electronic communication on a regular basis, interacts directly with the students, and provides feedback on a sample of the student work.

Objectives

The Industry Fellows model is designed to satisfy three objectives:

1. Increase student learning of course material, motivation to attend classes, and engagement in the course work.

2. Increase the knowledge of participating faculty members from colleges and universities in current practice in disciplinary areas.

3. Increase the knowledge of teaching-related skills (such as goal setting, managing work groups, and communicating ideas effectively) for participating professionals from the industry.

Modus Operandi of Instantiating the model

There were two distinct phases of interaction between the faculty member and the industry fellow: joint planning in advance of the academic term, and carrying out the co-teaching during the term.

The Joint Planning Phase: identical across instantiations

The planning is to be carried out several months in advance, and may involve three targeted, face-to-face meetings of approximately 1-1/2 hours each between the industry fellow and the faculty. Each meeting should centre around answering a key question. For example,
Meeting 1: What will students be able to do on course exit?
Meeting 2: What specific work will we assign to students?
Meeting 3: How will we sequence the topics from week to week?
The faculty member will keep extensive notes of these meetings and share these after each meeting with the industry fellow via email for commentary and clarification. We should have several weeks between each meeting. At the end of the three meetings, the faculty member will developan updated set of course materials for the course: syllabus, course schedule (i.e. the weekly sequence of topics, assignments, and corresponding

course readings), and assignments.

The Co-Teaching Phase: adaptive to the industry fellow's constraints

Heavy-weight versions

- The industry fellow will attendone of the two weekly class sessions.

- During this time, the faculty member structures interaction so as to maximize the interaction between students and industry fellow while at the same time making visible the industry fellows expertise.

- The main activity will be critique and discussion of student project work-in-progress that students would present for the full class.

- It also includes presentation and discussion of authentic work from past projects by the industry fellow.

- After each of these jointly-taught class sessions, the industry fellow and the faculty member would debrief the session (what worked, what didn't) and sketch a plan for the next weeks class sessions.

Light-weight version

- The industry fellow attends only the first and last class sessions of the term in person.

- During the balance of the term, the industry fellow attends class for approximately 15 minutes each week via electronic mediation, using a video Skype call projected onto the classroom screen.

- Approximately once every two weeks the students would post their current project designs to a publicly-accessible Internet wiki, and the industry fellow will briefly look at these.

- The substance of the classroom interactions with the fellow will be cantered around his comments on the project work that he was viewing.

- In addition, the industry fellow prepares screen casts giving a brief tutorial on an area of his expertise (e.g. using PowerPoint to make prototypes), and a screen cast giving his professional biography.

- The faculty member interspersed these screen casts throughout the term to provide a sense of the industry fellow's involvement, particularly during the weeks when he had little time to spare from his professional responsibilities.

- Finally, the industry fellow and the faculty member would talk for 10 minutes at the end of each week by telephone. During that time, the faculty member would update him on student progress, and they would discuss what students needed based on the project increments that they were viewing. This allows them to plan where to focus their efforts in the upcoming week.

Industry Fellows Vs Other Models

The Industry Fellows model is novel, drawing inspiration but also distinct from past attempts to link practitioners and academics.

Industry advisory boards can provide important input into curricula, thus having a positive impact on the development of degree programs. But acting at the program level divorces many of the board concerns from the day-to-day realities of the classroom. In addition, many of the members of the board are no longer practitioners but rather in higher levels of management.

Guest speakers from industry provide students a window into the world of work. But guest speakers have no opportunity to provide feedback to students on their work, and they rarely understand the context of the courses or the specifics of the college settings in which students are working. There is no ongoing relationship between guest speakers and students, no opportunity for these speakers to contribute to further student development. There is little opportunity for guest speakers to enact authentic practice, or critique students attempts at imitating and adopting expert practice.

When professionals moonlight as part-time teachers, there is the opportunity for this ongoing interaction. These moonlighting practitioners have deep content knowledge and a keen awareness of one or more specific work settings that they can bring to the classroom. Yet, they do not have the pedagogical or pedagogical content knowledge that only comes from experience in teaching. Since part-time teaching faculty have little interaction with skilled teaching faculty, they improve as teachers only very slowly through their own trial and error in the classroom.

Industry Fellows differs from student internships, where individual students spend time working in specific industries. These kinds of experiences can be invaluable to students, and can provide increased motivation for students to continue with their academic studies. Yet the experience also varies widely from student to student. In addition, there is often little opportunity for participating students to reflect on their internship experience and to explicitly integrate their academic knowledge with what they are learning about practice.

Because of the ongoing interaction of the industry fellow, and the pairing of practitioner with educator, Industry Fellows is a novel model with the potential to be extended to other practice-based disciplines and diverse settings. In addition, none of the existing models above provide the opportunity for teaching faculty to increase their practice knowledge.

Impact of Industry Fellow Model

Impact on industry fellows

(a) Industry fellows were highly motivated to take part in the program. Given their experience in the field they felt that they were in a unique position to inform the nature of computer science education at the curriculum level. It is their hope that these changes would better prepare incoming computer science professionals for the rigors of real work.

(b) Fellows reported that they enjoyed teaching and the program gave them the opportunity to do so without a significant time commitment.

(c) Fellows reported that they found the industry fellows experience to be enjoyable and rewarding. Fellows were most impressed with students level of engagement, the improvement in students work, and students appreciation of fellows efforts.

(d) Fellows felt that having an industry fellow in the classroom benefitted all parties involved including students, professors and industry fellows. First, students were more engaged because they were able to see practical applications. Second, the professor was able to supplement her/his knowledge base with up-to-date developments in industry. Third, industry fellows gained general classroom experience, a greater appreciation of why things are taught the way they are in academia and had the opportunity to impact future computer scientists.

Impact on students

Connecting the classroom to the world of professional practice

Most students mentioned how the industry fellow helped them to see the relevancy of their school work, and how they might use their classroom experiences in their future work.

- It gave me a better representation of how this course applies to a real job

- It gave the course a greater sense that this was something we could put to use in our professional career.

- I was able to see what I learn in the class can be used in real life settings.

- It helped me gain a more realistic view of my class material, seeing that it's more than just theory ... that it is used in practice.

- It really helped tie the course to a real life situation. I felt that I got a lot more out of it, and paid more attention just knowing that she had a career doing this.

- A lot of the time in courses, I find myself asking how much of this stuff am I actually going to use, and come with an answer myself. Having and [sic] industry fellow present to clear up any ambiguity to this question helps a lot.

- It helped tie in some of the key concepts that we would need to learn and be conscious of for work outside of an academic setting.

Developing specific technical skills through the industry fellow's critical evaluation of student work

Many students pointed out the importance of the feedback that they received from the industry fellow on their work in progress. Several mentioned specific skills and practices that they improved as a result.

- IF's critiques of the classes deliverables pointed out ways to improve the design and incorporate features in the design that would have not been considered otherwise.

- It helped the students to realize the various flaws in their designs.

- It was the honest critics that were most valuable.

- The students were able to tell a story behind their design.

- IF influenced the way the students set-up our project and how better present our ideas.

- IF's feedback helped them realize that simple is beautiful, and more importantly, clarity and simplicity would ensure more users would experience their project, and be able to get something positive out of it.

Impact on the teacher

- The increase in relevancy(of course material) resulted from interactions both during the planning phase and as the course was running.

- The technical skills are also improved. It helped to see some of faculty members own misconceptions (and lack of skill), which they were able to improve with industry fellow's help. These technical skill improvements will benefit students in future offerings of these courses.

- The changes that faculty member made to his courses are lasting. That is, he will not revert to teaching in the way that he did prior to working with the industry fellows.

Industry Fellow model in LIS classrooms

The Industry Fellow model can be best used in the classrooms of our LIS schools with all positive impact and useful result. The possible subject areas where IF model may be introduced

   (a) Classification emerging trends and online classification trends

   (b) Cataloguing RDA (Resource Description and Access)

   (c) Library Automation Softwares Free and open source softwares Vs commercial, tailor made softwares

   (d) Digital library / Institutional repository software DSpace, Joomla, Greenstone, Eprints etc.

   (e) Reference management softwares like Zotero, Mendeley etc.

   (f) library 2.0 tools like blogs, twitter, facebook, social bookmarking and whatsapp

   (g) Practical reference interviews

   (h) SDI Services

   (i) Anti-plagiarism tools and softwares like turnitin

What is required for the effective implementation of Industry Fellows in LIS Classrooms?

The things which are essential for the effective implementation of IF model in LIS education are as follows:

- Awell structured planning

- Preparation of a directory of industry fellows in various papers

- Co-operation and co-ordination between the IF and the faculty members Updated syllabus

- A survey of industry demands (expectation of various institutions where our LIS students would be seeking for employment)

- Readiness to update the learning environment Skype, online video conferencing, LCD projectors etc.

Who can be the Industry Fellows in LIS Education?

The following people may take the role of IF in LIS education.

- Working librarians

- Information science professionals working in various specialized libraries and information centres

- Successful librarians (automation, library spacing, resource management, blogging, digital library etc)

- LIS practitioners of various NGOs and research centres

Conclusion

Industry Fellows is based on research in socio-cultural learning theory, expertise, the use of mediating representations, and the importance of intrinsic motivation. With its direct interaction between students, faculty, and practicing professionals over an extended period of time, Industry Fellows offers a novel model for helping to bring engineering education into the 21st century.The Industry Fellows model does have this impact. Industry fellows report that they learn about the educational enterprise, and are able to link their professional skills with those required in the university setting. They find satisfaction in being able to positively affect undergraduate education. University teachers benefit from practitioner expertise in updating course materials and in increases in technical skills. And students gain from increases in motivation to study, learn, and engage in the course because they are assured it links to professional practice, while at the same time learning state-of-art practices. If introduced in LIS classrooms, sure to state that Industry Fellows model will have its lasting impact both on the faculty members and the students.

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What Slows Down the Wheels of Indian LIS Education and How to Make it Move Faster? : The Million Dollar Question

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Abstract

The question on quality of LIS education raises many a question to in front of learned communities. There are lot of issues and obstacles that stumble the path of progress of LIS education and LIS schools. It may be due to lack of required infrastructural facilities in the department, lack of qualified, required strength of teaching staff, adoption of old syllabus, no emphasis on soft skills in the curriculum, no ICT based technical sessions, no industrial visits, no accreditation programs for Indian LIS schools or non-availability of properly laid selection criteria for admission or sprouting LIS schools etc. These blocks hinder the growth of LIS education in India. This serious scenario will affect the quality of LIS professionals entering the present day market. To bring a noteworthy quality in LIS education, series of measures such as enactment of national level policy, accreditation of LIS schools, strict admission criteria, updated syllabus, internship programmes, ICT training, introduction to open access resources and softwares, library automation training, national level LIS institute, sufficient funding, organization of conferences and seminars, e-learning contents etc need to be undertaken by individuals, professionals bodies and government bodies to reform the LIS education for the benefit of the society at large. The present article articulates the problems and issues faced by LIS profession and offer some measurable solutions.

Keywords: LIS profession, challenges, problems, lack of finance, lack of infrastructure, accreditation, teaching faculty, old syllabus, national policy

Introduction

When a lot of changes take place in the field of library and information centres in terms of resources, services, ICT penetration etc, we need to produce suitable candidates to lead the profession in future. The changes taking place in the profession should be

reflected and reciprocated by the content and practices being offered in various LIS schools.

Many challenges exist before LIS professionals to march further to meet the present andfuture situations and bring in quality both in teaching and practice. The ultimate aim of anycourse including LIS is to make job seekers enrolled in the system employable andmarketable.

Major Challenges

Following are the challenges and issues that the LIS education system is facing nowadays:

Common Challenges and Issues

1. **Lack of finance:** The major challenge in improving the LIS education is the lack offinance. It is not possible to make any resource available without appropriate financialsupport. The agencies issuing grants like UGC, university authorities and other bodiesdont support LIS schools needing special grants for infrastructure, faculty and othernecessary items.

2. **Absence of Accreditation body at National Level:** There is no accreditation agency in India like the ALA Committee on Accreditation in USA and The Institute of Information Scientists (IIS) and the Library Association (LA) in U.K to ensure reasonable standards and quality of output in the LIS education like nomenclature, curricula and essential resources. In view of the fast growing number of schools imparting training in librarianship, emerging diversity of standard and the recent trend of training through correspondence, there is a strongly felt need for regular control and enforcement of minimum standards in training and education for librarianship.

3. **Lack of supporting policy at National Level:** There is pressure to have quality assurance in LIS programs but the government hasnt implemented any policy at national level that may support LIS Education. National coordination and a planning program are needed to gain maturity. A general program can reduce waste and make the fullest use of existing academic and technological resources.

4. **Lack of a global Perspective:** There is a lack of coordinated and effective programs of international studies in Library and Information Science Education in India to future oriented programs that are clearly defined in the mission, goals and objectives. Internationalizing means having a program in which faculty, staff and students maintain a global view and an appreciation of the importance of the field internationally without which library and information science studies will be incomplete.

5. **Lack of proper library facilities:** Most of the LIS departments in our country do not have an adequate library facility in the departments. In many departments a few out of date and obsolete books are stored. A few departments which are having some current books do not provide any access to the students for home lending or even reference purpose.

6. **Curriculum updating:** Many LIS schools in India hardly revise and update their syllabi in a regular basis These syllabi are need to be restructured to accommodate emerging changes in the field of knowledge. If well-designed curricula are adopted and implemented, we may expect quality education suitable both for the practicing library professionals as well as teaching staff.

7. **Inadequate physical facilities:**Physical facilities form an essential component of the infrastructure (Kumar & Sharma, 2009). Many LLS schools do not have separate building separate class rooms, separate IT laboratory , adequate furniture, teaching equipment, tools for cataloguing and classification, over head and LCD projectors and even well maintained black and white boards along with chalks and dusters.

8. **Little attention for selection criteria:** We always expect intelligent and meritorious students for our LIS departments. As a result we have several screening procedures while admitting the students. Some universities hold an entrance examination for admission to different courses particularly for BLISc, MLISc, M.Phil, Ph.D. The admission criteria should be laid down in such a way that some weightage is given to qualifying marks in the entrance examination, beside some other weightages including academic record, highest educational qualifications, professional experience etc. Students with good qualification sometimes join the course but many of them are not enthusiastic in continuing it and leave it when they get any other choice. Therefore more attention towards selection criteria is needed to attract the best brains(Singh, 2003). In someschools preference is also given to deputed candidates who are already working as Semi-professional Assistants / Senior Library Assistants for at least 3 years. The criteria for selection in this category should be in order of merit.

9. **Dual Responsibility:** A few Professors of LIS departments in India, are also in charge of the university library. This is not a healthy practice. Headship in a department involves important administrative work along with academic pursuits. The present day librarians, on the on the other hand, are having tremendous responsibility and involvement in their day to day work. This type of dual responsibility is neither good for the department nor for the library. As long back as 1979, the UGC panel on Library and Information Science had recommended for the independent status to the LIS departments but even now some of the states in India are continuing the practice of dual responsibility.

10. **Emergence of new LIS schools:** There is an ever increasing growth of new LIS schools all over India. These are either formal, non formal, or in distance mode. Many of these schools do not have minimum basic facilities. Emergence of such types of institutions has led to the production of sub-standard library professionals. It leads to the creation of more and more problem of unemployment in the job market. Many universities which are conducting distance education courses in LIS, neither have adequate number of teaching centres, nor have any control over the admission procedures and are allowing more and more students in their courses. The departments do not have minimum infrastructural facilities including computer laboratories, class rooms, teaching aids and even reference tools which are essential for teaching practical papers in LIS. On the other hand, competition in the job market is increasing day by day as production is much more than the demand (Singh, 2003).

Challenges and Issues in Distance Courses

1. **Inadequate Infrastructure in Study Centres of Universities:** Generally in most of the universities, study centres areconducting LIS education in India, which are not adequately established with wellfurnishedcomputer laboratory and library facilities because the administration does notfeel any need to provide computer lab facilities, library facilities, communication equipments,other information science components and necessary infrastructures required forLIS departments. The major constraint e-learning systems face in the Indian environmentis the lack of infrastructure. E-learning requires a certain investment in hardware,software, and support staff. While much of the hardware/software investment alreadyhave been committed as part of the organizations existing infrastructure facility, veryfew study centres have a well-organized computer laboratory along with fulltimeInternet connectivity.

2. **Insufficient Contact Classes:** Being a practical oriented course, LIS education requiredcomputer training and practical classes for classification and cataloguing with personalcontact between teacher and student, but the number of days for contact classes is verylimited. Some universities are not even insisting that students attend contact classes.There is no provision of Credit Hours for individual papers in the distance program.

3. **Lack of High quality teaching Staff:** Most of the LIS departments have senior teachersof old age and they are not ready to accept the changing nature of the subject. Fewdepartments have skilled fresh faculty and an innovative nature but they stand as juniorsand work under pressure of seniors. Experienced regular teachers are not much involvedin the distance education program, working librarians, fresh postgraduate students andresearch scholars are handling most of

the classes.

4. **Lack of Permanent Faculty for Distance Program:** There are no full time faculty in the schools who conduct correspondencecourses, except IGNOU, New Delhi and Dr. B.R. Ambedkar Open University,Hyderabad which will adversely affect giving attention to the individual students.Another common limitationis the lack of sufficient opportunity for the interaction between the learner and thesubject expert

5. **Lack of Evaluation:** There is no mechanism of assessing teaching effectiveness andquality of study materials of distance program courses. Students evaluations of teachingwill help to provide instructors and course designers with feedback about the quality oftheir efforts.

6. **Lack of Admission Policy:** No restriction for admitting the number of students toBachelor and Postgraduate courses, a whole class might comprise 100 to 150 people.Offering a distance programme is a good business decision for most institutions in India.Recent order of the University Grants Commission from exempting M.Phil/PhD holders from NET, that was essential for entering the teaching profession and for graded libraryposts, led to an enormous increase in the number of M.Phil/PhD aspirants. Profit makinguniversities plan to start correspondence PhD training programs this session onwards.

7. **Nomenclature, curricula and duration of LIS courses:** Curricula of BLISc and MLISc are not uniform in library and information science schools, very little emphasisis given to the components that the LIS professionals need to carry outon the tasks in thelibrary when they join the given job. The course duration at each level is also not uniform in the LIS schools. Thecorrespondence courses had made their own style of nomenclature, curricula andduration. Most of the LIS schools have Masters level of one-year/two semesters. Onlyone-year duration is not enough for a student to learn all the things at an advanced level.

8. **Medium of instruction:** The majority of students study in regional languages.The expected English knowledge of the students is not sufficient to comprehend most ofthe LIS materials published in English. Therefore the students have to depend largely onthe lecture notes given during the contact classes by the teachers who have othercommitments in addition to teaching. For this reason a good part of the libraryprofessionals have very limited notes based knowledge.

9. **Lack of Library Visits:** Educational tours and Library visits are compulsory in regular library science courses to understand about various services and routine work in the libraries. But there is no such provision in Distance education programs.

Suggestions for Distance Courses

- Admissions should be done through admission tests or based on good academic record.Duration of the contact classes, especially practical hours should be increased andattendance should be made compulsory.

- All universities in India, who impart distance education programs may take up broadcasting lessons through EDUSAT, Gyandharshan, FM, Radio etc. that would reach the entire section of a student community.

- Instead of organizing contact classes, study centers can manage regular evening classes in selected major cities for the convenience of the working class.

General Suggestions

- The syllabus at all levels should be updated. It is strongly felt that the course duration at Masters level should be of four semesters. Dissertation/project work should be in thethird semester and practical training/work experience should given in the fourthsemester.

- All library schools, who impart correspondence programs, should have a permanentfaculty. The availability of high caliber permanent teachers should be made aprecondition for starting courses in LIS.

- All LIS schools in India should have acquired the needed infrastructure for impartingpractical training e.g. well-equipped information and communication technologylaboratory with equipments such as PCs, Modems, CD-Drives, Printers, scanners, andmultimedia kits along with broadband Internet facility and latest library managementsoftware i.e. LIBSYS, Alice For Windows, VTLS and SOUL etc.

- The University Grants Commission should appoint an Advisory Committee, with faculty representation from all leading library schools, to be involved in all major decisions relating to the design of the curriculum, teaching methods, choices of e=learning equipment, software and evaluation.

- A national policy has to be evolved/formulated for LIS education in distance mode in the changing context of librarianship in modern India, under various kinds of establishments with varied functions and responsibilities and there should be some concrete efforts to make grants available. The policy should emphasize the need for practical training and necessary infrastructure requirement. The UGC is supposed to be the most suitable organization to take up formulation of such a policy.

- It is very essential to establish some professional agency at the national level, which can undertake the work of accreditation of the courses in LIS that may maintain the standard in LIS curricula, nomenclature, and duration and course fee. There should be a common platform for all library schools that conduct correspondence courses.

- LIS schools/departments may be provided with IT laboratories fully equipped with the latest hardware and software including Internet connectivity, networking and library management software.

- LIS departments provide training programmes with ICT specialisation for teacher librarians.

- Seminars, tutorials, assignments and field tours should be effectively integrated with curricula involving outside experts and agencies.

- Syllabus should be revised from time to time with the advent of the information technologychanges.

- The syllabi in the LIS departments should view the developments taking place in information technology, information resources, information access and their impact on libraries and library profession.

- It is necessary for the University Grant Commission (UGC) to see how these LIS departments could come up to international standards and the students coming out of these Departments excelled in their work.

- There are many standards and protocols such as Z39.50 standard, Inter library loanStandards, Circulation Interchange Protocol, and the teaching of them in classrooms isnecessary.

- Continuing education/in-service training facilities should be recognized as an essential partof manpower development programmes and sufficient financial resources may beallocated for this.

- All the present librarians, who completed their LIS education ten year before, should beprovided with computer/information technology training through these new LIS schoolsor through some refresher courses.

- There is a great necessity of funds for the acquisition of new technology in order to enhancethe services in the library.

- More orientation courses and refresher courses should be conducted for the LIS professionals and teachers.

- The LIS students may have training in libraries, which should have IT environment forgaining practical experience.

- ICT environment may be created in all types of libraries and information centres in thecountry.

- Short term and long-term programmes such as seminars, conferences, and workshops beorganized at regular intervals by library schools and library associations.

- To improve quality of research, talented scholars should be provided financial assistance byresearch organizations.

- Modern LIS education requires infrastructure such asmedia labs, IT labs, and information products forpractical approaches.

- Information professionals is changing and expandingand their existing skill sets and competencies arebecoming obsolete, LIS schools are required toconstantly take notice of the skill sets and newcompetencies that are in demand in the market placeand accordingly create new wherewithal and conformtheir curricula to meet the requirements of present timesand times ahead.

- In smart class rooms having interactive board andconnectivity with the intranet, faculty can selectelectronic content to help the students in just-in-timelearning.

- The LIS schools must initiate research-based teachingand ensure more emphasis on training keeping in viewthe vast potential of info-business.

- LIS schools are required to enormously expand theircurricula and offer specialized courses in areas such associal informatics, business informatics, financialinformatics, agricultural informatics, health informatics,and legal informatics and so on.

- LIS schools to provide training to manpower in thenewly emerging areas such as information aggregation,institutional repositories, digital and virtual libraries,open sources, information products and services design.

- LIS schools should also develop a body of knowledgethat creates substantial demand in the market place andfetch high salaries for graduates.

- A growing number of LIS departments are developingtheir own websites to provide information about them.With the growing impact of the Internet on LIS, newareas such as digital libraries, electronic publishing,online resources, metadata and information architectureare reckoning as nascent fields of LIS research

- The beginning of PG Diploma courses in somespecialized areas, like Archival and DocumentationManagement, Library Automation, Networking andInformation Technology, etc.

- Appointment of teachers in LIS schools have to be on the basis of following criteria:

  1. sound knowledge of the subject; b) effective communication skill;

  2. capable to learn appropriate methods of teaching; and

  3. capable of using suitable instructional materials.

- There should be a control mechanism for unplanned proliferation of LIS schools. No LIS school, formal, non-formal or in distance mode be allowed to start their courses without adequate facilities.

- Bright and meritorious students have to be motivated and attracted to join our profession by providing scholarship, fellowship and various types of awards.

- There should be an independent status for each and every LIS department in India and the system of dual responsibility should be abolished with immediate effect.

Recommendations of NKC

National Knowledge Commission (NKC), set up by the Government of India, has recommended certain measures for the overall development of LIS education in the country. These are:

1. National Mission on Libraries should be set up immediately, for a period of three years. The Mission should subsequently be converted into a Permanent Commission.

2. Revamp LIS education, training and research facilities. The proposed: Mission/Commission on Libraries must assess as soon as possible the manpower requirements of the country in the area of LIS management, and take necessary steps to meet the countrys requirement through LIS education and training.

3. To keep the LIS sector abreast of latest developments, necessary encouragement should be given to research after evaluating the research status in this field.

4. Establishing a well-equipped institute for advanced training and research in library and information science and services would provide the necessary impetus to this task.

5. A system should be set up to foster close cooperation between the teaching/research faculty and practicing librarians at all academic and research institutions.

6. The minimum staffing pattern for the BLIS course and the MLIS has been recommended.

7. There should be a 1:10 teacher-student ratio.

8. It was felt that the Department should have not more than 50 students in one class for BLIS course,20 students for MLIS course, and PhD students according to the University norms.

9. All departments of LIS should set up computer centres and well-equipped departmental libraries with appropriate teaching tools.

10. Appropriate physical facilities such as classrooms,must be made available to each LIS Department.

11. E-learning materials for upgrading the skills of the existing staff should be provided.

12. Teachers who will teach in areas such as ICT applications in libraries and other modern methods,should have a specialisation in these areas. A system must be set up to allow stringent review of the performance of teachers. A suitable system of rewards, including promotions, should be instituted.

Vision of LIS education in India

The LIS education in India, in the digitized environment, should have the following vision.

1. Introducing e-education programme for the LIS education and developing Virtual Learning Tools(VLT).

2. Strengthening of research components in the areas focusing the need for the coming problems related to information users and innovating new curriculum and teaching techniques in digital environment.

3. Imparting training in modular courses to meet diverse types of users and libraries in India.

4. Out sourced teaching pattern for teachers and trainers through industry-academia-interface to inculcate the use of new tools and techniques of IT/ICT.

Conclusion

Taken in the right spirit, the above suggestions would bring a miracle in the field of library and information science. The role of individual librarians, the responsibility of professional associations like ALA, MALA, SALIS, KLA etc, the duty of government departments are all required in solving the above discussed issues. A national level policy on LIS education should be framed and implemented uniformly throughout the country. Sufficient trained and skilled manpower with enough physical, ICT infrastrucre and updated syllabus are the needs of the hour. Lets work together to revamp, rejunuvate and reform LIS profession to hold our face upright in the academic, public and research arena.

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Role of Librarians and Competencies in the Digital Era: Quality of LIS Professionals

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Introduction

Today's information products are not only as print media and it is electronically viable and available to the use of community by 24 X 7 at the doorstep through internet in the smart phones. The need for intermediaries like librarians or informational professional is not required today. In this situation it is essential and most required for the library professionals to improve their qualities and competencies to maintain their professional status. In Western countries small kids are very familiar in operating the android phones, but today in India the professionals are even unknown about the mobile application to transfer funds and to store information in clouds.

The role of librarians as the mere custodian of books is just transferred as information provider, thanks to the digital library initiative of the Government of India It is also in a pathetic situation while verifying the government institutional libraries in rural areas are running even without the qualified librarian. The emerging digital library movement is an eye openerto many of the young budding librarians are motivated towards library automation, E-resources management and E-content development.

Traditional Librarians

The professional librarianship with by laws of library science developed by Dr.S.R.Ranganathan and canons, principles, classification and cataloguing arrangement and re-arrangement of books with the help of classification schedules and rules.

E-Library

According to Wiederhold *A digital library is popularly viewed as an electronic version of a library where storage is in digital form, allowing direct communication to obtain material and copying it from a master version.* Digital library is a Collection of

digital object (text, video, audio) storage with method for access and retrieval, (as far as users are concerned) and also for selection, organization, and maintenance (from the point of view of librarian). Ian whitten.

With the advent of information technology and application of ICT in library oriented activities are the basic breakthrough in library automation are computerized in the network environment. Internet expanded through World Wide Web, make it possible to access the libraries globally within no time.

The process of preservation and conservation of rare and old collection of books through burning the CDS with the help of scanners and it needs to be uploaded in the institutional repositories to make the digital environment.Digital libraries today are serving by providing information and documents through PDF fields or printed documents by the agencies like Delnet, Inflibnet etc.The E-resources provided through various publishers in full text through IP based access control or through user name and password.

Role of Library Professionals

Librarians are facing is difficulties due to the changes in the techniques in information access in the digital era.Library professionals have to change themselves according to the information resources and its mapping strategies. The basic aim of the librarians is to provide the quality information by managing and delivering appropriate information services. Information literacy skills are essential to advice the users to access the appropriate information with the extended application of information technologies.

Competencies Required for Library Professionals

In the digital era the library services has to be streamlined through its influenced personalities and therefore it is possible through empowering the skills of library professionals. Librarians need to know to understand:

- Knowledge resources (books, journals, i.e. resources, Internet)

- Teleological facilities and resources (computer, online catalogues , websites, LANs file servers etc.)

- Financial resources (Budget) Human resources (skills for manpower training).

Competencies that Required Possessing in LIS Professional:

- Acceptance of change.

- Knowledge of user interaction with knowledge

- Provide quality service.

- Be adoptive, flexible and resistant.

- Be resourceful

- Posses excellent communication skills, constantly update personal knowledge base by keeping in touch with the latest development

- Create awareness among the users, make them accept the changes

- Be an information management strategist, etc.

Technical knowledge required

- Operating system Windows, UNIX, LINUX

- World processing, Graphics, Spread sheet & Presentations

- Database management systems including the skills in Bibliographic database management systems.

- General purpose programming networking

- Web page development and content management

- Information retrieval software for online,CD-ROM and internet.

- Library software packages, acquaintances with digital library tools.

Conclusion

The changes are the only unchanged phenomena and it is essential for achieving the goals of the librarian in the knowledge era with embodied competencies can create a new environment for maintaining digital information flow and thereby re-creating of new knowledge. It is always useful for the society to make the digital world as a dynamic one in information retrieval and management for knowledge sharing.

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Qualities and Skills required for Library and Information Professionals: An Overview

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Abstract

Library and Information Science professionals require some qualities and skills to perform their day to day functions efficiently and perfectly. They require some personality traits which are essential for their survival as good librarians. Library and Information has undergone a tremendous change during last two decades. These changes are taken it to consideration from various aspects of Library and Information Science. The changing environment demands a change in the working style of Library Professionals too. Some changes are due to changing technologies of information preservation and retrieval. Library Professionals are no longer the custodians of books and other materials but now they are performing the function of delivering right kind of information to right user at right time at their desk. This study deals with the qualities and skills of the Library and Information Professionals in the present era. The skills possessed by Library and Information professionals are ranging from the basic personality traits to ability to handle the modern technological tools.

Keywords: Personality traits, Information Science; listening skills, presentation skills, interpersonal skills, quality of library professional, information technology, information explosion, skills, LIS professionals, digital age, technology skills

Introduction

Library and Information professionals are no more the custodians of printed books and journals. The profession of Library and Information Science and its professionals are transformed during the passage of time. The Library and Information Science professionals are transforming themselves for the age old laborious task of manual method to the present time which ICT enabled. There are many tools and techniques which are required for library professionals to work like information scientist and knowledge managers. Some important skills are essential for LIS professionals to perform their day to day task efficiently in the present digital environment. Various

facets of ICT has influenced the Library and Information professionals in terms of Information collection, processing of information, preservation of collection, retrieval of desired information and dissemination of information at the desktop of beneficiaries. The information seeking behavior of users has undergone a tremendous change as well as the information preservation and dissemination technology has also changed. Digitization of information has created a new kind of challenge for present time. To cope with the challenges of modern ICT environment Library and Information professionals must has certain skills which are much useful for their survival as LIS professionals.

Objectives of the Study

This study elaborates various skills which are required for the professionals of Present Day Library and Information Professionals. Scholarly articles and research papers are referred for this study.

Literature Review

Kumar (2017) in his research explained that globalization and liberalization has opened up multiple career options to the LIS professionals. The traditional roles of LIS have changed with the advances in Information and Communication Technologies. LIS professionals are expected to be academics of higher order with competence to work in a hypertext, networked, digital environment. He discussed that the skills required by the library professionals to be effective in rendering service to the users community. Mangle (2017) in his study found that like other areas, Library and Information profession also need certain training regarding handling of technical tasks of libraries. His paper, he discussed regarding the skills required by library professionals for rendering effective services to the users. Moorthy (2017) in his study explored about some skills required for library professionals. These skills are developed by library professionals year by year. Some of the discussed skills are importance of professional growth; cope with the changing scenario of working condition due to over involvement of information and communication technology in Library and Information Science.

Qualities required for Library and Information Professionals

Always Innovative in Nature

Library Professional must be innovative in nature to establish and run new services in the Library for the welfare of the readers. His/her innovativeness always come from the demand of the users and also from his inquisitive mind.

Disciplinarian

A Library professional must be a strict disciplinarian so that he can apply his innovativeness for the welfare of the people. His way of working will become a landmark for the users to follow. That will also add the value of the library and develop users faith in librarians way of working

Positive Attitude

Some times situations are adverse in nature and handling of services would be a difficult task for library professionals or say that the situation is out of control, his positive attitude for completion of any task leads him to become a strong personality and also boost up his character for achieving goals even in most critical situation.

Listening Skills

Listening to others in a conversation to find a solution of a problem is an essential quality of a library professional. This skill is quite necessary because unless you listen to others you can not motive others to hear you. Listening develops a sense of stability of mind, improves sense of understanding, enhances the conceptual building ability and develops a sense of respect for others. This trait helps a library professional to establish himself a reliable person of the society.

Speaking Skills

A library professional must have a soft spoken personality. His task is to understand the requirements of his users analyze their problems and tries to solve their problems with a nice smile on his face. His answers should be in such a kind of language that invites the users again and again to the library. Basically good speaking skill is a boon for anybody until it is controlled by sensibility. Good speaking skill can help us to make friends but rough speaking may attract quarrels. A library professional is responsible to make a good atmosphere by his good speaking skills.

Building Interpersonal Relationships

Libraries are knowledge service providers to users belonging to all areas of life. These people have different subject backgrounds. A Library professional has to deal with all kinds of users in a day. Interpersonal bonding technique will help him to make healthy relationships with others and will enhance the usability of resources and also creates a healthy atmosphere for knowledge sharing. Understanding the nature of working of different users helps a library professional to improve his interpersonal skills to bring positive changes in his personality towards nation building.

Presentation Skills

A good library professional always focuses on his way of presentation of his personality as well as his workplace. Visiting a library may give various thoughts about a Library professional. A user can develop an understanding of the working style of a Library Professional. The day to day task of a library professional reflects his way of working. Presentation of information in such an attractive way invites users for all the time. It will be a great tool to increase users in a library.

Quality of satisfying the users

Users satisfaction is an important part of a librarians work profile. Users are one of the important aspects of a library. It is the duty of a library professional to satisfy the needs of users up to the highest order of possibilities. For this purpose, he has to use his perception, subject knowledge and interpersonal skills. It is very important to know that the satisfied users always bring more number of users to the Library. This will establish the library as an important resource center in knowledge society.

Writing Skills

Good writing skills are required for every professional. Library and Information Science professional must have good writing skills which will enable and establish them as an integral part of knowledge community. Some times librarian writes his research report, project report and also research papers, good writing skills enable him to express his thoughts in effective way.

Leadership Qualities

A Librarian or Library Manager manages all the routine affair of a library. From acquisition of information to dissemination of information, so many steps are involved in it. Each step of information processing involves different people with whom an Information Manager has to deal on a regular basis. Is it not a challenging task? Some times a librarian has to work with his fellow workers as their leader which helps them to supervise and lead a project up to completion. Library Manager has to work like a leader to have a better understanding of the changing demands of the users with the information available for him to be given. A good leader always thinks about the convenience of fellow workers so that a smooth functioning of a project is ensured at each level of its execution. A Library professional should develop leadership quality by voluntarily accepting the challenges.

Motivational Skills

A Library professional should possess motivational qualities. Motivation is such an energetic force which boosts up any body to think about the goal of his life. Some

people are self motivated while some are motivated by others. A Library professional motivates others in terms of acquiring knowledge. The inner thirst of knowledge will lead a user to the Library for getting desired information and finally quench his thirst of knowledge. Some people are motivated in such a way that they have always thirsty of knowledge and every time they need a place like library to solve their queries. Thus increasing number of users will enable a librarian to make a support system for finding solutions of their problems.

Perception

The Chambers 21st Century Dictionary (2000) defines perception as the process whereby information about ones environment, received by the senses is organized and interpreted so that it becomes meaningful Perception is one of the important skills what library professional posses. A sense of consciousness regarding the users needs and available resources may prepare the library professionals to provide better services to its users. A sensible awareness gives library professionals a smooth functioning of his/her library with deep insight, recognition and apprehension of knowledge retrieval and dissemination.

Administrative Skills

A Librarian must be a good administrator in terms of administering present and future affairs of a library. A good administration attracts more number of users at all times. A library and information professional have to administer day to day activities with different kinds of people. Each day in a library is a challenging task, but a good administration can fight against all the irregularities during the days affairs.

Visionary

Librarian must be visionary person. Fifth law of Library Science declares that Library is a growing organism in terms of collection, users and manpower. The vision behind this law is to make policies keeping in view of the future growth of the Library. A true visionary keeps all the relevant points in perception and make future plans accordingly. Libraries are running shortage of space and manpower. This skill is quite necessary for the present day Library and Information Professionals.

Stress Management Skill

Stress management is very important quality of a library professional in todays fast environment. Stress may be created with day to day route work. Managing stress is essential for living a healthy life. A healthy library professional will serve its user for a longer time.

Marketing Skill

We are now living in a age which is driven by market based tools and techniques. A library professional must have marketing and advertising skills to promote Librarys resources and services in such a way that it attracts a large number of users. There are many things happening day by day in a library. So many aspects of the working of a library are not known by users. These types of different aspects should be disclosed in-front of the users by using different marketing tools and techniques. This marketing skill may bring fame to the library. The prominent thing is to do hard work first to showcase the talent in-front of user community. Then only they would believe what library professionals want to convey. Without proper backend support no marketing would be fruitful.

Negotiation Skills

Library professionals deal with books and other resources which are bought from outside vendors. A good negotiation skill helps a library professional to buy best resources with a minimum cost.

Research Skills

A good library professional must be a good researcher. A research starts when he receives a query from any user to give answer. A research regarding finding the correct solution of that query will lead him to refer so many resources. All the references may build up a bibliography related to that query. So every search in a library is to be considered a research and with that a bibliography is created side by side. This research is only possible when the library professionals attitude is research oriented. A good library research always bring enhancement of ideas regarding a particular subject.

Information Technology Skill

Today, IT environment demands for libraries having different computer related information technology skills such as knowledge of hardware and software, LAN, MAN, WAN and also about various storage devices. Various library related networks like INFLIBNET, CALIBNET, and DELNET are database service providers of libraries. Various online resources are available on the internet, without knowledge of ICT applications, a library professionals can not be able to work in a networked environment. Various web- based services are available today, where the requisition and dissemination both are done with the use of technology planning, organization and execution skills. Resource sharing in ICT environment is quite speedy so a Library professional must possess the networking skills with the knowledge of latest tools and resources. A library professional must have knowledge of network protocol also such as TCP/IP, SMIP, HTTP and FTP etc.

Information Retrieval Skills

Today all the data is stored in a cloud under different servers. Now information has to be retrieved from those servers. This skill is very much required in todays ICT environment. The right information has to be provided to the right user at the right time will only be possible when a library professional possess the analytical skills of retrieval of information from specified databases by using retrospective searches, ready reference services, bibliographic services and selective dissemination of information. Various search options are available using keywords, the library professional must know about the search keywords to find himself in a better position to serve his users with a great sense of pride and honor. This will bring the smile on the users face and strong bonding can be ensured.

Content Creation and Management Skill

A library professional must learn and use content creation and management skills. Some times a library may act like a knowledge center where different subject expert can create content related to different subjects. The content creation invites more number of users in the library as well as the faith in a library as true learning resource center may be ensured. Various content creation tools are available these days. A library professional must acquire knowledge of these tools and promote content creation activities.

Qualities as an Information Scientist

Library professionals working as Information Scientist play a very important role as information creation, searching and facilitator of correct information for the development of library and information centers. Basically Information Scientists continuously work for finding new methods, tools and experiments regarding modernization of libraries using latest tools and technology. Thus the experiments done by information scientist are useful to make user friendly atmosphere in the libraries.

Website developing and hosting qualities

Library and Information centers can showcase their activities using the means of their websites. These websites are generally hosted and maintained by the servers of their respective organizations to which a library is linked. Latest content creation for the websites is an important step to update them. This content creation is a regular activity that a librarian performs. Developing a website and maintenance inputs are provided from the library from time to time. This procedure is only completed regularly when a library professional possesses the quality of website developing and hosting.

Digital Librarian

A digital library provides fast services to the users. A sort of online medium attracts uses as many users are adopting digital media to access information. Thus traditional library professionals may find themselves in a tough situation to work in digital environment. Developing digital libraries is a need of the day. For handling digital libraries, we need digital libraries who may equip themselves with latest tools and technologies to work for the welfare of users in a very short period of time. A digital librarian receives and responds queries in a digital medium.

Creation of Library Management System

A Library professional has to take decision regarding creation of in- house library management system where he is expected to give his views. Knowledge of library operation using LMS is quite necessary for library professionals. A continuous revision of services taking into consideration of users needs enables a library professionals work in this direction for better delivery of services.

Information Facilitator Skills

Library professional as an information facilitator is most appreciated. It gives him a chance to link himself directly with the users. Information can be retrieved from many sources. The knowledge of various works fields and their databases may be useful in this regard. Information can be searched by different methods. Knowledge of different search option and search engines will be useful for library professionals. This skill can not be acquired in a day. It requires constant practice with database searching for different queries. One a good information facilitator skill is acquired by a librarian; he would be demanded for knowledge management. This demand would fetch him name and success for his professional growth too.

Knowledge Management Skills

A good library professional must acquire skills regarding efficient knowledge management. The process of knowledge management involves many skills related to library and information management. The knowledge regarding these tools definitely helps a library professional to project himself as a knowledge manager. The various aspects of knowledge management related to two kinds of knowledge i.e. Tacit Knowledge and Explicit Knowledge. The first form is the knowledge which is available in various document formats and second is the knowledge which is not documented but can be acquired through practical experience. The second one is more important to preserve. It is not easy to record due to various interpersonal reasons. A library professional may do something in this area to store this sort of knowledge for the benefit of fellow workers so that they can utilize their experience for the growth of organization.

Conclusion

The ICT has affected all walks of life and Library and Information Science is not untouched with it. Information Technology has made tremendous changes in the working style of Library and Information Profession. Library professionals are some how working as Library Managers to help the community to get their desired information within minimum time. The essential skills for library professionals are listening skills, managerial skills, leadership, technological skills, learning skills and administrative skills.

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Extension Services in Academic Libraries

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Abstract

This paper describes the successful design and implementation of various Extension services for Academic Libraries. It examines the functions of academic libraries and the outreach challenges faced by the libraries. It also says about the different forms of extension activities which will help to bring books and reader together.

Keywords: Academic Library, Extension Activities, Book Exhibition, Book Talk

Introduction

The First Law of Library Science Books are for use is firmly established if the Libraries realize that their existence is justified only by the extent to which their books are used by the readers. Again, the third law of Library science Every book of its reader also gives emphasis on the same concept. But here books cannot move to their users, Therefore all the efforts should be on the part of Library itself to bring the books at the doorstep of users. Dr. Ranganathan is in favour to adopt the shop analogy by the libraries to implement the laws of library science. The most suitable method is Public relation and extension services of the library to reach all people of the community. Through various programmes and proper planning the Extension services are efforts to reach the maximum number of people, whereas Public relation is an attempt to interact with the people by informing about the resources and services of library as well as its importance to them. Therefore, this is an obligation of a library to get the views of users about its utility and quality of services time to time and to expands its area by making new users and by having cooperation with other libraries.

Objectives

- The main objectives in providing extension services are to educate the users about the status of resources like infrastructure, collection, staff, facilities and services.

- To convert a library into a social, cultural and intellectual centre;

- To inform those who do not use the library services and to attract them to those services.

- To inform the reader of all the facilities offered by the library.

Academic Libraries

Academic libraries are considered to be the nerve centre of academic institutions, and must support teaching, research, and other academic programme. While classroom teaching provides a glimpse of Knowledge the library disseminates a wide range of knowledge which is required to attain the Intellectual heights. Libraries supplement the instructional work of class-rooms and carry forward the ideals of education. It is the centre for self learning and self education. The main function of Academic library can be stated as the Conservation of Knowledge resources, Preservation, Dissemination, resource sharing, resource services, self-learning.

According to Dr. S.R. Ranganathan, a library is a public institution or establishment charged with the care of a collection of books, the duty of making them accessible to those who require to use.

Kothari Education Commission (1964-66)

Nothing could be more damaging to a growing department than to neglect its library or give Low priority. On the contrary the library should be an important centre of attraction on the College and University

Educative Services of the Academic Library

1. To acquire & preserve various types of documents for meeting the needs of different level of users

2. To arrange the essential library materials and other library facilities for the smooth running of all formal programmes.

3. To making them available for library use & home use through reasonable loan period

4. To guide the research scholars & provide them resources useful for their research

5. To keep faculty members informed of the latest thoughts in their field of specialization.

Library Extension Services

An effort of a library to increase the number of its users to make the maximize use of its resources is called Extension Service. **Krishan Kumar,** An extension service aims at converting non-readers in to readers. It creates and stimulates the desire for good reading. This is done by bringing books and readers together. This results in exploitation and promotion of collections. ALA Glossary of Library and Information Science 1983 defines it as the provision by a library of materials and services (including advisory services) to individuals and organizations outside its regular service area, especially to an area in which library service is not otherwise available.

Prerequisites for Extension Services

1. The library should have a good collection to support all extension activities.

2. The trained and experienced staff is obligatory.

3. The library should have a lecture hall, an exhibition hall for holding meeting of different groups.

4. The library should possess audio-video equipment i.e. LCD projector, slide projector and mike arrangement.

5. The librarian should be a good organizer, should understand the needs of the different categories of the community and be knowledgeable about the collection of the library

Forms of Extension Services:

The Library extension services may be of internal or external type. The internal extension service includes orientation programmes and the external extension service includes the mobile library service, publicity programmes etc. Some of the main forms of extension services are as follows

1. **Library Orientation** Many library users do not know how to use a library effectively. This can be due to the lack of early exposure, shyness, or anxiety and fear of displaying ignorance. These problems led to the emergence of the library instruction movement, which advocated library user education. Libraries inform the users of what materials are available in their collections and how to access that information.The reference staff may orient the user either in formal way or informally into the library system.

2. **Reading Circle, Study Circle:** Persons with common interest may be brought together by the library to a reading circle. Each reading circle should be given necessary facilities regarding the materials and a suitable place to hold the meeting, so they can discuss on various topics and exchange their ideas.

3. **Meeting, Public Lectures and Talks:** A library should organize lectures and talks by eminent persons and also by library staff. With the help of such lectures many new users can attract towards library and old users can gain more and new knowledge.

4. **Celebration of Festival and Events and Arranging Cultural Programmes** It is a good idea to arrange popular festivals and events in the library which may also arrange a drama, a puppet show, a music concert, a film show, a magic show etc. Such cultural programmes can prove great attraction for the community or can celebrate various birth anniversaries of eminent people such as Gandhi Jayanti, S.R. Ranganathan's jayanti, etc. On such occasions a book exhibition related to the programme should be arranged.

5. **Book Fair and Exhibition:** At the time of talk, festival, fair, drama, etc. a book exhibition on the relevant topic may be arranged. Exhibition on local history, local festivals, art, photograph and painting can offer great opportunity to attract the attention of the community. Periodical exhibition of books which have a bearing on topical theme enhances the chances of books finding their readers. Occasional exhibitions of unused books might prove useful for the reader in getting interested in books and using them.

6. **Mobile Service:** Library can introduce mobile library services to users

7. **Publication:** Library can publish publications like annual report, reading guide, library magazine / bulletin and other similar publications. It is also a marketing tool to increase use of library.

8. **Library Bulletin:** The library bulletin should not only list fresh books and some important articles published in current issues of journals but should also give brief annotations wherever the content of new material needs. The library bullet in can take the form of indexing or abstracting service or table of content of periodicals received in the library or the list of recent publications or acquisition.

9. **Annual Report:** The annual report is the official document of the library for recording the annual library activities in totality. It is the statement of assessment and evaluation of all the departments of the library. It is the survey of works carried out during the preceding year with summarization of the activities and achievements of the library.

10. Updating and maintaining library website

11. **User survey** is a process undertaken by libraries to learn about the needs of users (and non-users) and to evaluate how well they support these needs, in order to improve library facilities, services and resources.

12. **Repositories:**A repository may contain a wide variety of material that represents the academic output of an institution (e.g. journal articles, pre-prints, conference papers, working papers, datasets), or they may just focus on one type of material (e.g. peer-reviewed papers).Repositories can be institutionally based e.g. capturing the academic output of a particular university, or discipline based

13. **Library advisory committee:** The Library has to cater to the needs of variety of clientele such as faculty, research scholars, post graduate and under graduate students, institute administrators as well as specialists, industrial workers engaged in neighborhood industries and non teaching institute staff, a wide range of subject fields are to be represented in our book stock with prime thrust for meeting the needs of students and faculty members. Besides this, for smooth functioning of the library and safe guarding the interest of all sections of the library users, formation of policies, rules & regulations and implementing the library policies in a judicious manner, an infrastructure is needed for the library. To meet the above objectives the Library is advised by a Library Advisory Committee .

Conclusion

The Extension services will educate the users about the infrastructure, collection, staff, facilities and services and It is helpful to library, If it is used in an effective way. It helps to increase the users of the library, also increases use of the available resources. It is one of the best tools of marketing about library and library services. It helps to maximize user satisfaction. Above all the librarian should be a good organizer, should understand the needs of the different categories of the community and be knowledgeable about the collection of the library to convert non reader into reader, non user to user.

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CAS Through Social Media
(Current Awareness service- a review)

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Abstract

The paper seeks the feasibility of introducing and disseminating information and current Awareness Service, through social media such as Face-book and WhatsApp for better reach and make user friendliness more comfort and convenient thanks to this digital era and digital India. It also speaks of CAS and its uses, features, kinds etc.. It probes the pros and cons of this service introduced through social media.

Introduction

Dissemination of information that will keep it users well-informed and up-to-date in their fields of basic interest as well as in related subjects is called Current Awareness Service. It is a system of getting knowledge on recent development, and especially those developments which relate to the special interest of the individual.

CAS is a device of the information system through which the users of information can be informed promptly, as soon as possible after publications but before absorption into the comprehensive secondary sources of current literature on a broad subject field or on an area in which a group of persons are interested, and presented in a manner, volume and rhythm intended to facilitate or cultivate current approach to information. CAS involves knowledge of:

- New theoretical ideas and hypotheses.

- New problems to be solved.

- New methods and techniques for solving old and new problems

- New circumstances affecting what people do and how they may

S.R. Ranganathan defines CAS as Documentation periodical listing the documents appearing during the period covered, and without being selected to suit the requirements of a particular reader or of a specific topic under investigation. It endeavors to keep the clientele informed promptly of all the nascent thought created in their fields of work and related fields.

Types of Current Awareness Service

Two kinds of Current Awareness Services may be recognized.

- Those services, which are directed towards individuals or group of users. These may include communication of information to individuals or groups through informal conversation or via telephone, a message sent on notification form, SDI, selective of dissemination of documents, routing of periodicals (or automatic loan) and other documents. In this field, information supplied within the period of one week to one month.

- Those services, which are directed towards all users of the services, these may include accession list (a list of recent acquisitions), bibliography, indexing and abstracting services, bibliographic surveys, literature surveys, table of contents of periodicals received in the library, Current Awareness bulletin, etc.

Aims and Purposes of Current Awareness Service

- To aware the scientists/users with latest developments in their subject fields.

- To keep the clientele well-informed and up-to-date knowledge of latest development in their fields of research.

- To fulfill the current demand of the users.

Channels of Current Awareness Service

Characteristics of CAS are enumerated as follows:

Visual channel:

There is a visual channel for a user to know the current developments through:

1. Information obtained orally from colleagues.

2. Information received/gathered through the receipt of preprints, reprints.

3. Information gathered through attending meeting and conferences and getting information in both formal and informal way.

Literature channel:

1. Scanning of current issues of periodicals.

2. A regular perusal of abstracting and indexing periodicals in one's subject fields.

3. In some cases, reviews and monographs are also consulted.

Formal channel (Current channel):

1. A regular perusal of current issues of periodicals.

2. Current issues of abstracting and individuals periodicals.

3. Maintaining profiles (personal files of the users).

Factors Influencing on Current Awareness Service

- **Current Approach:** It is necessary for every informator to keep user known with the current literature or the latest development of the subject. He must know all the important areas as soon as published or generated.

- **Continuous need:** CAS is very much required where there is a continuous need for current affairs and developments by the user. More continuous need, more Current Awareness service.

- **Direct demand:** For many issues, the user may not be immediately interested but some of the references may be demanded by him at any moment. For such needs, some of the references is recorded in his diary or personal file kept with the library or informator, so that when to need arises they may be supplied with latest developments.

CAS Through Social Media

All the above shared viewpoints may be much beaten item to a well informed librarian or on informatory but, though the very aim of this paper is introducing the CAS service through social media for a quick and easy reach, to give a complete shape to the paper , the above points were discussed here. The services so far done through manually almost by a page boy or a physical announcement announced in the library board or in the front office of a library and so on. Instead, the facebook and whatsApp id may be collected from the users and this dissemination may take place as these two media have become common and all and sundries started using this in variably.

Conclusion

Library is a growing organization. That is why it has seen so many changes in it right from traditional library to modern library. Among this two broad spectrum many

classifications are possible with respect to its functioning like academic library, lending library, reference library, digital library and so on. Hence the slight modification in the mode of CAS could also be possible; initially let be a pilot scheme and later suitable modifications may be done.

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Extension Service of the Libraries: An Overview

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Abstract

Libraries are the democratic institutions for the profit and enjoyment of all. So, in the recent years much thought has been given to the best methods of popularizing the use of libraries. How does one attract readers to libraries? How were it extend to all classes the facilities for using them? How can one render the maximum amount of help to those who desire to use libraries and how to save the time of the reader and library staff alike are some issues to be addressed.

Keywords: Extension services, extension activities, Publicactivities for Library. Library Extension Services:

Introduction

Extension work is defined as those activities which are undertaken with the objective of reaching the group of people who might otherwise be unaware of the library services and book stocks. Mc Colvin considers it as means to increase the number of readers and the volumes of work and later to make the library more useful to more people. ALA Glossary of Library and Information Science 1983 defines it as the provision by a library of materials and services (including advisory services) to individuals and organizations outside its regular service area, especially to an area in which library service is not otherwise available.

Objectives:

The main objectives in providing extension services are

- To convert a library into a social, cultural and intellectual centre;

- To convert non reader into reader, non user to user.

- To bring books and readers together.

- To inform those who do not use the library services and to attract them to those services.

- To inform the reader of all the facilities offered by the library.

- To remind both the reader and the non reader of the library and its resources.

- As a means of publicity to enlist financial support or otherwise for the libraries.

Prerequisites for Extension Services

1) The library should have a good collection to support all extension activities.

2) The trained and experienced staff is obligatory.

3) The library should have a lecture hall, an exhibition hall for holding meeting of different groups.

4) The library should possess audio-video equipment i.e. LCD projector, slide projector and mike arrangement.

5) The librarian should be a good organizer, should understand the needs of the different categories of the community and be knowledgeable about the collection of the library.

Forms of Extension Services:

The Library extension services may be of internal or external type. The internal extension service includes orientation programmes and the external extension service includes the mobile library service, publicity programmes etc. Some of the main forms of extension services are as follows;

(i) Library Orientation / Library Tour: Many potential library patrons do not know how to use a library effectively. This can be due to the lack of early exposure, shyness, or anxiety and fear of displaying ignorance. These problems led to the emergence of the library instruction movement, which advocated library user education. Libraries inform the public of what materials are available in their collections and how to access that information. The reference staff may orient the user either in formal way or informally into the library system.

(ii) Reading Circle, Study Circle: Persons with common interest may be bought together by the library to a reading circle. Each reading circle should be given necessary facilities regarding the materials and a suitable place to hold the meeting.

(iii) Forming Friends of the Library Group: The Library can also think of forming Friends of the Library Group; such group can assist the library through fund raising, volunteering, and advocacy. They also hold book sales at the library.

(iv) Reading to Illiterates: Reading hours for adults who cannot read should be arranged by public libraries. Once they become neo-literates the public library then should take upon itself to see to it that they do not lapse into illiteracy again.

(v) Meeting, Public Lectures and Talks: A library should organize public lectures and talks by eminent persons and also by library staff.

(vi) Celebration of Festival and Events and Arranging Cultural Programmes: It is a good idea to arrange popular festivals and events in the library which may also arrange a drama, a puppet show, a music concert, a film show, a magic show etc. Such cultural programmes can prove great attraction for the community. On such occasions a book exhibition related to the programme should be arranged.

(vii) Book Fair and Exhibition: At the time of talk, festival, fair, drama, etc. a book exhibition on the relevant topic may be arranged. Exhibition on local history, local festivals, art, photograph and painting can offer great opportunity to attract the attention of the community. Periodical exhibition of books which have a bearing on topical theme enhances the chances of books finding their readers. Occasional exhibitions of unused books might prove useful for the reader in getting interested in books and using them.

(viii) Mobile Service: Introduction of mobile library services to provide service to citizens without access to central or branch libraries has devised an interesting variety of delivering methods. For offering this service, the time for each locality is to be fixed and notified earlier.

(ix) Publicity/ Propagenda: Propaganda through the newspaper, radio, television can be introduced.

(x) Book by Mail and Telephone Request: The public library should also provide library lending service through mail and Dial a book and Dial a fact method. A public library can also think of delivering books to any home bound person on a request. Introduction of library website is also a good form of extension service.

(xi) Publication: Publications like annual report, reading guide, library magazine / bulletin and other similar publications are also helpful.

(xii) Library Bulletin: The library bulletin should not only list fresh books and some important articles published in current issues of journals but should also give brief annotations wherever the content of new material needs. The library bulletin can

take the form of indexing or abstracting service or table of content of periodicals received in the library or the list of recent publications or acquisition.

(xiii) Annual Report: The annual report is the official document of the library for recording the annual library activities in totality. It is the statement of assessment and evaluation of all the departments of the library. It is the survey of works carried out during the preceding year with summarization of the activities and achievements of the library.

Need for Library Extension Service:

1. To extent the benefits of library service to ever increasing number of Public People.

2. Ensuring equality of educational opportunities as part of overall Plan of ensuring social justice.

3. Improve the self education talent of Rural People.

4. Involvement of the rural Public including laymen, adult, children, students, workers, etc, In the task of social and economic development.

5. Objectives of Library Extension Services.

6. To make users of Non-users.

7. To create and stimulate the desire for good reading

8. To act as a link between mind and Idea.

9. To provide library Services to schools not having their own libraries .

10. To improve the status of the rural People in the society.

11. To encourage the adults regarding their education.

Principles of Extension Service:-

a. Stock of books and other reading materials should be adequate at every point of service

b. Particular reading material should be provided to meet individual readers demands.

c. Library service points must be staffed adequately be qualified , gained and experienced persons.

d. All kinds of library services, both technical and readers service, should be as good as its possible to make them.

Methods Involved in Extension Service:-

- Reading system

- Display Photographs, manuscripts

- Exhibitions Books

- Reading Circles Periodicals and Seminar

- Story hours for Children drematic performance

- Fairs and festivals Local festivals and special days

- Extension talks

- Adult Education

- Reading courses and lists

- Films and Fli8mstrips

- Discs and Tapes

- Extension centers

- Celebrations of Library Day

- Library Hand book

- Annual Report

- Library Bulletin

- Mobile Library Service

Reading System

- This will increase these professional efficiency and skill

- This will help to combat illiteracy

- This form of service also benefits the blind people and those in rural areas.

Display

Display brings to people's notice the latest additions to the libraries. The materials engravings, Photographs, manuscripts, archives, etc.,

Exhibitions

- It's mostly arranged to publicizes less-known materials, encourage readings. Promote interest in a specie field.

- Celebrate Children's Book week, to highlight their literature.

Reading Circles

Organizing reading circles with in the premises of libraries is another forms of extension Service.

Story Hours For Children

Libraries also arrange for story. Hours, Plays. Talks and other attractive forms of extension service to allure children to came to the library. The librarians also Occasionally ;arrange for dramatic performance by amateur troops.

Fairs and Festivals

The celebration of local festivals and special days of the year dedicated to illuminates or participation in local faurs,

Extension Talks

The librarian is also frequently arranges for special talk

Adult Education

Arrangement should be made to have books read to them at stated hours.

Cultural Programmes

The Public library attracts readers by converting it self into a social and cultural centre. A library may organize musical concern, a Puppet show, drama, dance, magic show. Villupattu and Kathakalakshepam.

Extensiton Centres

The public library system has bunch libraries to serve the rural populations. These books will be changed Periodically by the library authorities. The extension activies the Public library will be able to serve the user community whether urban or rural.

Celebration of Library Day

The library staff should arrange to celebrate annually the library day which should include interesting lectures, a small book exhibition Pleasing out rural Programme etc., The Idea behind such celebrating is to establish contact between the books and the readers.

Library Hand Books

An instructional booklet may be prepared carrying information and current facts about the library to help the Headers make use of its service. The Hand books should also gives hours of opening a rules regulations for the use of the librarys special resources, book service, text book arrangement and INTER LIBRARY LENDING SERVICE.

Annual Reports

Annual Report indicate in the library statistical data, the major activies of the library during the previous year and its future plans.

Library Bulletin

The Bulletin is used to know the working hours of the library, new service points, additional facilities etc., It is distributed to everyone.

Mobile Library Service

Mobil library service is used to not able to get reqular library service through conventional libraries. The people who are in rural areas will be more benefited by this.

- Books will be taken in a mobile Van to a particular place at particular time.

- The reader can use to this at the time.

Conclusion

The public library is a people's university and a living force for education. It is an information center and a place where the people can make proper use of leisure. The old concept of public library has changed in the modem context. Today, public libraries conduct user surveys and studies to identify the demand. Being a dynamic institution it reaches out to the people through branches, book mobiles and deposit stations. It provides special reading materials to all sections and ages of the society and thus no segment of the society is left unserved. The public libraries hold a large stock of slides, film stripes, microfilms, gramophonic records, audio/video cassettes, microfiches, art prints and educational films'

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Extension services in Public libraries: A view

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Abstract

The society is of multi-lingual and multi-cultural in nature. In such type of society a sense of respect and regard for other linguistic and cultural groups is essential to strengthen the cultural unity in diversity. Hence, a public library needs to address itself in organizing functions and meetings of different cultural groups to give aspirations and contributions of different cultures and it is to provide effective and efficient library services, which has a tremendous impact on socio-cultural and educational development of the local community.

Keywords: Information needs, Social centre, Public library, library collection, Extension services,Patrons.

Introduction

Libraries play a special role in the modern society. The aim of the modern libraries today is to provide services not only to its registered members but also to every member of the society. To make the libraries familiar, extension services should be arranged in them, so that the people of the society may get maximum benefit from them. Extension services are undertaken in two ways, one is Internal extension services which are arranged within the libraries, and another one is External extension services which are arranged outside the libraries. In fact, the external extension services are the real extension services of the libraries.*Dr. S. R. Ranganathan* defines Apart from such methods of pure publicity, libraries are now-a- days developing certain new types of work which, in addition to their being directly educative or recreational, lead also to publicity as an important secondary product. **McColvinsays** Extension services in the libraries are the ultimate objective to enjoy the benefit of library services. Thus we say that the extension activities of the libraries are very much helpful and important to make the literate society.

Literature Review

Sin and Kim (2008) examined the characteristics of users and non-users of the public libraries using socio-demographic data from the Current Population Survey, a nationally representative survey of over 50,000 households conducted during October 1319, 2002, and library services data from the Public Libraries Survey 2002. The study found 34 variables to be significant. These variables include factors that have not often been studied, such as distance from the library, age/school attendance status, use of other types of libraries, and public library expenditure and per State capita. It is also worth noting that disadvantaged groups, including ethnic minorities, recent immigrants and people with disabilities were less likely to use public libraries. This was true even after other factors such as education and income were held constant. The study provides a national- level assessment of the under-served population. It also offers triangulation to other existing research, particularly, qualitative information behavior studies of specific groups.

Kinya (2011) undertook a study of users of public libraries in Kenya. Questionnaire was used to gather required data from the users. The findings of the study are

(i) most of the users were men, diploma holders

(ii) most of them visit to read newspapers and other information

(iii) majority visit library daily or twice a week and spend two to four during their each visit and

(iv) majority of the users are not satisfied with collection, facilities, staff and other services.

Importance of Extension Services:

(a) Objectives of Extension Services:The main objectives of extension services are,

(b) It is to turn the library in to a social centre which encourages reading

(c) To make non-readers to readers

(d) It creates and stimulates the desire for good reading and brings book and reader together

(e) It makes, maximum use of library resources

(f) To arrange public lectures and talks by eminent persons

(g) To organize Book exhibitions and various competition programmed for children

(h) It is to create an image of the library among the users

(i) Prerequisites for Extension Services:

(j) The library should have a good collection to support all extension activities.

(k) The trained and experienced staff is obligatory.

(l) The library should have a lecture hall, an exhibition hall for holding meeting of different groups.

(m) The librarian should be a good organizer, should understand the needs of thedifferent categories of the community and be knowledgeable about the collection of the library.

(n) The library should possess audio-video equipment i.e. LCD projector.

In Public libraries

1. **Library Orientation / Library Tour:** Many library patrons do not know how to use a library effectively. This can be due to the lack of early exposure, shyness, or anxiety and fear of displaying ignorance. These problems led to the emergence of the library instruction movement, which advocated library user education. Libraries inform the public of what materials are available in their collections and how to access that information.The reference staff may guide the user either in formal way or informally into the library system.

2. **Translation of Manuscript/ Local Language:** For increase use of the public library should translate books or manuscripts into local language. It helps to attract more people towards library because books written in local or mother tongue are more demanded in public library.

3. **Reading Circle, Study Circle:** Persons with common interest may be brought together by the public library to a reading circle. Each reading circle should be given necessary facilities regarding the materials and a suitable place to hold the meeting, so they can discuss on various topics and exchange their ideas.

4. **Forming Friends of the Library Group:** The public Library can also think of forming Friends of the Library Group; such group can assist the library through fund raising, and volunteering. With the help of such group library can raise funds and can do library marketing also.

5. **Reading to Illiterates:** Reading hours for adults, who cannot read should be arranged by public libraries.Once they become neo-literates the public library then they do not lapse into illiteracy again.

6. **Meeting, Public Lectures and Talks:** A public library should organize public lectures and talks by eminent persons and also by library staff. With the help of such lectures many new users can attract towards library and old users can gain more and new knowledge.

7. **Book Fair and Exhibition** A book exhibition on local history, local festivals, art, photograph and painting can offer great opportunity to attract the attention of the community.Periodical exhibition of books which have a bearing on topical theme enhances the chances of books finding their readers. Occasional exhibitions of unused books might prove useful for the reader in getting interested in books and using them.

8. **Mobile Service:** Public library can introduce mobile library services to those who do not have access to public libraries. Public library can deliver books to them through various methods. For offering this service, the time for each locality is to be fixed and notified earlier.

9. **Publicity/ Propaganda:** Advertisement about public library and services provided by the library should bed one through the newspaper, radio, television etc. It helps to increase the use and user of public library.

10. **Publication:** Public library can publish publications like annual report, reading guide, library magazine / bulletin and other similar publications. It is also a marketing tool to increase use of library.

Conclusion

In this way we can see how extension service helps to the public library. If it is used in effective way it helps to increase users of the library, also increases use of the available resources. It helps to maximize user satisfaction and to provide services to the readers, who do not have facility of public library. In addition to this we can increase benefit services to general society. The study further revealed that the impact of public libraries on socio-cultural and educational development could be further gear-up with active support from the state and central government. It is also concluded that the government should encourage, establish and maintain public libraries in order to provide effective and efficient library services, which has a tremendous impact on socio-cultural and educational development of the local community.

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Infrastructure Facility for Accessing Digital Resources in Libraries: With Special Reference to Islamic Management Engineering Colleges of Tamilnadu

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Abstract

Library and Information Centre is essential Part of every academic Institutions. They are playing as boosting agency for the Higher Education and Research. According to that it is mandatory for every academic institution to satisfy Certain Rules and regulations of the University Grants Commission , AICTE, State Government and Concerned University in order to establish and provide proper Infrastructure facility for the Library users. This article has designed in order to find out the Infrastructure and services provided by the Islamic Management Engineering colleges of Tamil Nadu. This study was conducted with a help of detailed questionnaire prepared and distributed to all Engineering colleges especially Muslim Management Institutions. There were two types of questionnaires were distributed one for the users. All the Responses are collected back for the data analysis. Then it was analyzed with respect to the purpose of the study. According to the study infrastructure facility to be increased in certain level.

Introduction

Libraries are heart of every higher educational institutions, they act as the light house for the education community. Due to privatization of higher education In India, Engineering Institutions have mushroomed.Here the Quality of higher education is the main concept for every academic institution.In Tamil Nadu there are lot of Engineering educational institutions among them Muslim Management Engineering Institutions have taken for the study. This study particularly meant for Library Infrastructure. According to that the Institutions have to provide proper infrastructure facility in libraries. Based on this a study performed about the infrastructure facility of the selected Institutions in TamilNadu especially Muslim Management Engineering Institutions. The study covers the Libraries infrastructure like Separate Building,

Ventilation, Working hours, Adequacy of Resources, Furniture, Computer Systems, Internet facility, Digital Resources, Bulletin board, OPAC facility, facility for Research Scholars, Reprography, Printing , downloading and Manpower. According to that there are two types of Questionnaire were designed one for the Librarian and another for the users. Based on the above categories both the questionnaires were Distributed to selected Muslim Management engineering colleges in Tamil Nadu. Then responses are collected back for the data analysis. It is found that majority of the Library users satisfied with their Library Infrastructure. The methodology and analysis of the study will see the succeeding passages.

Muslim Management Engineering Colleges

S.No.	Name of the Institution(s)	No.of Questionnaire Distributed	No of Questionnaire Received	Percentage
1	Dhanish Ahmed College of Engineering, Kanchipuram	100	72	72
2	C.Abdul Hakeem College of Engineering & Technology, Vellore	100	86	86
3	As-Salam College of Engineering & Technology, Tanjore	100	69	69
4	Annai College of Engineering &Techynology, Kumbakonam	100	78	78
5	M.A.R.College of Engineering & Technology, Trichy	100	65	65
6	M.A.M College of Engineering & Technology, Trichy	100	71	71
7	Dhanish Ahmed Institute of Technology, Coimbatore	100	77	77
8	Mohamed Sathak Engineering College, Kilakarai	100	66	66
9	Syed Ammal Engineering College,Ramanathapuram	100	69	69
10	National College of Engineering,Tirunelveli	100	67	67
	TOTAL	1000	720	72%

Review of Literature

Singh, Gurpreet;and Nagah, Pankaj Kumar. (Mar 2014) Discussed in their paper E-resources are increasingly important to all aspects of teaching and learning. This present study provides an overview of the utilization of e-resources by the users of IIT library Ropar. A well-structured questionnaire was administered to the faculty members and the students of IIT Roparto get required data. 100 questionnaires were distributed, out of which 70 questionnaires were returned with good response. This study investigates awareness among the users about the availability of e-resource in the library; their usage; satisfaction with the availability of e-resources&infrastructure facility provided in using e-resources; and need of training to increase the utilization of e-resources. Gives suggestions and recommendations for the improvement in the usage of e-resources.

Akporhonor, Blessings Amina; Akpojotor, Lucky Oji. (Feb 2016) aimsto identifying the challenging confronting postgraduate library and information science student in the use of electronic resources in Southern-Nigeria. The entire population of three hundred and seventy (375) postgraduate students of library and information science student in Southern Nigeria was used as the respondents for this study. The questionnaire was the instrument used for data collection. The simple percentage statistical tool was used to answer the research question. The finding revealed that poor internet connectivity epileptic power supply, information overload, high cost of access, download delay and difficulty in accessing some websites are some of the problems militating against the use of electronic information resources by postgraduate students of library and information science student on Southern Nigeria. Based on the findings, the study recommended that power supply should be improved upon, internet providers should improve their network services, cost of accessing electronic information resources should be subsidize to a minimum so as to make them affordable.

Kwadzo, Gladys (Mar 2015) the purpose of this study is to examine the awareness level and usage of electronic databases by graduate students in the University of Ghana. The focus was on graduate students of Departments of Geography and Development Resource, and Information Studies. The findings were that students were very much aware of the databases available to them as indicated by 96.9% and 93.8% indicated to use them. The studies has also established that majority of students knew about the databases from their lecturers and most of them accessed from the central library. Despite the claimed usage level, databases they focused on were few and many of them were not familiar with those in their discipline of study. Further, the limited number of the databases they knew about, they were satisfied with them and claimed the databases have impacted on their learning and research activities.

Objectives

This study is based on the following objectives.

- To identify the Muslim Management Engineering Colleges in Tamil Nadu

- To collect data from the concerned college Library users including UG, PG Students, Research Scholars and Faculty

- To identify the usage of the Computer Lab/Digital Library/Virtual Library

- To examine the types of digital resources

- To identify the infrastructure facility of the concerned library

- To measure the level of satisfaction of the Digital resources among the respondents

- To find out the solution/suggestion for the improvement of infrastructure

Methodology

A systematic questionnaire has prepared for the data collection and sent to the engineering colleges. Total 1000 questionnaires were distributed to 17 Engineering colleges, among this 10 engineering colleges were selected and 720 questionnaires were received back. Total 720 respondents filled the questionnaires and they taken in to account for the data analysis. All Questionnaires were feeded in the computer system and SPSS software version 2.0 applied for the analysis.

Statistical Tools

The collected data were coded and fed in to the computer with the help of MS Excel and further the analysis was done by using SPSS packages. The present study follows simple percentage method, ANOVA test and chi square test.

Discussions & Findings

Forms of availability of Journals and its usability

Form of the Journal	Yes	No	Total
Print Version	540(75%)	180(25%)	720
Online Journal	615(85.4%)	105(14.5%)	720

The college libraries are hybrid in nature, where both print version and online/digital resources are available for the users choice. Among the Engineering colleges, 75 percent of the respondents (540) are of the opinion that the printed version of the journal is very much comfortable for getting information. It is also noted positively that the maximum of 85.4 percent of the respondentsare given the opinion that Online/e-journals are very much useful for acquiring the relevant information for their academic needs.
Problems faced while accessing and using e-resources (Mean values)

Problem	Mean	Rank
Accessing Suitable personal computers	4.05	3
Accessing suitable software	4.10	2
Lack of Information about how to use digital resources	4.16	1
Lack of time to acquire skills	3.74	5
Lack of support from Library staff	3.58	6
Other reasons	4.02	4

The above table shows the opinion about the problems faced while accessing and using e-resources by the respondents. It is inferred from the table that the respondents are having the foremost problem as the Lack of information about how to use digital resources ranked in the first places with the mean value of 4.16 Percent. The problem in accessing the suitable software (4.10) in Engineering colleges and lack of time to acquire skills at the 2nd position as the problem in accessing and using the e-resources.

Rating of Digital Resources in future:

Advantages	Mean	Rank
Increase considerably	4.40	2
Increased to some extent	4.47	4
Remain the same	4.42	1
Go down to some extent	4.32	3
Terminate almost completely	4.11	5

The future trend of Digital resources and the trend is analysed in which the present position of the e-resources remain the same (4.47) placed in the first place responded by the Engineering college respondents. It will be increased considerably (4.40) was ranked in the second place. It is also viewed that the present e-resources and its trend will be increased to some extent (3.87) is ranked in the second place. Strengths and weakness of the Library:

Opinion	Strength	Weakness
Range of resources available	419(58.1%)	301(41.9%)
Resource Information	365(50.6%)	355(49.4%)
Accessibility of resources	386(53.6%)	334(46.4%
Library working hours	424(58.8%)	296(37.2%)
Usability of resources	369(51.2%)	351(48.8%)
Staff user friendliness	317(44%)	403(56%)
Connection problems	401(55.6%)	319(44.4%)
Multimedia features	385(53.4%)	335(46.6%)
Others	318(44.1%)	402(55.9%)

Whether the usage of the libraries are becoming more effective and efficient because of the introduction of e-resource facilities in the library is enquired from the respondents of colleges. The maximum of 58.1 percent of the respondents, (419) are of the opinion that the Range of resources available may be the strength of the library. The information provided through the available resources will be the strength by 50.6 percent of the respondents. The availability and accessibility of digital resources will be the strength opined by 53.6 percent of the respondents (386) in Engineering colleges. Library working hours (58.8%), Staff User friendliness(44%) Connection problems (55.6%) and Multimedia features of the digital resources (53.4%) of the respondents are of the positive opinion and they are considering these factors as Strength for their libraries in Engineering Colleges.

Suggestions

- It is suggested that more resources are required in Engineering colleges

- There is urgent need to increase or subscribe more number of digital resources in the colleges

- More powerful Internet connections and enough systems are also suggested to Increase the utility in colleges

- More user awareness programmesand training for the faculty and students to be conducted in order to improve the usage pattern

Conclusion

Dr.S.R.Ranganathan father of Library science stated in his fifth Law, Library is a growing organism. According to his statement Infrastructure facilities are essential part of every library. Based on the study the effective infrastructure will be improved for the users in certain colleges. Sufficient funds will be required to establish well

infrastructure facility for both the Government colleges and Self financing colleges.All the growth, development & Quality of Service for the library is possible only through the Librarians dedication and involvement.

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Impact of e resources and usage among Veterinary Students: A study

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Abstract

The study is designed to investigate the impact and usage of e-resources among Veterinary students of Veterinary College and research Institute, Namakkal. The study includes purpose of e resources access ., frequently used e-resources, most preferred place of accessing e-resources, benefits of accessing e-resources, usefulness of e-resources, level of satisfaction and obstacles faced by the Veterinary students of Veterinary College and Research Institute, Namakkal.

Keywords: E resources, Students user community, Veterinary Library

Introduction:

Internet has become a part of library environment today. It has added a great value to the field of library and information services. The electronic resources (e-resources) available in Academic library play a prominent role in facilitating access to required information to the users immediately and save the time of the Users. The e-resources like CD-ROM databases, e journals, e books, online databases and the internet are silently replacing the importance and usage of print media. It is imperative that one should be familiar with the use and exploitation of e-resources for their quick and effective usage for promotion of academic excellence and research. According to Greyz, with the expansion of Internet a new class of electronic documents has emerged. Internet is playing an important role in transforming the library system and the way in which we view the library resources and the library services. Internet provides links to various library web sites, specializing in almost every topic and they can be accessed directly from any part of the world. Information and communication technology (ICT) has revolutionised every walk of human society and change the world into Global village.

Veterinary College and Research Institute, Namakkal, Tamilnadu

The Veterinary College and Research Institute, Namakkal was established during 1985, as a constituent college of Tamil Nadu Agricultural University, Coimbatore for the betterment of poultry farmers. Later it became a constituent unit of India's first Veterinary University, the Tamil Nadu Veterinary and Animal Sciences University in the year 1989. The college moved to its own premises during 1990 to an extensive and scenic campus of 500.18 acres at Ladduvadi village, seven kilometres to Namakkal town. The college is offering undergraduate course in Veterinary and Animal Sciences faculty with annual intake strength of 80 students. At present 23 departments are offering postgraduate programme and 17 departments are offering Ph.D. programme in different branches of Veterinary and Animal Sciences. Apart from teaching, this institute is diverting maximum attention towards research activities to meet the growing demands of the farming community

Literature Review

A number of sources have been consulted and the content was gone through to identify the related studies on the present topic of research. Some of the studies relevant to the present survey are:

Sivathaasan, Achchuthan and Kajananthan (2013) survey on demographic variables and usage of electronic information resources revealed that there are significant mean differences among age group, teaching language and experiences of teachers on the usage of electronic information resources, whereas mean usage of electronic information resources do not differ significantly among five different faculties (F =2.075, p ¿ 0.05).

Bansode (2013) explores the use of electronic journals by the users of university of Pune. It is found that majority of the users prefer electronic journals than the printed journals and those electronic journals are found to be beneficial to users.

Shukla and Mishra (2011) determine the extent to which research scholars of Institute of Technology, Banaras Hindu University are aware and make use of electronic information resources, and the authors also highlight the problems faced by research scholars in accessing e-resources. Results reveal that the Research scholars prefer electronic resources against print resources.76% of the research scholars use e-resources daily. It is found that 88% of the scholars use electronic information resources for their research work.

Thanuskodi and Ravi (2011) survey on use of digital resources by faculty and research

scholars of Manonmaniam Sundaranar University, Tirunelveli investigated utilization of electronic information resources by postgraduate and research scholars. The result shows that 67.14% of the faculty is familiar with the use of electronic information resources. Awareness of EIRs has changed what users actually read and use. They now tend to use only what is easily accessible. Therefore, they visit the library a lot less and as such, discovery through serendipity is reduced. Users often prefer increased access to databases of online-refereed journals and to the Web which provides information that is up to the minute, international in scope and sometimes not available elsewhere because they see these resources as easier to access and search.

Waldman (2003) reported high usage of the library's OPAC by students at City University of New York.

Gakibayo (2001) carried out a study on Internet usage by students and staff at Mbarara University of Science and Technology and the result of the study indicated low usage of electronic information resources by students and staff of the university.

Nikam and Pramodini (2007) conducted a study on use of E-Journals and Databases by the Academic Community of University of Mysore. The result reveals that only 4% of the users are fully aware of UGC-INFONET, whereas 61.5% are somewhat aware and 16.5% users are not aware. There are only 50% of the respondents are less satisfied with e-journals/ e-database services of the library. 99% users have not had an opportunity to attend training/ orientation

Objectives of the Study

1. To find out the purpose of access the e resources by Veterinary students

2. To find out the frequency of accessing e- resources by Veterinary students

3. To find out place of accessing e resources among Veterinary Students

4. To study the benefit of accessing e-resources by Veterinary students.

5. To determine the level of satisfaction among the Veterinary students

6. To identify the obstacles in accessing and using e-resources by the Veterinary students

7. To find out the level of usefulness of electronic resources among the Veterinary students

8. To find out the information technology skills among the Veterinary students

Scope, Limitations and Methodology

The study adopted survey method and a structured questionnaire as a tool to collect data from the students. The stratified random sampling method was followed to collect data from the Under Graduate, Post Graduate Students and Research Scholars of this college. A total of 340 questionnaires were distributed and 226 respondents have returned back after filling the data. The study was undertaken only among the students from VCRI, Namakkal. It is a constituent college of Tamil Nadu Veterinary and Animal Sciences University. The faculty members were exempted from the study due to time limit. The data were entered in to MS Excel for analysis and interpretation.The present study is limited to the students' community of Veterinary College and Research Institute, Namakkal.

Data analysis

Si.no	Category	Questionnaire distributed	Response received
1.	UG	261	150
2.	PG	62	60
3.	Ph.D	17	16
	Total	340	226

Table -1. Distribution of Questionnaires and response received

The above table-1 shows that the responses received from users against distribution of questionnaire. A total of 340 questionnaires were distributed and out of which 226(66.4%) responses were received from the students. The table also indicates that the PG students and PhD scholars are actively participated in the survey.

Purpose of e resources access	UG	PG	Ph.D	Total
For Learning	56	5	1	62
For Assignment	47	2	1	50
For Presentation	20	18	2	40
For Symposium	12	12	3	27
For Project	15	3	1	19
For thesis writing	0	20	8	28
	150	60	16	226

Table -2. Purpose of e resources access

The above table-2 shows that the purpose of e resources access by the veterinary students.The majority of UG students56 (37.33%)out of 150 and overall 62 out of 226 students are using the e resources for learning their courses. The Majority of PG students

18 out of 60 and Ph.D scholars 8 out of 16 are using the e resources for presentation and thesis writing respectively.

Sl. No.	Frequency of use	No. of students (%)	Cumulative total
1	Daily	110(48.6%)	110
2	Several times in a week	48(21.2%)	158
3	Several times in a month.	39(17.2%)	197
4	Occasionally	27(11.9%)	224
5	Never be used	2(0.88%)	226
	Total	226(100)	

Table -3 . Frequently use of e resources.

The above table-3 shows that the frequency use of e resources by the veterinary students. The Majority students 110 out of 226(48.6%) Veterinary sciences are using the e resources in daily, followed by 48 (21.2%)students in several times in a week, 39 (17.2%) students using the e resources several times in a month and only 2 (0.88%) students never be used e resources.

Si.No	Preferred Place	UG	PG	Ph.D	Total
1.	Central Library	104	17	8	258
2	Department Library	13	28	12	53
3.	Computer centre	24	10	14	48
4.	Hostel Wi-Fi	7	15	11	33
5.	Other places	2	4	1	5

Table -4. Place of access of e resources
*Multiple responses allowed
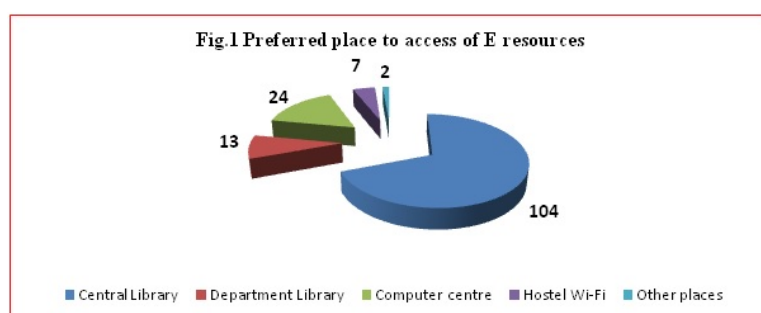
*Multiple responses allowed

The above table-4 and fig.1 shows that the place of access of e resources by the veterinary students. The Majority students of VCRI has preferred central library(258) for access of e resources followed by 53students in department library, 48 students in computer centre ,33 students preferred Hostel Wi fi and 2 students used other places.

Category	Time saving	Easy to use	Easy to locate	Easy to retrieve	More information	Total
UG	106	24	8	7	5	150
PG	8	12	7	19	14	60
Ph.D	4	2	2	3	5	16
Total	118 (52.21%)	38 (16.81%)	17 (7.53%)	29 (12.84)	24 (10.61%)	226 (100%)

Table -5.Distribution of Respondents' benefit of using e resources
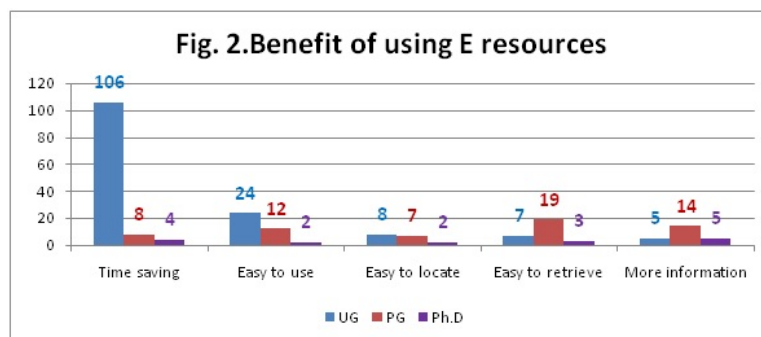
The above table-5 and Fig.2 shows that the benefit of using e resources by the veterinary students. The Majority students 118(52..21%)of VCRI are utilizing the e resources for the benefit of timesaving followed by 38 students (16.81%)for easy to use ,29 students (12.83%) for easy to retrieve ,followed by 24(10.61%)students for more information and 17(7.53%) students for easy to locate.

Category	Highly satisfied	Satisfied	Some what satisfied	Dissatisfied	dissatisfied dissatisfied	Total
UG	18	117	10	3	2	150
PG	7	28	15	9	1	60
Ph.D	2	8	4	1	1	16
Total	27	153	29	13	4	226

Table -6. Distribution of Respondents' satisfaction level of e resources

The above table-6 shows satisfaction level of e resources among the veterinary students. The Majority students 153 (67.69%)of VCRI are highly satisfied against e resources followed by 29 students (12.83%) responded somewhat satisfied,followed by 27(11.94%) students responded highly satisfied followed by 13 (5.8%)students and4 (1.7%) students are highly dissatisfied.

Nature of obstacles	UG	PG	Ph.D	Total
Lack of computer terminals	56	10	3	69
Lack of relevant informationsources	25	3	5	33
Limited /Poor archive issues	8	1	3	12
Need Staff support to access the information	26	25	1	52
Slow speed internet to down load	6	4	2	12
Lack of ICT skill to access	29	17	2	48
Total	150	60	16	226

Table -7. Distribution of Respondents' obstacles while accessing of e resources

Fig.3. obstacles while using e resources
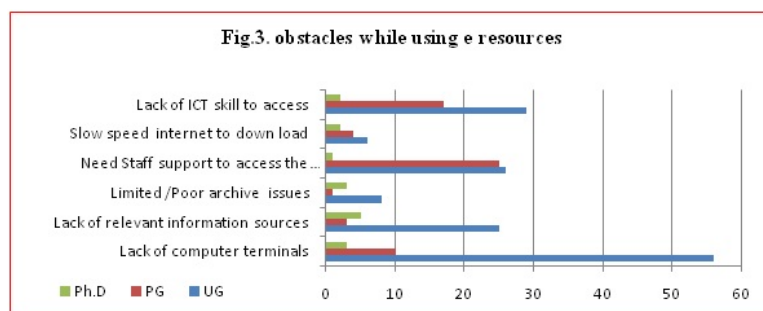
The above table-7 and Fig.3 shows that obstacles faced while accessing the e resources by veterinary students. The Majority students 69 (30.53%)of VCRI are responded that lack of computer terminals, followed by 52 students responded for need staff support to access the e resources ,followed by 48 students (21.23%) responded lack of ICT skills to access the e resources ,followed by 33 students responded lack of relevant information sources, followed by 12students responded against limited /poor archive issues and slow speed internet to access.

Category	Higly useful	useful	Average	Not useful	Total
UG	25	37	86	2	150
PG	28	15	14	3	60
Ph.D	5	3	8	0	16
Total	58(25.66%)	55(24.33%)	108 (47.78%)	5(2.21%)	226(100%)

Table- 8 .Distribution of Respondents' usefulness of e resources

The above table-8 shows usefulness of the e resources by veterinary students. The Majority students108 (47.78%)of VCRI are responded that average level of usefulness

of e resources, followed by 58(25.66%) students responded for highly useful the e resources ,followed by 55(24.33%) students responded average level of e resources and only 5 (2.21%) students responded for not useful e resources.

Findings

1. The Majority of UG students56 (37.33%) and overall 62 students of Veterinary sciences are using the e resources for learning their courses. The Majority PG(18) and Ph.D scholars(8) of Veterinary sciences are using the e resources for presentation and thesis writing respectively.

2. The Majority students of 110 out of 226(48.6%) are using the e resources in daily

3. The Majority students of has preferred central library(258) for access of e resources

4. The Majority students 118(52..21%) are utilizing the e resources for the benefit of timesaving.

5. The Majority students 153 (67.69%)are highly satisfied against e resources

6. The Majority students 69 (30.53%) are responded that lack of computer terminals.

7. The Majority students 108(47.78%) are responded that average level of usefulness of e resources

8. The UG students 26 out of 150 are needed the Library staff support to access of e resources, 29 from UG required formal training to utilize the e resources at the maximum and 26 from UG required additional computer terminals to access the e resources .

Conclusion

To sum up, this study throws light on the various aspects of e-resources usage among Students of Veterinary College and Research institute, Namakkal. The majority users are dependent on libraries to access the e resources and highly satisfied about the e resources. Users are expected the staff support to access the e resources and need formal training to make best use of the e resources. The study also suggests some measures to achieve effective and efficient use of e-resources by the Veterinary students of Veterinary College and Research Institute, Namakkal (TANUVAS), TamilNadu.

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Special Education Through ICT

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Abstract

Information and communication technology (ICT) place a vital role to promoting teacher education the term is made from three separate terms- Information, communication and technology in general sense the implication of technology in gathering the information and to make communication more effective as a part of education. It may defined be defined as digital device, tools and resources. In special education we had lot of improvements along with our new technologies and instruments for better understanding to the special children. Our goal is promoting a special children to their significant in the educational system. In this paper student has tried to highlight the qualification, roles and responsibilities of special education teacher.

Keywords: Special education, special children, special education teacher.

Introduction

Literally Special Education refers to the goals and Educational techniques incorporated to teach children. Young and adult who deviate to the society's norms, fail to learn at rates equivalent to the majority of society's members. The practical concern of contemporary special education is to change environments and behavior such that individual can function effectively within social communities. This orientation departs from these concepts that emphasize differentness.

Effective special Education through ITC

Affective skills often are weak in students with learning problems. Affective aspects of learningproblems.Be an important independent area of study planning for a child or adolescent emotional well-being should be given as much weight as planning for the attainment of both cognitive and physical goals through technology. Parents are also concerned that their children master affective and social skills, for example, the goals that parents have for schooling are as follows:

1. Responsiveness to learning,

2. Creativity in learning and living,

3. Basic knowledge and skills,

4. Fitness and health,

5. Artistic expressiveness,

6. A sense of self-worth,

7. Understanding of the family in society,

8. Practical life skills,

9. A sense of responsibility in society,

10. Cultural understanding and tolerance,

11. Good work attitudes and skills,

12. Respect for the environmental, and a developed set of values.

A large number of these goals statements either directly or indirectly refer to affective outcomes. For example, numbers one and six centered on feelings about learning or about self in several of the other items, an affective dimension in implied. Thus, both professionals and parents alike are beginning to agree that affective goals should be given more emphasis.

The way individuals feel about themselves the majority of the time has been termed self-concepts when individuals generally are content with themselves as persons, they are referred to as having a positive self-concept conversely, when they feel badly about themselves the majority of the time they are referred to as have a negative self-concept. We are concerned about the latter case, individuals who feels badly about themselves. Often there is the case for young children who may have difficulty differentiating subject specific learning problems from their concept of themselves as persons. the aching them the content or skills that are troubling them, such as that numbers make sense or that the little be is always the same letter,often will result in improvements in self-concept.

Gender and Educations

In this case there was little mention of knowledge and pedagogy in the education system. This is because the middle class have a close affinity with the formal system of education which in many respects is seen to mirror their ways of seeing the world and what they consider really useful knowledge. What is argument ignores, however, is the fact that class conflicts are cross-cut by those of gender. For women, the question of

whether the state has enabled them to become full citizens in a democratic society has been long-standing, characterized by the nation of a patriarchal state, dominated by and run in the interest of men.

Typically, this approach involves the following seven steps

1. Identity nonstandard dialect speakers. This is usually done informally, but some instruments are available.

2. Explain that there are different dialects.

3. Contrast and teach the differences. List and description of dialect differences for a number of dialects are available. Very young children may not be mature enough to recognize, Label, and contrast dialect differences.

4. Teach students to distinguish between home English and school and work English and to use the most appropriate one for a given situation.

5. Drill students in substituting standard forms for nonstandard ones.

6. Provide students with opportunities to practice standard form in class.

7. Evaluate the results. This last step can be done informally or by using a formal instrument.

Importance of Teacher in Special Education

1. Successful elementary teachers in many cases desire to remain in a teaching area in which they are secure because of their success;

2. Because of the shortage of elementary-school teachers, superintends are reluctant to encourage successful elementary teachers to change to special fields;

3. The area of specialization are not the same for all groups of exceptional children, and the amount of training needed with different groups;

4. Teachers who have changed from regular class room teaching to special class room teaching for sentimental rather than professional reasons have not always been successful has teachers of exceptional children.

Qualifications of Special Teachers

Many lists of the qualification of successful teachers have been prepared. Symonds (1947) state that the teacher should

  (a) like training

  (b) personally secured, have self respect, dignity and courage,

  (c) identify himself with the children,

  (d) accept aggression of boys and girls, laziness, slowness etc.,

  (e) we free from anxiety and

  (f) self-centered or selfish.

These traits are characteristics apply equally to teachers of exceptional children.

Roles and Responsibilities of Special Education Teachers

Irrespective of the impairments and capabilities, every child has the right to receive education according to his needs, interest capacities and abilities. It is the responsibility of the teacher to identify the abilities or disabilities within each child and make appropriate organizational instructional climate for prepare development of the child. Whether it is an integrated education or special education, the educational development of the child largely depends on teacher's capabilities to perform various roles within the class room and outside the class room to make the student competent in personal and special life in the techno pedagogy.

The United State of Education

  (i) The same competencies required of qualified teachers of sighted children plus a sequence of specialized preparation;

  (ii) Medical knowledge involving anatomy of the eye and the implications for education and development of visually handicapped pupils;

  (iii) Guidance and counseling skills;

  (iv) Knowledge of instructional strategies;

  (v) Skills in teaching orientation and mobility;

  (vi) Ability to teach communication skills, braille, typing and listening;

(vii) Curriculum adaptation and development;

(viii) Assessment and evaluation;

(ix) Knowledge of role and ability to work with other specialists, agencies and appropriate organizations (Mackie & Dunn, 1955)

Conclusion

These are the most important thing in the special education. Teacher role and responsibilities are more requirements for the special children. Finally, special education wants to be encouraged and motivate much through education nowadays.

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Massive Online Open Courses in India

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Abstract

Massive open online course (MOOCs) is a recent development in the variety of online learning options available. This article deals with the growth of open education & online learning using MOOCs. It describes various platforms used, subjects covered, pros and cons of MOOCs, etc., It also discusses the future relationship of MOOCs with librarians since it is likely to occupy the future educational system of the universe.Higher educational Institutions like colleges and universities are facing a number of issues, including increased tuition fee, limited Government support for public institutions, paucity of supporting funds from private institution, decreasing student enrolment and increasing competition amongst profit making educational institutions. Even though these issues and concerns are being looked in to various institutions involved, this new technology namely Massive Open Online Courses, (MOOCs) has bloomed as an alternative which could address the needs of higher education at a comparatively less cost.They are in short, a new system which can provide large variety of educational courses to millions of people at an affordable cost through online resources and social media.

Keywords: Open education, Online learning, MOOCs, SWAYAM

Introduction

Massive Open Online Courses (MOOCs) is presently receiving a great deal of attention from the entrepreneurs, education professionals and technologically literate section of the public. The advantage of MOOCs is that they will provide access to various courses of University level education at a lower cost, and is expected to disrupt the existing models of Higher Education.

MOOCs has prompted elite universities world over to offer their courses online by developing open learning platforms. Growth of Universities/Institutions offering MOOCs is gradually increasing, clearly indicating the latest trend in online learning.

Just like the rapid growth of virtual libraries, the world would very soon witness higher education through e-learning using MOOCs.

Though the idea of MOOCs was mooted around the year 2008, it has caught the lime light during this decade and developed as well as developing nations are showing keen interest in adopting this. Many MOOCs platforms have been developed and started to offer courses either independently or with collaboration of other Universities and educational institutions.

Indian Pespective

Keeping abreast of the global development in online courses, Indian Government also decided to give priority to the Massive open online courses and initiated SWAYAM the Indian Platform for MOOCs in the year 2014. SWAYAM is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. Education is a priority area as it is crucial for making the youth of our country competitive and resourceful. Challenges like lack of quality education resources abound. This makes all the more desirable that quality and equality in education must be ensured. The solution seems to lie in technology and specifically ICT and its applications. The reach and access to quality education for all in a country of billion plus can be ensured through technology enabled education modules and courses in the form of MOOCs.

SWAYAM (Study Webs of Active -Learning for Young Aspiring Minds) is a Massive Open Online Courses (MOOCs) initiative on a national platform with a comprehensive academic structure. The integrated platform will offer courses covering Engineering, Humanities and Social Science etc. to be used by learners at large. Formation of a Consortium of Premier Educational Institutions & Universities to offer flipped online courses instantaneously after due authentication and award of certification.Under this programme, professors of centrally funded institutions like IITs, IIMs, Centrally universities will offer online courses to citizens of our country. All courses will be made available free of cost for learning. In case the learner requires a Verified Certificate, a small fee will be applicable

Aims and Objectives

- To improve the Gross Enrolment Ratio (GER) in higher education (Total Enrolment in higher education, expressed as a percentage to the eligible official population of 18-23 years in a given academic year) in India.

- To provide quality education with equitable access to learners across India.

- To facilitate implementation of Choice Based Credit System (CBCS) by offering quality courses online to count for credits and allowing inter-disciplinary learning.

- To enhance skill set of Indian population through Skill Development Courses.

- To explore unexplored subject topics in MOOCs relevant to Indian learners like Classical Indian Music, Yoga, Ayurveda, etc.

- To explore these possibilities, we need to include all stakeholders government, education providers, industry associations / guilds, employers and others to contribute to areas such as:

  1. Policy initiatives

  2. Capability Building

  3. MOOC creation and delivery

  4. R and D

  5. Creation of Industry relevant curricula

  6. Proctoring and assessment mechanisms

  7. Credit Transfer System

 8. Recognition of Prior Learning

Proposed Benefits

The key benefits would be:

- Ability to publish existing repurposed e-Content to a large number of students thereby ensuring higher usage.

- Ability to create custom MOOCs from existing content already developed by CEC.

- Improved student and teacher engagement due to greater customizability, personalization and interactivity.

- Analytics on content efficacy and student usage. Reliable solution on the cloud accessible across India.

- Increased collaboration between instructors for creation and delivery.

SWAYAM is an indigenous (Made in India) IT Platform for hosting the Massive Open Online Courses (MOOCs) with acapacity to revolutionize the education system by providing best quality education covering all the subjects and courses being taught in the high schools, colleges and universities in the Country using the IT system to the students even in the remotest corner of the Country.

SWAYAM would provide High quality learning experienceusing multimedia on anytime, anywhere basis and provide onestop web location for interactive econtent for all courses from School to University level. M/S Microsoft has been entrusted with the responsibility for creating the IT platform. Beta () Version of SWAYAM Portal has been launched on 15.08.2016.

For creation of Massive Open Online Courses (MOOCs), 8 National MOOCs Coordinators (NMCs) have been appointed with the responsibility to identify the best teachers for preparation of the material for the MOOCs. Total 262 Online Courses has been repurposed in SWAYAM by NMCs till November 2016 University Grants Commission (UGC) has vide Gazette Notification dated 19th July, 2016, notified Regulation, 2016regarding Credit Framework for Online Learning Courses through SWAYAM. Accordingly, a student studying at arecognized institute anywhere in the country and having cleared the Online Course through SWAYAM, shall be awarded Credits and the credits earned by such a student shall be transferred from the Host Institute to the Parent Institute where the student is studying. However at present, such students through online learning delivered on SWAYAM platform can earn the Credits only up to 20% of the total courses in a Semester. This would allow any student in the country to take the courses offered by the best teachers on SWAYAM, there by bridging the academic deficit experienced in the backward areas thereby, raising the overall standards of higher education in the country.
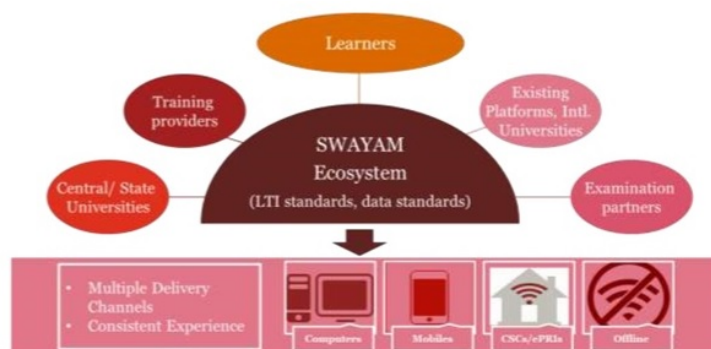
The status of preparation of the online learning courses is as follows:

National MOOCs coordinator	eContent Courses Completed as on Date	. Courses to be repurposed in MOOCs Format by 31st July 2016.	Courses to be repurposed in MOOCs Format by from 1.8.16 to 31.12.16	Total Courses.
NPTEL	900	120	123	243
CEC	215	25	125	150
UGC	160	68	68	136
IGNOU		71	71	142
NCERT		24	24	48
NIOS		15	15	30
Total	1275	323	426	749

Access Channel for SWAYAM

It is envisaged that the SWAYAM will be hosted on cloud located on Indian territory accessed by all the stakeholder, authorized users as well as citizens through various means and mechanisms and request/obtain required services through various channels. Some the key access channels envisaged for the SWAYAM are described below:

1. **Web Browser:**Access over Internet/through Web Browsers will be one the key access mechanisms for the SWAYAM. All the SWAYAM ecosystem partners will connect to the Portal via Internet. The solution should be accessible via the NKN Gateway. The access rights for the contents and modules of the SWAYAM will be managed through the Role Based Access Control (RBAC) mapped to individual/group login credentials. The SWAYAM should have both static and dynamic information/content that should be available and accessible through a web browser via Internet. The kind of information/content to be displayed on the web portal will be managed and controlled through the Application Admin module and Content Management module of the Portal with an intention of making most of the information available for Stake holders consumption through the web portal. The SI is required to develop a comprehensive browser based information control and display feature through these modules.

2. **Mobile Devices:**It is envisaged that the SWAYAM will also be accessible through various Mobile devices and smart phones, through defined mobile application or normal browsing through a mobile device. All the features and functionalities as defined for the access mechanism through Web Browser/Internet will also be applicable in case of accessing the Portal through any mobile device. The SI will need to optimize the SWAYAM web content, with user friendly features so that the Users can easily browse and operate the service features through these devices. Some of the key requirements related to Mobile Apps, but not limited to, are mentioned below:

3. **Contact Centre:**Contact Centre is one of the important aspects envisaged under SWAYAM ecosystem for providing technical support. The Contact Centre is envisaged to be running its operations 16*7*365 and will provide required information as well as assist the stakeholders in availing various services. Considering the criticality of the services and Contact Centre operationalization in short time duration, the SI is required to provision services from an existing operational Contact Centre on per seat basis and should not create a new captive infrastructure. The Contact Centre personnel should perform following key functions, but not limited to:

   a. Should support a voice based work flow and selection options that will guide the caller through the different options available to request and interact with support services.

   b. Should provide support in 10 languages English, Hindi, Bengali, Telugu, Marathi, Tamil, Urdu, Gujarati, Kannada and Malayalam

   c. Should support Dual Tone Multi Frequency (DTMF) using telephone touchpad

   d. Should support redirection to human assistance

   e. SWAYAM should have a provision to capture the feedback of the stakeholder for services availed. This feedback shall be collected voluntarily via portal/Contact Centre. MHRD at later stages shall decide upon making this feedback public.

   f. Grievance Redressal/Suggestions: It is envisaged that the Users might face certain issues and challenges during their normal online/offline interactions with the various stake holders or through SWAYAM. Some of them may also like to provide constructive feedback and suggestion with regard to improvement areas in SWAYAM's overall functioning, or record their grievances. These issues, suggestions and feedbacks may be of different nature and categories, but any citizen should be able to reach out through the concerned medium i.e. Internet or Contact Centre, and record their

concerns, especially their grievances, if any. It is therefore required that even if any citizen is not registered in the system, they should be able to log their Grievances for taking necessary corrective actions through SWAYAM.

4. **Email/SMS:** The SWAYAM is envisaged to send alerts/intimations/automated messages to registered email and mobile number, based on preferences set up/opted by individual users. An authenticated SMTP mail service (also known as a SMTP relay or smart host) is envisaged to be integrated under the NIC/DeitY framework for sending mails from SWAYAM, and delivered to intended inbox or mobile device. For text messages, integration with either Mobile e-governance Service Delivery Gateway (MSDG) or another SMS Gateway, as identified by MHRD is envisaged. The MSDG is established to deliver Government services over mobile devices using mobile applications installed on user's mobile handsets. As MSDG is developed based on IIP/IIS (Inter-operability Interface Protocol / Inter-operability Interface Specifications) standards of government of India, it provides seamless integration with backend department through existing NSDG/SSDG eGov exchange infrastructure and provides different set of mobile based services to both departments and citizens. However, the SI is free to provide another SMS Gateway services at no additional cost to MHRD as part of integrated SWAYAM solution, but the services and its quality should not be compromised. The solution should have the capability to provide each participant on the SWAYAM platform with a secured email id for official communication with other system stakeholders on a DNS domain provided by MHRD. This service should be accessible from the student dashboard and controlled by MHRD policies.

5. **Social Networking Capability:** With the view of increasing the reach of SWAYAM, it is envisaged that the Portal will be integrated with social networking sites and propagate information related to courses through these channels. It is also envisaged that the Portal will receive feedback and suggestions/service requests and other information through these sites. Such type of integration with social networking sites and their chat forums can provide an effective medium for communication between all stakeholders. It is also envisaged that the information gathered through these sites may also aid in validation of basic demographic.

SWAYAM PRABHA

The SWAYAM PRABHA has been conceived as the project for telecasting high quality educational programmesthrough 32 DTH channels on 24X7 basis. Every day, there will be new content of at least four hours which would be repeated six times a day, allowing the student to choose the time of his convenience. The DTH Channels will

cover:

(a) Curriculum based course contents covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture etc. in higher education domain (all courses wouldbe certificationready in their detailed offering).

(b) School education (912 levels) modules for teacher training as well as teaching and learning aids to children of India to help them understand the subjects better and also help them in better preparedness for competitive examinations for admissions to professional degree programmes.

(c) Curricula and courses that can meet the needs of lifelong learners or Indian citizens in India and abroad.

(d) IITPAL to assist the students in the Classes 11 and 12 aspiring to join IITs by encouraging scientific thinking and conceptual understanding critical to answer the 'tough' questions of JEE Advanced, so that goodquality students enter the portals of IITs. The four channels under this would be on Mathematics, Physics, Chemistry and Biology.

Social Networking Capability

With the view of increasing the reach of SWAYAM, it is envisaged that the Portal will be integrated with social networking sites and propagate information related to courses through these channels. It is also envisaged that the Portal will receive feedback and suggestions/service requests and other information through these sites. Such type of integration with social networking sites and their chat forums can provide an effective medium for communication between all stakeholders. It is also envisaged that the information gathered through these sites may also aid in validation of basic demographic.

Integration Gateways

An Enterprise Services Bus (ESB) within the service-oriented architecture (SOA), combined with the modular and concurrent design of high-performance of the SWAYAM is envisaged to be designed and implemented for communication between interacting software applications in a distributed computing, heterogeneous and complexecosystem.There are four integration gateways envisaged as part of the solution design. The key requirements with respect to each of these are mentioned below

SMS Gateway: SMS services are envisaged to be made available as part of the solution design. The SI may integrate the solution with MSDG, and use the services available through it, or deploy its own SMS Gateway services at no extra charge to MHRD but it is a mandatory requirement that all the SMS based services (alerts and notifications) should be available as part of the solution.

Email Services: Email services are envisaged to be made available as part of the solution design to send alerts/intimations/automated messages to registered email ids, based on preferences set up/opted by individual users. An authenticated SMTP mail service (also known as a SMTP relay or smart host) is envisaged to be integrated with the solution for sending mail from the solution, and delivered to intended inbox

Payment Gateway: The solution is envisaged to have integration with payment gateways, to enable authorized Users make financial transactions, as per rights and privileges provided to him/her. The SI is required to make the provisions for integration with such third party gateways and provide payment services, as per requirement of the MHRD

IVR Services: IVR services are envisaged as part of Contact Centre facility, which will be integrated with the solution, to provide information and services to the people who would contact the Contact Centre. There are multiple ways of integration of the solution with other systems is envisaged. These may be through Web Services, Message Queuing, File based or API based. The integration and data sharing mechanism may be either in Batch Mode or Needs basis (synchronous or asynchronous).

Assessment: Assessments would be offered by partner institutions and professional testing organizations at multiple locations, as needed. This network of assessment centreswould be established, where possible, online proctoring and student authentication would be fully used. The results of assessment can directly go into a national repository from which students and potential employers can access the skills profile.

Credits & Certification Learners would be offered credits and certification as may be decided by the partner institution and government policy.

Analytics: Analytics of students learning experience, content usage, completion ratios and performance on assessments will be collected by the platform. These analytics will shape how teachers evolve the MOOC over time as well as provide a mechanism for suggesting improvements to students themselves.

Conclusion

MOOCs is all set to provide a variety of higher educational courses which are easily accessible, flexible, affordable and easy to complete. Hence the Higher Educational Institutions, Educational Policy makers and Private educational investors are now eying on this concept and trying to build their own brands to market MOOCs. MOOcs which is in its infant stage will become a full bloomed reality shortly. Just about a decade ago the phenomena of digital Library and virtual library appeared and many of the Librarians were not very serious to accept it and adapt it. But today it has become an inseparable part of the Librarians role. Similarly this concept of MOOCs which is rapidly developing today need to be taken seriously by the Library Professionals and they should fully acquaint themselves with the phenomena.

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Facilitating Electronic Medical Resource access to the Faculty of Christian Medical College, Vellore.

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Abstract

Christian Medical College Vellore is a unique Organization by Vision, Sacrifice and Commitment of its founder Dr.Ida Sophia Scudder and her successors. Services both in clinical and education have grown rapidly. Many super specialties and postgraduate courses have been increased. Christian Medical College (CMC) offers number of undergraduate postgraduate, post diploma, post doctoral fellowship courses in medical, nursing and allied health sciences. Library services in the above setup play an important role in promoting clinical, educational and research activities of the institution. This Educational Institution since its origin depends on Libraries for health science information, which is established as an integral part of them for the successful implementation of its academic programmes. The Library as an effective instrument for the improvement of educational standards will be able to make its presence felt by the student community and exert its wholesome influence on them only if library facilities in the college are improved and education is a process of learning than teaching. In recent times, number of Electronic Medical Resources available online continues to grow exponentially and many of these resources could be of enormous value for teaching, learning, research and treatment purposes. However, evaluating and facilitating access to this content brings many challenges, for both librarians and medical community. In developing Information and Communication Technology (ICT) Scientific Society in India, extending electronic medical resource access is one of the challenging tasks for any medical library to meet the need of the faculty in any institution. This article explains the different method of electronic medical resource dissemination to the faculty in Christian Medical College, Vellore.

Keywords: Information Literacy; Electronic Medical Resource Access

Introduction

Information technology rapidly changing physician accessing way to the biomedical information. In earlier days physician's biomedical information retrieval

behavior is highly depend on printed resources for medical practice, continuing education and research. Now a day's clinicians visit to the medical library for the printed medical journal or reference book is being replaced by computer based electronic medical resources.

Facilitating electronic medical resources to the faculty is one of the challenging tasks in any modern medical library. The medical librarian needs to understand the faculty needs and expectation from the library and librarian. And also the librarians needs to know what reliable electronic medical literature freely available, apart from subscribed content at their institution in order to provide the information to the faculty at correct time in a comprehensive way.

The recent trend is every librarian needs to equip their teaching and disseminating skills to facilitate medical faculty according to their needs and expectation. Lack of knowledge on teaching, information literacy leads to failure in providing the information which they seek in a correct manner from the library.

Christian Medical College has started the electronic journal subscription and Electronic Books from different leading publisher like Elsevier, John Wiley, LWW, Oxford University press, Springer, Nature, etc. In 2017 Christian Medical College (CMC) incorporated all the electronic medical resource collection on their newly renovated library website `http://dodd.cmcvellore.ac.in`. This article explains the different method of electronic medical resource dissemination to the faculty in Christian Medical College, Vellore.

Building the Electronic Medical Resource (EMR) Collection

It was a big challenge on building the electronic medical resource collection at Christian Medical College, Vellore. Upto the year 2000, most of the electronic medical resource access through online are free against the print subscriptions. Later, the journal subscription pattern changed to online plus print. Today, online separate and print separate subscriptions. In this stage managing the budgeting for procuring the print and electronic version according to the needs of faculty is difficult and there is a need to evaluate collections in CMC, Vellore Library. Based on the internal collection development analysis, there have been considerable number of print journals were invisible in order to manage the allotted budget.

Resource challenges

The growth both in volume and value of free online content comes at a time when librarians budgets are challenged. CMC Library continues to face on budget constrains on building the electronic medical resources. So careful content acquisition is most important to manage the available budget. Perhaps, the availability of a growing pool of free online resources presents the library community with an opportunity to expand its collection cost-effectively.

Collection of E-resources

E-resource is one of most important resource for students as well as our faculty and Research Scholars. The library has initiated free trial for new medial databases and research product from various publishers. The trail has been well accessed by the faculty members and the students. At the end of the trials period, the library received feedback and recommendations from the faculty and students. We have maintained a suggestion record which is available in our circulation counter. The academic community of our institution draws the attention of the librarians by suggesting new edition of published sources. While go for new additional resources to the library, adequate care has been taken by analyzing the trial feedback and readers suggestion. CMC Library subscribes electronic medical resources from the various leading publisher which are as follows.

S. No	E-Resources-Books	No of Books
1.	Access Medicine E-books from McGraw Hill	149
2.	Eduport CBS Publishers	91
3.	Elsevier E-Library Books	99
4.	LWW/OVID	21
5.	Medicine Complete from Royal Pharmaceutical Society of Great Britain.	21
6.	OXFORD	15
7.	Thieme Clinical Collection	51
8.	Themie E-book Library	100
9.	John Wiley E-books	56
	Total No of E-books	603

S. No	E-Journals subscribed from Leading publishers	No of titles
1	AMA	12
2	AACR	8
3	BMJ	15
4	CAMBRIDGE	5
5	ELSEVIER	129
6	JOHN WILEY	66
7	KARGER	8
8	LWW / OVID	75
9	OUP	108
10	SAGE	13
11	SPRINGER NATURE	43
12	TAYLORE and FRANCIS	11
13	THIEME	4
	TOTAL	497

Challenges

There is no doubt that the computer based medical information resources plays a vital role in most of the physicians day to day routines in patient care. Following are some of the barrier observed to access the medical information by our user community.

- Lack of time during working hours

- Complex accessing method of electronic medical resources

- Lack of awareness of availability of resources

- Accessing problems at senior level

To overcome the above barriers, the library has been conducting information literacy programme to the faculty and the research scholars to make use of the CMC subscribed electronic medical resources.

Information Literacy

Facilitating the medical faculty at Christian Medical College Vellore, the library deployed the following methods to promote the subscribed electronic medical resources usage.

- User education

- Medical Database Presentation through publisher

- Library Website

- Citation Verification/Reference Services

- Resource Sharing Services

- EBSCO Discovery Services[EDS]

User Education

Most of the fresh students are unaware of resources of the library. So induction to the library is carried out through Library Orientation programme which is very useful to them. A through library orientation programme will generate an awareness about what are all the resources available and the services of the library. A tri-way interaction between the library, the students and the faculty is possible in library orientation programme which has its own impact in their academic learning.

Information Literacy through Publisher Presentation for Medical Databases

Library has been arranging periodic database / other subscribed content presentation through publisher representatives for updating user awareness about the databases which will help to promote their academic and research knowledge as well as evidence based medical information.

Apart from the publisher literacy programme the library through its website promote the electronic medical resources availability among the faculty at Christian Medical College Vellore (`http://dodd.cmcvellore.ac.in`). The library website also designed according to the needs of the faculty.

Library Website

In the electronic environment, physical presence of readers to the library is not needed. Instead, they can access all the library resources electronically from their table through different authentication method. Christian Medical College, Vellore Library has its own website `http://dodd.cmcvellore.ac.in` (Fig.1) to facilitate the faculty and library patron efficiently to provide high class electronic medical
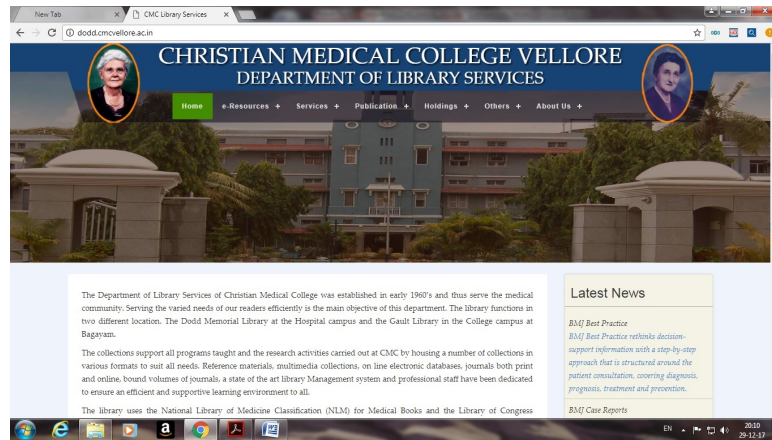
Figure 1: Christian Medical College Vellore, Library Website
Home Page `http://dodd.cmcvellore.ac.in`

information. The library website has a content coverage of e-Journals, e-books, e-questions, print catalogue; link to all the subscribed electronic medical resources, CMC registered PubMed. And also the library extends off-campus electronic resource access to the faculty and research scholar whenever they are away from CMC by ez-proxy.

Citation Verification / Reference Service

It is one the most appreciated service extended to our user community on request. The aim of this service is to extend personalized service to each student and teacher. The staff looking after circulation control desk helps the staff and students to locate a book or a journal when they are in need. They are playing the role of a receptionist when guiding the library user to find the library material physically and also electronically.

Resource Sharing

This is one of the unique services offered by the department of Library Services. The most accessed open source health science database called Medline by National Library of Medicine includes 27 million citations for biomedical literature. But our institutional Libraries both main and departmental are subscribing around 600 journals only. The articles which are not available from our own source and subscription list are obtained from different health science libraries in India as well as other organizations like Delnet from Delhi & Q-Med Knowledge foundation Mumbai. Our Library extending this service on request to the faculty and research scholars.

EBSCO Discovery Service

EBSCO Discovery service (EDS) we are planning to have EBSCO Discovery Services. It will enable library to improve its scholarly search service and leverage improvements in technology. EDS is offering researchers, faculties and students what they were looking for from the library single search box like Google that is easy to use which directs the user in the right direction while incorporating the premium resources that Library users have come to rely on.

EDS provides an easy yet powerful solution with exceptional capacity to more easily connect with library's vast information repository including Electronic Journals, Electronic Books, Databases as well as Catalog and Institutional Repositories and provides a single set of results from all of these resources. This makes waves of revolution in Library world by boosting the quality of academic and research performance of organizations.

Outcome of Library Website and EBSCO Discovery Service

After the launch of renovated CMC Library Website and EBSCO Discovery Single Search the Information literacy implementation, the Christian Medical College Vellore Library electronic medical resources utilization were increased at a remarkable extent based on the usage report from different medical publishers.

Conclusion

The increasing volume and variable quality of online resources represent a significant challenge to librarians in deciding how best to facilitate access to high quality online resources within our institution by the given financial allotment. However, currently librarians mostly try their level best to link selected free resources in library web portal and provide training to their user communities to equip them to find and evaluate resources for themselves. There is no clear way to measure the potential impact of diverting more resource to surfacing high quality online content, and yet librarians feel that this would likely prove worthwhile. In Christian Medical College, Vellore, the library has identified the needs of the faculty from feedback while they are in the information literacy Programme and have been promoting the usage of electronic medical resources.

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Networked Collaborative Learning

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Abstract

The sustainability of networked collaborative learning is key topic of discussion among the institutions where been or may potentially be introduced. In order to determine the extent of NCL's sustainability, the added value university may yield by adopting collaborative learning strategies must be qualified. In turn an understanding of the implication NCL produces in terms of design and management is gained. After comparing NCL with other Technology Enhanced Learning approaches and discussing the possible reasons for adopting it, with a multidimensional model for the sustainability of NCL are proposed. This paper tend to reveal the technical aspects of collaborative learning, collaborative learning and technology, collaborative learning approaches collaborative learning at workplace, collaborative learning and cooperative learning, collaborative learning for the sustainable development.

Keywords: Collaborative learning, networked collaborative learning, educational technology, networked aspects in collaborative learning, its development for future work.

Introduction

Collaborative learning is an umbrella term for a variety of educational approaches involving joint intellectual effort by students, or students and teachers together. Usually,students are working in groups of two or more, mutually searching for understanding,solutions, or meanings, or creating a product. Collaborative learning activities vary widely, but most centre on students exploration or application of the course material, not simply the teacher's presentation or explication of it.Collaborative learning represents a significant shift away from the typical teacher-centred or lecture centred milieu in college classrooms. In collaborative classroom, Along with the sides other processes that are based in students discussion and active work with the course material. Teachers who use collaborative learning approaches tend to think of themselves less as expert transmitters of knowledge to students, and more as expert designers of intellectual experiences for students-as coaches or mid-wives of a more emergent learning process.

Assumptions about Learning

Though collaborative learning takes on a variety of forms and is practiced by teachers of different disciplinary backgrounds and teaching traditions, the field is tied together by a number of important assumptions about learners and the learning process.Learning is an active, constructive process:

- To learn new information, ideas or skills,our students have to work actively with them in purposeful ways. They need to integrate this new material with what they already know-or use it to reorganize what they thought they knew.

Collaborative learning

Learning is a situation in which two or more people learn or attempt to learn something together.Unlike individual learning, people engaged in collaborative learning capitalize on one another's resources and skills (asking one another for information, evaluating one another's ideas, monitoring one another's work, etc.).Thus, collaborative learning is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artificial or product of their learning. Further, collaborative learning redefines traditional student-teacher relationship in the classroom which results in controversy over whether this paradigm is more beneficial than harmful. Collaborative learning activities can include collaborative writing, group projects, joint problem solving, debates, study teams, and other activities. The approach is closely related to cooperative learning.

Collaborative Learning Approaches

- Collaborative learning covers a broad territory of approaches with wide variability in the amount of in-class or out-of-class time built around group work.

- Collaborative activities can range from classroom discussions interspersed with short lectures, through entire class periods, to study on research teams that last a whole term or year.

Classroom Collaborative Learning

Often, collaborative learning is used as an umbrella term for a variety of approaches in education that involve joint intellectual effort by students or students and teachers by engaging individuals in interdependent learning activities. Many have found this to be beneficial in helping students learn effectively and efficiently than if the students were to learn independently. Some positive results from collaborative learning activities are

students are able to learn more material by engaging with one another and making sure everyone understands, students retain more information from thoughtful discussion, and students have a more positive attitude about learning and each other by working together.

- When compared to more traditional methods where students non-interactively receive information from a teacher, cooperative, problem-based learning demonstrated improvement of student engagement and retention of classroom material.

- A meta-analysis comparing small-group work to individual work in K-12 and college classrooms also found that students working in small groups achieved significantly more than students working individually, and optimal groups for learning tended to be three- to four-member teams with lower-ability students working best in mixed groups and medium-ability students doing best in homogeneous groups.

Collaborative Learning and cooperative learning

Many businesses still work on the traditional instructor and trainee model and as they transition from one model to another there are many issues that still need to be debugged in the conversation process:

1. Need to understand actual interests and concerns regarding collaborating processes, activities and tools'

2. Reigning leaders and managers must better understand the collaborative tools and processes that can boost productivity.

3. Become better equipped to design, implement and evaluate collaborative learning environment

Also, in cooperative learning small groups provide a place where:

- learners actively participate;

- teachers become learners at times, and learners sometimes teach;

- respect is given to every member;

- projects and questions interest and challenge students;

- diversity is celebrated, and all contributions are valued;

- students learn skills for resolving conflicts when they arise;

- members draw upon their past experience and knowledge;

- goals are clearly identified and used as a guide;

- research tools such as Internet access are made available;

Implication for the future work

To have collaborative learning, there seems wide range of implications for future work. Some of the unsolved problems that identified:

1. Cultural diversity, and accordingly a lack of awareness of cultural norms

2. Geographical distance and time zone differences

3. Member isolation in virtual teams

4. Generation gaps and age differences in the acceptance of collaboration tools

5. Lack of technology support for learners

6. Lack of learners' awareness about effective collaboration processes and strategies Lack of learners' technological skills and knowledge about collaboration tools.

It is crucial to consider the interactive processes among people, but the most critical point isthe construction of new knowledge brought about through joint work.

Collaborative Learning and Technology

Technology has become an important factor in collaborative learning. Over the past ten years, the Internet has allowed for a shared space for groups to communicate. Virtual environments have been critical to allowing people to communicate long-distances but still feel like they are part of the group. Research has been conducted on how technology has helped increase the potential of collaborative learning.The results of the study helped build an online learning environment model but since this research was conducted the Internet has grown extensively and thus new software is changing these means of communication.Two of these principles are especially important in developing technology for network collaboration learning.

1. Good practice develops reciprocity and cooperation among students,

2. Good practice uses active learning techniques.

Some examples of how technology is being increasingly integrated with technology are as follows

- Collaborative networked learning - According to Findley (1987) " Collaborative Networked Learning (CNL) is that learning which occurs via electronic dialogue between self-directed co-learners and learners and experts. Learners share a common purpose, depend upon each other and are accountable to each other for their success.

- Computer-suppor

- ted collaborative learning (CSCL) is a relatively new educational paradigm within collaborative learning which uses technology in a learning environment to help mediate and support group interactions in a collaborative learning context.CSCL systems use technology to control and monitor interactions, to regulate tasks, rules, and roles, and to mediate the acquisition of new knowledge.

Development of Collaborative learning, Enables the developers of learning systems to work as a network.

- Collaborative learning in thesis circles in higher education is another example of people learning together. In a thesis circle, a number of students work together with at least one professor or lecturer, to collaboratively coach and supervise individual work on final (e.g. undergraduate or MSc) projects. Students switch frequently between their role as co-supervisor of other students and their own thesis work (incl. receiving feedback from other students).

- There are two directions the non foundational task can be presented: as an indistinct, no right answer that generates discussion or propose an answer and request questions and a process of how the answer came to be. Once the task is assigned, the instructor backs off in order to resist the urge to intervene in students' conversation.

Conclusion

The goal is to remove focus of the instructor's authority. The instructor must keep time to ensure the students are pointed on analogizing, generalizing, and bridging their comprehension with others.. Thus Networked collaborative learning tends to develop the sustainable development and the advanced learning methodology for the betterment of academic results. Networked Collaborative learning frequently evokes the participation of students in higher level. Scholars in the field of education examine

the uses of innovative media and technologies for collaborative learning, examining all aspects from direct student learning to management and impacts on institutions. As in all forms of applied technology in the collaborative learning, the field studies how theoretical knowledge and scientific principles can be applied to problems that arise in a learning context. Practitioners in educational technology seek new and effective ways of organizing the teaching and learning process through the best possible application of networked collaborative learning.

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Library and Information Science Education and Research: Growth and Development

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Introduction

Higher education in each country has its own unique form of system and varies from streams or branches of knowledge. Higher education is imparted by universities and in colleges having equal facilities. Academic in higher education plays an important role in making the society strong as stated different policies are adopted in strong as stated different policies are adopted in different countries similarly LIS is a specific subject discipline which support in all educational branches through library systems. Schools of library science provide useful professional education universally and develop (program, 2006) library and information professionals to manage the libraries efficiently. The LIS schools have more importance towards developing technical and managerial skills through the LIS education.

Library and Information Science Education in India

Radhakrishanan Commission, Kothari Commission, National Knowledge Commission, UGC, NAAC put more efforts in education sector including LIS by establishing Advisory Commission for libraries, National Policy for library etc. Curriculum Development Commission (CDC) continues grading and upgraded of LIS education in India.

Joshi M K (2010) and Rana R (2011) LIS education in India is completing a century of its existence during the period progress have been achieved in developing LIS education to tune with current practices. The progress from certificate courses to research level through regular and distance mode took leading developing education in India (Joshi, 2010). Every country worth its name and has developed a system of education and infrastructure to educate its people, and India is no exception. There has been a fast growth in institution of higher education since the dawn of 20th century and more particularly, after India attained independence in 1947. The new India started its development program to achieve the new educational, cultural and economic

objectives at the national level. Such developments at these institutions contributed to the development of more libraries, which in turn had to accept new responsibilities to meet society's changing needs and demands. It was Padamashree S R Ranganathan (1889-1972) father of library science who lifted trail librarianship to the level of a science with the formulation of laws of library science, and establishment library schools and research centres. He even graded them as normative principles, fundamental laws, canons, principles and postulates.

The first research degree in the library and information science in the country and even in the commonwealth countries was awarded by the University of Delhi in 1957 to D B Krishna Rao for his thesis "Facet Analysis and Depth Classification of Agriculture" under the supervision of Dr. S R Ranganathan.

Historical Development

The modern period in the history of education for librarianship began in the mid-1800s as librarians around the world recognized that systematic education and training were required so that proper order could be brought to the collections that had been growing in all libraries. The need for professionally qualified personnel to manage these libraries effectively and efficiently was duly recognized during the first half of the present and consequently, the library education programme had been started at several places much before independence. The history of the education of library science in India may be traced far back as the year of 1911 with the starting of a short term training programme in library science in the Baroda state, under the patronage of Maharaja Savayirao Gaikwad of Baroda, who, impressed by the splendid work done by public libraries in the west, secured the services of an American librarian Mr. W A Borden as Director of the State Library Development. Mr. Bordon had been a pupil of Mr. Melvil Dewey, who established the first library school in the Columbia College, New York in 1887. In 1915, another student of Dewey, Mr. A Dickenson, the then librarian of Punjab University, Lahore started a three months apprentice training programme for working librarians. Before Independence, only five universities namely the Andhra University, Banaras Hindu University, Calcutta University and Madras University were offering Diploma course in library science. Library education was given a new status and design by Professor S R Ranganathan in 1920, when the first systematic programme in library education was started under the auspices of the Madras Library Association in collaboration with the Madras University. This library school was subsequently taken over by the Madras University in 1931 and in 1937 the course was converted into Post Graduate (PG) Diploma in Library Science. This was the first diploma programme in library science in India. University of Delhi was the first university to establish a full-fledged department of library science just before independence in 1946, and started admitting students to the PG diploma in 1947.

In 1951, the diploma was changed to Master in library science (M.Lib.Sc). Later, between 1956 to 1959, six new LIS departments were established at Aligarh Muslim University, M.S.University of Baroda, Nagpur University, Osmania University, Pune University and Vikram University. Since 1960s, the number of LIS departments has continued to increase. After independence the stimulus for the growth and development of libraries and library science education has come from the progress in and extension of education, scientific research and programmes of socio-economic development which started in 1951 with the commencement of the first five year plan. As a result of these developments, library and information science today is a well-recognized discipline of study and research at the post-graduate level in more than hundred universities in the country. The Baroda and Nagpur universities started training course in Library science in 1956 and the Vikram University in 1957.

Present Scenario of LIS Education in India

LIS education has grown and developed into a full-fledged multi-disciplinary subject. LIS courses are Bachelors, masters and Research level are being impacted by different institutions- university departments, colleges, library associations and specialised institutions. There are now 96 universities in India imparting library and information science education as independent departments in different levels. Apart from these departments, there are also specialized R and D organizations imparting library and information science education. Worth mentioning is the two years Associate ship in Documentation and Information Science (ADIS) imparted by Documentation Research and Training Institute (DRTC), Indian Statistical Institute, Bangalore (Karnataka) and National Institute of Science Communication and Information Resource (NISCAIR) formerly INSDOC, New Delhi which is equivalent to Master Degree of Library and Information Science (LIS). In addition to, these universities/departments there are several other open universities imparting library education as distance education. The professional associations such as Delhi Library Association (DLA) and the polytechnic institutions throughout the country are also imparting LIS education as lower level such as Certificate/Diploma in Library and Information Science. With the realization of the importance of higher disciplines. The University Grants Commission (UGC) and the Indian Council of Social Science Research (ICSSR) are promoting to research activity in library and information science by awarding scholarships to research and doctoral students.

Objectives of Library and Information Science Education

The goal of library and information science education is the preparation of personnel for the task of successful performance at different levels of competence in

different types of libraries with an insight into the role of these libraries in a fast changing society. It should impart a through grounding in the intellectual foundations of the profession and competence in the technical and technological skills required for their day-to-day practice in different positions. In other words, education for library and information science should be both knowledge and theory oriented task or practice oriented. In achieving this objective the methods of teaching and evaluation employed are as important as the quality of the faculty. The main objectives of LIS profession are to provide training for building up leadership qualities among the LIS profession develop knowledge on the latest techniques of information storage, transfer and retrieval of information help to acquire necessary skills in handling information, accessing and application of electronic resources, tools and media; and help to know the latest developments in the Information Technology (IT) to sum up, the basic aims of library and information science education may be as follows:

- To develop necessary technical skills;

- To develop administrative skills;

- To develop service orientation;

- To develop through knowledge of various sources of information, necessary to give traditional and modern library services;

- To develop professional awareness.

Levels of Education

Out of the 96 university departments, 56 departments conduct one-year Bachelors degree and one year Master degree in Library and Information Science at Post-Graduate level. Thirteen of these universities conduct two years integrated Master degree in Library Science. These programme further leads to M.Phil and PhD levels. The levels of LIS education in India are follows:

Certificate/ Diploma in Library Science (C/D.Lib.Sc.)

Many polytechnic colleges, schools and library associations impart the low level of library science courses in India having duration of six months to one year. The basic qualification for these courses is 10+2. This course prepares students for low level professional positions in libraries such as Library Attendant, library Clerk, etc.

Bachelor of Library and Information Science (BLIS) after any Graduation

The basic eligibility is a three years degree from any discipline. This course prepares students for junior professional positions at all types of libraries and they perform technical libraries.

Master of Library and Information science (MLIS)

Master of Library and Information science is imparted as a one-year post-graduate degree course in some universities while in some, it is conducted as a two years integrated course. Many universities which offered one year BLIS and MLIS courses are now switching to two years integrated MLIS course in the line of other master degree courses. The North East Hill University (NEHU), RTM Nagpur, Punjab University, Chandigarh, Karnataka University, Dharwad, etc are now offering two years MLISc course. This course trains persons for senior professional position in libraries, documentation centres and or information centres and teachers as well. The first ever library school was started by Melvil Dewey in USA in 1887 at Columbia College (now Columbia University).

Associate ship in Documentation and Information Science (ADIS)

The Documentation Research and Training Centre (DRTC), Bangalore (Karnataka) offers two years Associate ship in Documentation and Information Science (Now know as Master of Science in Information Science). The National Institute of Science Communication and Information Resources (NISCAIR), New Delhi, formerly INSDOC also impart two years documentation programme i.e., Associateship in Documentation (AID) after graduation. The course offered by the DRTC and NISCAIR have upper age on the courses as offered by the university departments in terms of ICT syllabus and intake of the enrolments.

Master of Philosophy in Library and Information Science (M.Phil)

In library and information science prepares a student for further advanced research in LIS. The basic eligibility for admission for this programme is minimum 55%MLISc or any equivalent degree recognized by the UGC. With candidates having more qualifications are being preferred for superior position, many students are opting for M.Phil. courses to better quip them for better positions and develop research activity.

Doctor of Philosophy of Library and Information Science

This is an advanced level of research programme being offered after the completion of MLISc or M.Phil. The general aim of a research degree, whether M.Phil or Ph.D is to provide training in doing research as well as to develop in the candidate a critical and analytical process of thinking with the purpose that they would be able to provide leadership in the profession. They would also be able to help librarians and information scientists to develop techniques and skills required to meet their requirements of the fast changing society. They should be able to identify the needs, set objectives, identity and analyze the problems and find appropriate solutions. They would also be in a position to participate in the planning, organization and implementation of programmes at various levels.

First Course of Library Science in India (Certificate, Diploma and Training Courses)

In India the existence of in service training was initiated by John Macfarlane, the first librarian of the Imperial Library (now National Library) at Calcutta from 1901-06, as mentioned in some reports. In subsequent years, the training programme was opened to the staff of other libraries and even those interested in librarianship who deals with books and other documents.

Baroda School

In 1911, Sayajirao Gaikad (1862-1939), the ruler of Baroda state called the American librarian Mr. William Allenson Borden (1853-1931), a disciple of Melvil Dewey to create a cadre of men for the newly established libraries in the state library system. In 1912, he initiated the first training school in library education in India. In 1913, another training class for working librarians of town libraries was started. These classes continued even after the departure of Borden.

Lahore School (now in Pakistan-1915)

In 1912, the Punjab University called another librarian Mr. Asa Don Dickinson (1876-1960) from USA. He started the second educational course of three months duration in library science in the year 1915. This happens to be the first university course in India. Mr. Asa Don Dickinson later becomes the Librarian of Punjab University, Lahore (now Pakistan) during 1915-1916.

Andhra Desa Library Association Course (1920)

The Andhra Desa Library Association (founded in 1914) started conducting "Training classes for the library workers", at Vijayawada in 1920. The classes covered a module on running adult education classes in addition to library techniques.

Mysore State (Karnataka State) 1920

In 1920, a course for the training of librarians was conducted at Bangalore under the "program of library development" initiated by the then Dewan of Mysore Mr. M. Visweswaraya.

MALA-Madras Library Association

The Madras Library Association, which came into existence in 1928, mainly through the effort of Dr. S R Ranganathan, conducted an annual summer course in librarianship in 1929 and 1930. In 1931 this programme was taken over by Madras University and was conducted as a certificate course for three months duration.

Imperial Library course of Calcutta (1935)

The Imperial Library, Calcutta started a training class under the supervision of its librarian Mr. K M Asudulah in 1935. It was a full time regular Diploma course in librarianship at the Imperial Library, Calcutta (now National Library, Kolkata). It continued till 1946.

Post Graduate Diploma Courses

University of Madras in 1937, introduced a one year Post Graduate Diploma Course in place of the certificate course of three month duration. This was the first P G Diploma in library science in India. The second university to start a post graduate diploma course was the Banaras Hindu University in 1943. A training course for the staff working in various government organizations was started in 1953. This course was recognized as equivalent to the university diploma courses.

Degree Courses

In 1947, Aligarh Muslim University started BLib Sc course for the first time in the country. University of Delhi was the first university to establish a fully fledged department of library science in 1946. It also instituted the first diploma degree course in 1948. In 1949, the structure was changed. The programme of master of library science was introduced as a two year course with the first year leading to BLISc. In between 1956-59, six new LIS departments were established at Aligarh Muslim University, MS University of Baroda, Nagpur University, Osmania University, Pune University and Vikram University. In 1960, Madras University replaced its full time one year diploma course to BLib Sc. Degree course by mid 1960; many other universities had fallen in the line of university of Madras following the recommendation of Review committee Report of UGC in introducing different degree courses. The Government polytechnic for Women, Bangalore, Chandigarh, Delhi, Jullundur, and Rourkela started post matric (class x) diploma courses of two years duration in late 1960s.

Documentation Research and Training Centre (DRTC)

In 1962, Dr. S R Ranganathan established Documentation Research and Training Centre at Bangalore. Previously DRTC courses were at 14 month duration which was later on moved to two years programme. INSDOC conducted a short term course for Asian Document lists in 1963. In 1964, it started a one year post graduate course in Documentation and Reprography leading to "Associateship in Documentation and Reprography". In 1977, the programme was renamed as "Associateship in Information

Science (AIS)". On September 30, 2002, INSDOC merged with the National Institute of Science Communication and Information Resources (NISCAIR). At present, it is conducting "Courses in Information Science". At present, about 107 institutions, mostly university colleges and polytechnics, have library science education courses. Out of these, MLibSc course is being offered by more than 75 universities.

Five Year Integrated Course in LIS

In 2010, University of Calcutta introduces five year integrated course in library and information science and thus becomes the first university to launch such course in LIS domain. The entry qualification for this course was set at Higher Secondary (10+2) in Arts/Science or Commerce. Launching of this course will force the learners to choose the LIS by choice and not by chance. It will again help the students to grasp and understand the contents for LIS in a better and exhaustive way.

Present Status of LIS Education in India

Very few department and associations now provide Certificate courses in Library and Information Science (CLIS) and Diploma in Library and Information Science (DLIS). The other provides BLISc and MLISc courses. In most of the universities, the prerequisite for admission into the bachelor or Master Degree course in Library and Information Science is 10+2+3 years of education from any faculty (arts, science, commerce etc). The University of Calcutta went a step ahead and introduced five years integrated course in LIS with entry qualification as 10+2. Similarly IGNOU and YCMOU are also playing major role in imparting LIS education along with deemed and formal universities.

Specialization

Students in most schools of library and information science have the opportunity to develop at least some degree of specialization. Some may take advanced courses in particular library functions, such as reference work, while others may take courses related to a particular type of library, such as a course in medical librarianship or public librarianship or academic librarianship. In simple, there are many different courses available in LIS. It makes the professionals available to work at all levels of library irrespective of type, structure and function.

Syllabus

University Grants Commission (UGC), from time to time recommended the broader outlines of courses of library and information science. The latest effort has been through a UGC Curriculum Development Committee (1993). The UGC and other higher bodies now give emphasis to semester system rather than annual system and credit-based rather than marks-based system. Every university being autonomous is free to frame its own course of studies and syllabus of many universities/schools is quite modernized. It includes courses in knowledge organization (classification, cataloguing, bibliography, indexing and abstracting, meta data, semantic and syntactic analysis, controlled vocabularies etc), collection development (acquisition), information seeking behaviours of users, search strategies, library services (dissemination of the acquired library materials, reference) and management of the collection (preservation and conservation of documents). It also includes contents related to scholarly communication (bibilometrics, infometrics, scientometrics, and webometrics) digital libraries and ICT.

ICT as an Integral part

Technology is entering in a very big way in every sector and in LIS where it has been used extensively to store and retrieve information in different forms and structures. This new dimension is reflected in the course structure of almost all universities that provides courses in LIS. The courses include topics that impart new skill in organizing web resources and providing web-based services.

Practical Exposure

All courses provide scope of practical knowledge rather than restricting to only theory. Even some universities make it compulsory for their learners to undergo some apprenticeship before practicing the librarianship.

Problems with present LIS education and Research

Limited Accommodation Capacity

All universities which provide library and information science courses witness a great flow of learners. But they are able to accommodate only a limited number of such desired students.

A very competitive Entrance Examination

In most of the universities, students desire to study the LIS has to go through a very competitive entrance examination for admission.

Limitation as a Professional Subject

LIS is a professional course and so it has the limitations of any other professional courses. The non-inclusion of library and information science in UPSC, Civil Service/ State Public service Commission Examination, SET/SLET is a very common.

LIS Research in India

The LIS research briefly means the collection and analysis of original data on a problem of librarianship, done within the library school according to scientific and scholarly standard. Research in this connection broadly includes investigation, studies, surveys, academic work at the doctoral, post doctoral and research staff level. The aim of research in LIS, like any other discipline is to contribute towards the advancement of subject and contribution to the existing knowledge.

Dr. S R Ranganathan's Effort

The era of LIS research in India started with Dr. S R Ranganathan's effort. His idea of classification and cataloguing becomes the area of research in different library schools all over the world. The library and academic community of those days, even today also respect him as a pioneer researcher in LIS. Some of his worth notable contributions are

- Five Laws of Library Science

- Colon Classification

- Prolegomena to Library Classification

- Classified Catalogue Code

- Documentation and its facets

- Library administration etc.

In India research activity to reflect in two programs.

M.Phil Programme

University of Delhi

It was the first to introduce M.Phil programme in library and information science in 1980. Today more than 11 universities offer the M.Phil programme. The duration of M.Phil programme in almost all universities in this country is one year.

Ph.D Programme

University of Delhi:

The credit for introducing the Doctoral degree programme in library science in India goes to Dr. S R Ranganathan (1892-1972). In 1951,he started Ph.D program in Delhi University in 1958. The university offered first doctoral degree in library science to D B Krishna Rao for his "Facet Analysis and Depth Classification of Agriculture" under the guidance of Dr. S R Ranganathan. In 1977, Panjab University, Chandigarh offered the second Ph.D. today more than 125 Universities in India have Ph.D research facilities.

Documentation Research and Training Centre (DRTC)

In 1962, Dr. S R Ranganathan established Documentation Research and Training Centre at Bangalore. Since its inception, it has been carrying out research studies on documentation and related areas.

Library Associations

The contribution of library association of India towards research activities is negligible but they restrict their activities in the field of publication of journals, organization of seminars, conferences and workshop etc, for making ground to do research in LIS, IATLIS, NASSDOC, ILA, IASLIC are the mentionable among them.

Funding of LIS Research in India

The University Grant Commission (UGC) is promoting LIS research by awarding different kinds of fellowships to the students. Indian Council of Social Science Research (ICSSR) and Defence Scientific Information and Documentation Centre (DESIDOC) are also promoting LIS research programme by awarding scholarship to doctoral students.

D. Litt Programme

In 1992, Utkal University, Bhubaneswar awarded D.Litt. to Dr. B B Shukla. It claimed to be the first such degree in library science all over the world.

Conclusion

The library and information science with all aspects of information and knowledge which includes acquisition of materials, classification and cataloguing, searching tools, information retrieval, library services, preservation and conservation of documents and so on. Dr. S R Ranganathan is a pioneer in the field of library and information science in the world and India in particular. Now a day's many university and colleges provides different courses in library and information and its related subjects. It ranges from certificate course to Ph.D. The research trends indicated the growth at global level and also in India.

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Social Media for Teaching and Learning

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Abstract

Information and communication technology [ICT] place a vital role to promoting the teaching and learning activities. Likewise the social media for teaching and learning takes place. Social media in general sense implication of technology in gathering the information via social media like google, twitter, facebook, whatsapp, youtube, reddit, online advertisements, journals, magazines, viber, Wikipedia, Instagram and linkedin. It makes communication, teaching and learning more effective. It may defined as digital device, tools and resource. In social media, we had lot of improvements along with our new technologies and instruments for better understanding. Children has to be significant in the education system. In this paper student has to improvement in their learning process through the social media.

Keywords: Teaching, learning, media, social media, online, internet, journals, Wikipedia, negative effects and positive effects of social media.

Introduction

Every good teacher is able to establish her own model of teaching in the course of her life span of teaching. That way good teachers give rise to good models of teaching. Teaching models can improve the activity of teaching in classroom situation to a great extent.

Meaning and Definition of Teaching

Teaching is a process which usually takes place in the class room situations. They were giving some knowledge , passing some information to them, making the students acquires some skills and changing the attitudes of students. Teaching is the stimulation, guidance, direction and encouragement of learning by Burton. Teaching is the system of actions intended to induce learning by B.D Smith.

Meaning and Definition of Learning

Learning is a life long process and the acquisition of knowledge or skill through study, experience or being taught. The activity or process of gaining knowledge or skill by studying, practicing and experiencing. A change in human disposition or capability that persists over a period of time and is not simply ascribable to processes of growth by Robert Gagn. The process of gaining knowledge and expertise by Malcolm Knowles.

Social Media

Social media refers to websites and computer programs that make communication possible.Its a catchall term for a variety of internet applications that allow users to create content and conclusion.Few examples are Gab. Google +. Instagram ,linkedin , pinterest, Reddit, Snapchat, twitter, viber, wechat, whatsapp, wikia and youtube.

Teaching and Learning Through Media

Radio, T.V. and newspaper are commonly available in almostevery home may be a village or a cities. They are used for different purpose mainly for entertainment and knowing what is going on all around within the country or outside on this earth. **Radio:** Radio is a very common type of hardware aid. It is an unparalleled vehicle, for mass communication. It is now recognized as an education medium that reaches millions of interested listeners. Its use for: educational purposes was tested in English in 1924.The radio programme for the schools become popular very common with now A.I.R. and B.B.C. Radio programme for the schools became popular during the period from 1950s to 1970s.

Radio Lessons

The radio broadcast can be used:

1. To introduce a new lesson.

2. To present a complete lessons.

3. To review the previous lessons.

4. To solve major problems occurring in a lesson.

Television

Television is being used for educational purposes in our country for the last about 30 years. First it was used in schools of Delhi in 1961. Later it was taken by Doordarshankendras of Mumbai, chennai and Srinagar.

Types of Educational Programme in T.V.

1. Demonstration type.

2. Supplementary type.

3. Direct teaching type.

Newspaper

Newspapers are mostly used for the communication purpose in our country. News has different type passes on the people with the help of newspapers. The unemployment people see vacancies under the column vacancies or situation vacant.

Audio-Visual Aids

Teaching aids which effect or organs of audiability and sight are called AUDIO VISUAL AIDS. that the teacher stand dictionary of education speaks of audio-visual aids as Anything by means of which learning process may be encouraged or carried on through the sense of learning or sense of sight.

Over Head Projector

Its another useful and more convenient way of using black board. In case of black board work, generally it is seen that teacher stands in front while writing and thus his writing on the blackboard is obstructed. The students cant see it properly.

Slides

A slide is usually a piece of film in a frame for passing strong light through or to show a picture on a surface. It may be a small piece of thin glass to put an object on for seeing under a microscope. Its may be made of cellulose acetate film, translucent paper, glass etc.

Tele-Conferencing

In tele conferencing, people situated at distance places establish direct contact through tele communication and converse among themselves. This sophisticated method liberates people from undertaking expensive and time consuming long distance journeys.

Types of Tele Conferencing

1. Video-conferencing.

2. Audio-conferencing.

3. Computer-conferencing.

Social Media for Teaching and Learning:

Social media is for teaching and learning is such as, Internet, World Wide Web Online magazines. Online journals. Online advertisement, Whatsapp, Twitter, Reddit, Google +, Viber, Wikipedia, Youtube, Instagram, Facebook, Linkedin.

Internet: Internet is very big network containing many WANs and LANs. The term internet is derived from the words interconnection of networks. i.e. it is a network of networks. Internet places a vital role in teaching and learning purpose. It helps to learn more and more to the students nowadays. Today 60 million people use the internet globally. This increases in every year in multitudes.

World Wide Web: The world wide web was invented by TIM BERNERS-LEE in 1989 in an attempt to efficiently store research data at CERN, the European particle physics laboratory in Geneva, Switzerland. The WWW system allows hypertext to link files on different computer systems.

Online Magazines: Online magazines are growing rapidly. In the list that follows. Both print magazines that are starting to offer some or all their text online, as well as true online magazines and journals that are published entirely on the internet.

Online Journals: As with any online service across elements of their layout style and design may be worth emulating. Hundreds of other online journals focus on non-computer topics.

Online Advertisment: The results suggest that on average, commercial web sites incorporate approximately half or fewer of the identified beneficial features of

advertising on the web. Most web sites are taking advantages of the content richness of the medium and ability to build brand images while ignoring it.

Whatsapp: Whatsapp messenger- computer . an ad- free instant messaging service for all major smart phones from whatsapp. It uses the internet as an alternative to the SMS text messaging system. Its uses for learning and teaching to the students. Probably it contains general knowledge questions. .

How Social Media Affects the Students

Social media not only helps to acquire knowledge but also establishing enduring relationships with real people, connecting with fellow dorm residents through facebook. Twitter and various social sites can help a student overcome the kind of isolation that otherwise might leader to leave school. A twitter account can provides shy student with information about events that facilitates face to face encounters with other students. Such personal interactions are vital to creating and sustaining a sense of belonging. Social media tools and networking sites encourage students to engage with each other and to express and share their creativity. The social networking sites focus heavily on building online communities with common interest or activities. As there are positive effects of social media there are some negative effects.

Advantages of Social Media:

1. It gives vividness to the learning situation.

2. It gives clarity to the learning and teaching situation.

3. Meet the individual differences among the pupils.

4. Good substitute for direct experiences.

5. Its helps to creating interest and involvement among the teacher and pupils.

6. Students develop their skills and gains some knowledge

7. It attracts the pupil easily.

Disadvantages of Social Media:

1. Every kind of social media cannot be projected all the times.

2. Too much of be using android mobiles and computer is quiet difficult.

3. This kind of learning and teaching is becoming costlier nowadays.

4. This method is not that much possible for middle class pupils.

Conclusion

These are the most important things in the teaching and learning through social media. Social medium plays a vital role nowadays. Pupils are very eager to learn through the media. Its very effective in teaching and learning activities. The concept of learning and teaching through social media helps people to perform their jobs remarkably better as they acquire a great teaching and learning experiences. All this we help us to reduce the negative impact of social media on the students which will in turn benefits our young generation.

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Awareness of Digital Library Among the Library Professionals in Vellore District: A Study

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Abstract

A digital library is a library in which collections are stored in digital formats as opposedto print, other media and accessible by computers the digital content may be storedlocally, or accessed remotely via computer networks. A digital library is a type ofinformation retrieval system. Digital Library is an integrated approach to identifying, managing andsharing all of an organizations knowledge assets.

Introduction

It is well recognized that libraries all over the world are undergoing transformation, especially owing to the development in information and communication technologies. Traditional libraries are changing to digital libraries and new libraries that are being set up are increasingly of the digital kind. As a result, there is widespread interest and consequently, a lot of research and development activities are being carried out in this area world over. In India a number of institutions are also in the process of setting up digital libraries and many scholars and practitioners are conducting research on digital libraries.

What is digital library?

All the books, Journals, Monographs, Theses, dissertations, Printed materials should be scanned/Photocopied/feeded in toComputer/Electronic device as digital format and it should be retrieved from via Internet, Online mode, CD/DVD, external storage devices etc., are available through computer lab/virtual lab Library is known as Digital Library.

Objectives of DL

- To make sure of an effective Resource sharing of new knowledge and improvement of existing the information ;

- To ensure an effective securing of knowledge and make easily accessible to the organization;

- To ascertain a specific distribution of new DL and transfer of knowledge to new employees;

- To improve the form of DL bearers in relation to the users;

Methodology

In order to collect the comprehensive and relevant data from the library professionals Engineering colleges Polytechnic college and Arts Science College in Vellore , a structured questionnaire was designed and interview method was also adopted as the tool for collection of data. The questionnaire was formulated keeping in view, the objective and various facers of the study and the questionnaires were personally distributed and collected with constant personal pursuance and the data obtained from the filled in questionnaires, later classified, analyzed, tabulated and logically interpreted.

Data Collection

- **Primary Data:**Questionnaire method has been adopted to collect the required primary data.

- **Secondary Data:**Secondary data have also been collected through published and unpublished resources.

Sample Design

Fifty samples were chosen for the present study.   The library professionals wererequested to fill up the questionnaire.

Limitations

The study covers the professionals who are working in different types of CollegeLibraries in Vellore District.

- Engineering College Library

- Polytechnic College Library

- Arts & Science College Library

Area Profile of the Study

Vellore (formerly known as **Rayavelur or Vellaimaanagar)** is a sprawling city and the administrative headquarters of Vellore Districtin the South Indian state of Tamil Nadu. Located on the banks of the Palar River in the north-eastern part of Tamil Nadu, the city has been ruled, at different times, by the Pallavas, Medieval Cholas, Later Cholas, Vijayanagar Empire, Rashtrakutas, Carnatic kingdom, and the British. Vellore has four zones (totally 60 wards) which cover an area of 87.915 km2 and has a population of 423,425 based on the 2001 census.[1][3] It is located about 135 kilometres (84 mi) west of Chennai and about 210 kilometres (130 mi) east of Bengaluru. Vellore is about (100) Km South West of Tirupati in Andhra Pradesh. It is Hotspot City Of Bengaluru - Chennai National Highway. Vellore is administered by Vellore Municipal Corporation under a mayor. Vellore is part of Vellore (State Assembly Constituency) and Vellore

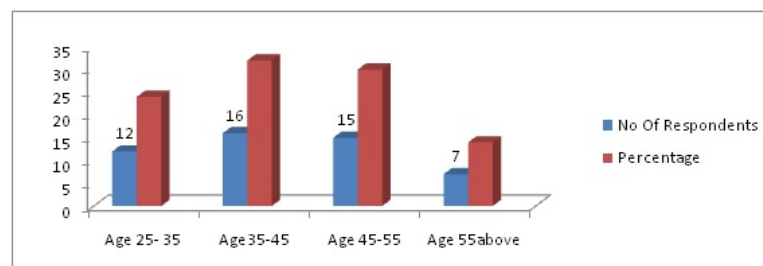## Data Analysis and Interpretation

Figure 1: Age Wise Classification

It is found that 32% of the Library professionals belong to the age group 35-45 and 30 of them are in the age group of 45-55.

Classification by Qualification

It is observed from the above that 38% of the respondents are possessing postgraduates degrees along with Master degree in Library and Information science, 28% respondents possess PG Master degree in Library Information science, 18% respondents possess M.L.I.S, Mphil degree in Library Information science,12% respondents B.L.I.S degree in Library in Library science and 4% PhD degree in Library Information Science.
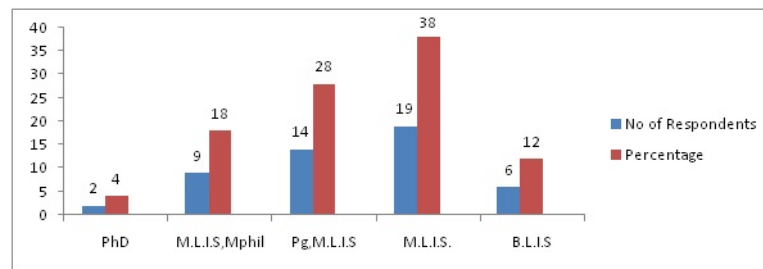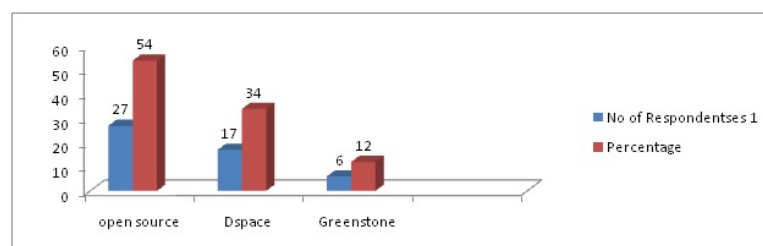
Figure 2: Qualification Details

Figure 3: Maximum number of respondents (54%) is knowledge on Open source and 34% are knowledge on Dspace and 12% of the respondents are knowledge on Greenstone.
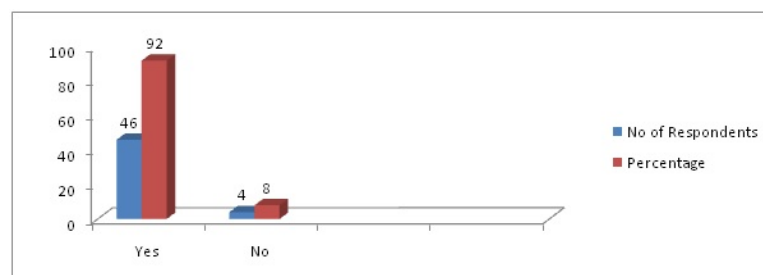
Awareness on Digital Library

Figure 4: It is observedthe above table that 92% of the respondents are aware of the concept of Digital Library and 8% of the respondents are not.
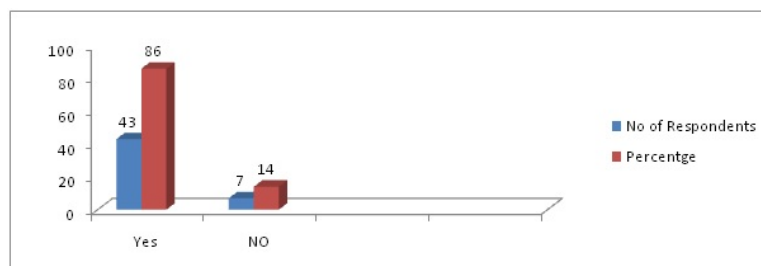
Figure 5: The above table shows that 86% of respondents are eager to apply the concept Digital library and 14% of the respondents are not willing.

Opinion on Application of Digital Library

Conclusion

Digital Libraries are excellent assessment tools, both for teachers and students. They allow us to collect the best examples of our progress, our work, and our creativity. DL allow us to showcase our best efforts at what we do DL is one that is compact in size. It can incorporate a wider selection of materials. A digital (electronic, virtual) Library can easily be duplicated, shared, and augmented in the field of library. According to Dr.S.R.Ranganathans (father of Library science) fourth law of Library Science, Digital Libraries are save the time of the readers.

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Techno-Pedagogy in Educational Institutions

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Abstract

Techno-pedagogy or the powerful combination of various technologies and pedagogy provides new opportunities to support a range of learning environments. Singapore applies techno-pedagogy to a conversational self organised learning (SOL) environment. The concept of SOL is explained in terms of conversational constructive learning events within a social context.I also review the pedagogy of SOL in terms of delivering task management components within a learning organisation. I then explain how the integration of these three technologies provides for a conversation scaffolding learning environment that helps deliver the curriculum. This pedagogic process facilities in learners the development of independent learning skills through both collaborative and individualized content learning encounters that enables them to take increased responsibility for self organising their own learning in both school and the community. The article concludes by discussing the benefits of techno-pedagogic solutions and how the stuff that enhance the quality education in such educational institutions. This article describes the scope of techno-pedagogy, The technological changes in education and the classification in Education. The Needs and Importance of techno-pedagogy and the uses of technology in Distance Education and the innovations in technology in education.

Keywords: Educational Technology, Teaching Methodology, Teaching and Learning technological aids, scopes and needs, Techno-pedagogy, Educational Institutions.

Introduction

TECHNO PEDAGOGY refers to electronically mediated courses that integrate sound pedagogical principles of teaching or learning with use of technology. The objective is not to prepare technocrats, but to develop techno-pedagogues. Techno-pedagogy is the art of incorporating technology in designing teaching learning experiences so as to enrich the learning outcomes that is to make use of internet technology, exploring it, accessing information from it to use in teaching learning process. The uses of technologies in the field of education attained its peak in

teaching and learning innovations. Thus techno-pedagogy plays an important role in the educational institutions and other corresponding studies. The crucial uses and the needs are techno-pedagogy tend to frame the whole educational aspects and the other educational institutions.

Scope of Techno-Pedagogy

- Enhance linguistic abilities

- Develop teaching learning process

- Improve to develop study material

- Design multi-grade instruction

- Plan specific pedagogy

- Support in distance education through e-learning

- Guide and counsel for career choices

- Stimulate self learning ability

- Enhance enrolment and examination process

- Assist in research activities

- Reinforce for cognitive learning

- Development of life skills

- Develop aesthetic sensibility

Technological Changes and Eduction

The work of the school master was once comparatively simple, but like the rural employers they lacked scientific knowledge and equipments. A rapidly growing technology however has produced striking changes both in agriculture and in education. The possibilities of combining all the media in a modern educational technology can be considered more widely. A primitive technology early introduced the book for the use of the individual and, later audio-visual equipment for the group. Some of the ways in which technology improves education over time:

- **Teacher can collaborate to share their ideas and resources online:**They can communicate with other across the world in an instant, meet the shortcomings of their work, refines it and provide their students with the best. This approach definitely enhances the practise of teaching.

- **Students can develop valuable research skills at a young age:**Technology gives students immediate access to an abundance of quality information which leads to learning at much quicker rates than before.

- **Students and teachers have access to an expanse of material:**There are plenty of resourceful, credible websites available on the internet that both students and teachers can utilise. The internet also provides a variety of knowledge and doesnt limit students to one persons opinion.

- **Online learning is now on equally credible option:** Face to face interaction is huge, especially in the younger years, but some students work better when they can go at their pace through online at some educational centres.

Educational Techonology

According to Skinner, Gagne and others, *Application of psychology principles in the instructional process constitutes Educational Technology.*Educational technology is the study and ethical practice of facilitating learning and ethical practise of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources. At the contemporary criteria of educational explosion, it is very difficult to get qualified and competent faculty members in good numbers to different subject and disciplines of study. While on one hand there is an ever increasing demand for education for at all levels and on other hand there is dearth of infra-structural and instructional facilities in school and college.

Software Technology

The software technology uses the principles of psychology for building in the learner a complex repertory of knowledge or modifying his behaviour. It originated from the pioneering works of skinner and other behaviourists. Software approach is characterised by such psychological principles like, task analyses, writing precise learning objectives, selection of appropriate learning strategies, immediate reinforcement of responses and constant evaluation.

Hardware Technology

This is based on the application of engineering principles for developing electro-mechanical equipments for instructional purposes. All types of projectors, cassette players, tape recorders, Radio, Television, Closed Circuit Television(CCTV), Teaching Machines and computers are called as educational hardware.

Need and Importance of Techno-Pedagogy in Education

It is firmly demanded to achieve the followings:

1. To make teaching and learning, planning and structured.

2. It emphasizes objective based programmed instruction.

3. It helps to express the instructional objectives in terms of behavioural outcomes.

4. It helps to answers the issues in education like Why? To Whom? How? Where? and How much? and so on.

5. It urges that the learning materials to be presented in small and easy to learn and step.

6. It advocates that students are to be allowed to progress to the next step only after mastering the previous step.

Distance Education and Technology

Distance education is any type of education that occurs while location, time or both separate the participants. In this process, the teacher, through the use of technology delivers instruction to a student at a separate location. Distance education is a form of indirect instruction. Distance education may utilize any combination of the following four technologies at some educational centres:

- Printed materials

- Audio voice technologies

- Computer technologies

- Video technologies.

Tecnological Innovation in Education

Innovations in educational technologies have impacted how business professionals want to learn. Educational technologies such as virtual classrooms, mobile devices, digital readers, on-demand video, online gaming, and cloud-based LMSs have fed a market that has been, and continues to be hungry for innovation. But recently, investors have looked across the traditional market boundaries beyond higher education and toward corporate training. Thus student community shows more interest and desire towards the techno-pedagogy in their learning activities:
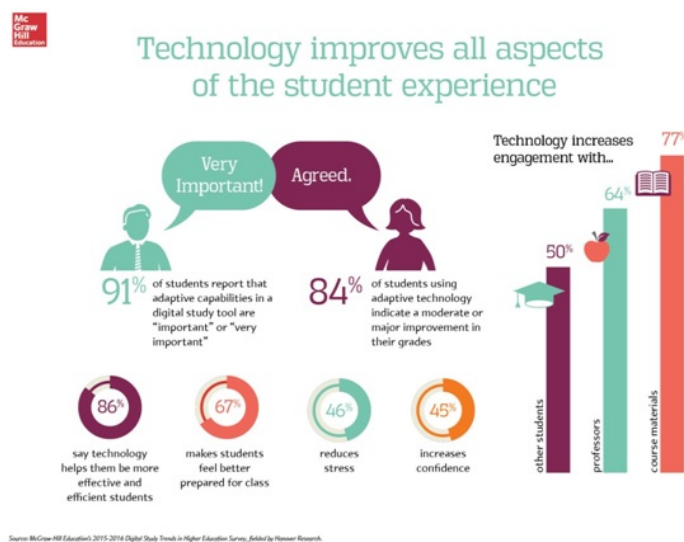
Conclusion

This research has facilitated an in-depth exploration of the concept of techno-pedagogical innovation in order to complement knowledge on this topic that remains highly complex. The richness of the data collected allowed comparison, integration, modelling and theorizing leading to the seven Distinctive Notions, as well as the current pedagogical innovation conception cycle. Furthermore, the pioneering nature of a techno-pedagogy in educational institution is fleeting as it will become habitual.Thus the techno-pedagogy has its vital role in both the learning and teaching practises that evokes the advanced methods and interest along with their active participation in the learning activities in the whole educational institutions. These aspects are clearly evidenced in this paper.

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Role of Information Technology in Women Empowerment

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Abstract

This article explores how information Technology can be springboard to attain gender equality and empowerment in India. India is stepping into 21st century with a bold mission to join the group of economic superpowers. It can boast of knowledge based society and planning to use its demographic dividend to emulate the growth model of developed nations. Indian growth basket is unique in a sense that it directly made transition into Service based economy. India is world leader in Information Technology and ITES services. However, Gender equality poses serious threat to India's future ambition. The Dismal figure of Gender Inequality Index (GII) of Human development report and growing women violence in society shows the inequality in society. For developed society, equal endowment of women on social, economic is sine quonon. India can use potential of Information Technology to enable women to ladder of power and freedom in economic as well as social sphere. Recent initiative of Digital India Mission (NeGP 2.0) to transform India into digital empowered society and knowledge economy can be helpful to create gender just society. Information Technology has multiple enablers it can create ecosystem for equal participation I economic space as evident from sprawling IT and BPOs in metropolitan cities; it can provide unique tool of public service delivery to remotest places like Cash transfer schemes, access to Micro-financing institution. Opportunidades (Mexico), Bolsafamilia (Brazil) become beacon of IT enabled services for gender empowerment and poverty removal. It can even be a bulwark of women safety like recently launch Himmat Mobile Apps. Mobile revolution has increased the accessibility of public service delivery to distant lands. M-Pesa creates virtual banking space for remote and poor people of Kenya. ICT is changing the global landscape impacting the way people live, think, work and communicate. The range of ICT is extensive including better access to information, technology, Forecasting, training and education. IT Ecosystem provides barrier free avenue for women entrepreneurship. Sheryl Sandberg of Facebook and Virginia Marie Rometty of IBM have reached the highest echelon of software companies. For Indian perspective, IT provides unique opportunity to reduce gender disparity in varies space like educational, health, safety, economic space etc. This article discusses how IT can be a vital enabler for gender

Empowerment and Equality.

Keywords: Women   empowerment,   gender   equality,   entrepreneurship,
microfinance, e-governance

Introduction

Every second recruit entering the $60 billion Indian IT industry is a woman.
Currently, Infosys employs the largest percentage of women at 33.4%, followed by
TCS 30% and Wipro 29%. The major players in IT industry are now offering an
environment that will retain the talented women workforce. To develop women friendly
work environment leading companies are now offering benefits like lactation centers,
extra maternity leave, work from home policies, creches, and option to relocate to city
of their choice in case of transfer of the husband. IBM has also launched a diversity drive
in the campuses specially to attract women in their workforce. In IBM the percentage
of women has climbed up to 26%. (Singh Harsimran& Singh Shelley, 2009)

Role of Various Stakeholders

Various organizations including NGOs, government, and private institutions have
led to improvement in status of women through ICT.

Role of NGO'S

Smile (Savitri Marketing Institution for Ladies Empowerment) organizes IT
seminars in collaboration with IT companies. NIIT has launched SWIFT JYOTI
programme for IT education of women. The programme is designed to provide
computer literacy to females from six years to sixty years. It provides functional literacy
on the one hand and benefits women in seeking and receiving information useful in their
daily life. The duration of SWIFT JYOTI programme is 18 hours.
SEWA (Self Employed Women's Association) has launched IT programme to increase
efficiency of rural micro enterprises.

Ujjas Innovation: It is an initiative to empower women by bringing out their own
newsletter called Ujjas. The newsletter went on air on All India Radio Bhuj Station in
Gujarat. The newsletter provides a medium to express views against female infanticide,
dowry, and other relevant issues.

Role of Government

Yeshaswini Nagara Hagu Grameena Abhivruddi Parishat in association with Karnataka State Womens Development Corporation (KSWDC) has launched e-mahile project to women's drawn from over 200 villages in 11 districts of the State. Then, each trained woman who is called village service provider, will be given a laptop, printer, UPS, soil testing kit, LCD projector, digital camera, e-mahile dual language software and educational CDs, Internet connection, IRTC currency for booking rail and air tickets at a cost of Rs. 1,80,000. Nationalized banks will support these women by providing loans. Apart from loans, the government will give Rs. 10,000 as subsidy to each woman under the Asare programme. This is besides the Rs. 25,000 margin money. Personality development courses and Yoga classes are the added benefits. Many women with their newborns are attending the training camp and the organizers have set up a creche and appointed women to take care of the children.

Gyandoot: Gyandoot is an e-government project started by the state government of MP (India) that won the prestigious Stockholm Challenge award in 2000. The project provides a network of computers connecting the rural areas and fulfilling the everyday, information related needs of the rural people.

M.S.Research Project in Pondicherry is providing internet connectivity to create information villages. The project has developed a hub and spokes distribution model where Web-based data is downloaded in a community with an Internet connection and subsequently relayed through a local voice/data network to community Village Knowledge Centre's (VKCs) in six nearby villages. Datamation foundation in collaboration with the UNESCO has set up a community media centre in a madarasa in extremely backward Seelampur-Zaffrabad in NewDelhi.The project aims to empower girls with the basic computer skills for their better future.

Dairy Information System Kiosk (DISK) is a project in Gujarat which provides Internet connectivity and a portal at the district level serving transactional and information needs of all members. DISK has improved efficiency of milk buying process at 2,500 rural milk collection societies. Software called AkashGanga has been developed with special features to enable speedier collection of milk and faster disbursement of payments to dairy farmers.

Role of Private Sector

Project Shakti launched by Hindustan Unilever promotes internet penetration among rural women. The project now provides services to 135000 villages, across 15 states and has developed 45000 women entrepreneurs. Project Shiksha of Microsoft and Internet

Bus of Google are also contributing to increase internet awareness.

E-choupal initiative of ITC has reached 40,000 villages covering 4 million farmers through 6500 kiosks.

NASSCOM: National Association of Software and Service Companies provide mentoring and empowering women managers across junior, middle and senior level from the IT Industry through various workshops, activities and training sessions.

India Shop, an e-commerce website in TamilNadu, has been designed to sell rural women's cooperatives and NGOs.

SwayamKrishiSangam (SKS) is using ICT's such as smart cards and hand held devices to improve microfinance projects to empower poor women.

NABANNA: Networking Rural Women and Knowledge, a UNESCO sponsored project in NABANNA, India was launched to empower women through use of intranet portals, databases, and web based applications. Through the NABANNA network women share local indigenous information and information obtained at group meetings and newsletter. Women gained more respect in their local community. Younger women were more confident to approach job market. Women became more creative after learning programs like paintbrush. Women developed a sense of unity among them and bringing forth leadership qualities.

Challenges

The Women employees have to face challenges of long work hours, constant travelling and juggling different time zones of international clients, Social issues on account of working during night. As a result the industry is losing women employees at the middle and senior management level. In Infosys top management has less than 2% women employees. In a study conducted to assess the status of women in technical education and employment in Karnataka state by Sequeira A.H. (2005) self employment among degree and diploma holders was as low as 1% of the total number of pass outs. Access to technology and internet connectivity in the remote villages is a great challenge in India. To capitalize on the opportunities for women empowerment provided by Information Technology it is important to increase internet connectivity in remote villages. The other challenges are:

1. Poor regulation, and support for women working in informal sector.

2. Poor awareness of ICT for women.

3. Lack of e-commerce related infrastructure in developing countries.

4. Language barriers for the use of ICT for non English speakers.

5. Paternal set up of Indian society.

6. Poor Internet Usage: Women form a very small part of the internet population in the country, with working and non-working women accounting for only 8 per cent and 7 per cent of the internet users universe.

7. Conservative outlook for working women.

8. Challenges of managing career and family.

Opportunities

Nasscom estimates that the male: female ratio in IT industry has improved from 70:24 in 2005 to 70:30 now. IT reduces the impact of barriers of time and distance in organizing and managing the service delivery of businesses. A large part of jobs outsourced are going to women. The freedom to work from anywhere and anytime can become a catalyst for financial independence and empowerment of women by enhancing their extra income. A women entrepreneurship cell should be set up to handle the various problems of women entrepreneurs in all states at the college level.

Romoting Women Entrepreneurship in it

Sarada Ramani started Computer International with six employees. Now the firm has transformed into an outsourced product development company with 150 employees. Sangeeta Patni at Extensio Software builds technology in India and sells it to the rest of the world. The ten employee company has now MNCs like SAP, IBM, and ACC as its major clients. Rakhee Nagpal started Dynamic Vertical Solutions (DVS), an ERP solution provider for retail and hospitality industry in 2006. Its list of major clients includes Ddamas, Lilliput, Devyani Group among others. Anu Lall, CEO of SNARTAK IT Solutions started the business with a mere Rs.12000. Now the firm has reputed corporate like Siemens, Satyam, Ranbaxy, Apollo Tyres and others as their client. These women entrepreneurs will become the role models and inspire many more to become entrepreneurs. Apart from entrepreneurship other opportunities are:

1. Flexibility for women to work from home.

2. Women friendly working environment in IT companies.

3. Enhanced access of women to distance learning.

4. Access to information through e-governance initiatives of government.

5. Better market access for micro enterprises through e-commerce.

6. Regulatory support by government to support microfinance and mobile banking for women empowerment.

Strenghts

Abilities to learn quickly, their persuasiveness, open style of problem solving, willingness to take risk and chances, ability to motivate people, knowing how to win and lose gracefully are the qualities that shine Indian women personality.

Role Models

- Women who have achieved commanding position in the industry will inspire more women to follow their footsteps.

- Neelam Dhawan, Managing Director of Hewlett-Packard India. She has countrywide responsibility for revenues and profitability and ensuring the greatest leverage from HPs Services, Personal Systems and Imaging & Printing businesses. With a portfolio that extends to offshore activities, BPO, Software Engineering, Research and IT Services, Neelam is focused on shaping the company's overall business agenda and leading its strategy and corporate development efforts to make HP the most admired company in India.

- Chandra Prabhakar, Vice President-On Demand Solutions, Ramco Systems. She was an important contributor in the mainframe, client server, and e-commerce projects.

- Kalyani Narayanan, CEO of Allfon Systems: She was able to independently manage large critical applications. At the age of 22, she designed developed and deployed applications.

- Dr. M. RevathySriram, Director of M/s TejasBrainware Systems (P) Ltd, has 40 years of IT experience.

- Mrs.SumitraSeshan is COO of Fifth Generation Technologies India Ltd.

- SudhaJagadish, COO of Dax Networks: She had excelled in service, purchase, credit control and HR, and the major departments of the organization.

- Pamela Ramalingam, COO of Thales Group India: She has rich experience of working in leading American, British and Indian companies.

- SadhanaSomasekhar, Joint M.D Future Focus Infotech. She is the global head for the organizations business operations. She is also the founder chairman of Platinum Info systems

- GayatriViswanathan, founder and VP Delivery. She has rich experience of software development, project management, and solutions delivery

Conclusion

There is growing recognition of role played by ICT industry in women empowerment. Industry norms are undergoing metamorphosis to attract and retain talented women employees. The need to balance work family balance is creating a talent crunch in the middle and top management. These talented women can utilize their experience and talent to become entrepreneurs. Women at the top of ICT industry are setting a role model for the young generation. Women have to maintain a balance between professional and personal life to capitalize on the opportunities provided by Information and Communication Technology. Family members should support the women to utilize their talent and skills to establish their unique identity and for the economic welfare of the family.

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Developing a Subjects Web Portal for Management Studies

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Abstract

A portal can provide an information and retrieval at single desk. In this paper
we proposed an approach for implementation and design of an interactive web
portal Management Studies student, scholars and faculties. This portal provides
a platform for knowledge sharing and interactive user friendly modules. It can
be increasing productivity and save the user time. The Management Studies web
portal is a subject portal to provide all the information under one portal like E-
Books, E-Journal, E-Database, etc.,

Keywords: Web Design , Web portal, Management studies, Subjects portal,
Information Management.

Introduction

Today's education scenario is rapidly changing and demanding. Students demand
a higher level of access to information about their options, their performance, their
learning environment and their future. They also demand that technology resources be
an integral part of their learning experience. The standard for access to faculty and
student services will change as students come to expect virtual access to faculty and
student services resources. In other words we can define portals as applications getting
data from different data sources and displaying the stuff under a consistent look and feel
umbrella which in other case would have been different applications or sites altogether.
In this portal brings the student to a platform of knowledge sharing with dramatic and
highly user friendly modules for increasing the productivity and saving user time.

With the vast development of various technologies, learning today is no longer
confined to classrooms with lecture delivery as the only method of conveying
knowledge, rather, an electronic means of learning has continued to evolve. Electronic
learning (e-Learning), which facilitates education using communication network, has
made learning possible from anywhere at anytime using the Internet, wide area networks

or local area networks. A subject portal can assist the students in e-learning by providing wide variety of digital resources and web based library services. Subject portals are important tools for users to access and utilize library and information services over a network. Thus the subject portals act as a single user interface for accessing wide variety of resources in a single window. After knowing the demand of this kind of portal we have develop a subject portal in Management studies discipline to assist the Management studies learners in accessing variety of information related to their subject in single a log in.

Management studies was applied in the creation and maintenance of a database to store Inter related subjects Management Modeling, Business Communication, Commerce, Cost Accounting, Economics, Management studies Programming, Organizational Behaviour, Operational Research, Financial Analysis, Management Information System, Marketing Management, Statistical Analysis, Research Methodology, Operations Research, etc., Development of this type of database involved not only design issues but also the development of complex interfaces whereby researchers could both access existing data as well as submit new or revised data.

Information

According to (Shannon 1993, p180). The word information has been given different meanings by various writers in the general field of information theory. It is hardly to be expected that a single concept of information would satisfactorily account for the numerous possible applications of this general field.

As Luciano Floridi (2011) stresses, it is a polysemantic concept associated with different phenomena, such as communication, knowledge, reference, meaning, truth, etc. In the second half of the 20th century, philosophy begins to direct its attention to this omnipresent but intricate concept in an effort of unravel the tangle of significances surrounding it.

Information system

An information system is software that helps you organize and analyze data. This makes it possible to answer questions and solve problems relevant to the mission of an organization. Its help Review and Business Courses. A arrangement of hardware, software, infrastructure and trained personnel organized to facilitate planning, control, coordination, and decision making in an organization. A business application of the computer. It is made up of the database, application programs, manual and machine procedures and encompasses the computer systems that do the processing.

Management

The Management studies as a discipline is more than 80 years old, there is no common agreement among its experts and practitioners about its precise definition. In fact, this is so in case of all social sciences like psychology, sociology, anthropology, economics, political science etc. As a result of unprecedented and breath-taking technological developments, business organizations have grown in size and complexity, causing consequential changes in the practice of management.

Many management experts have tried to define management. But no definition of management has been universally accepted. Let us discuss some of the leading definitions of management: Peter F. Drucker defines, "management is an organ; organs can be described and defined only through their functions".
Henry Fayol, "To mange is to forecast and plan, to organize, to compound, to co-ordinate and to control."

Importance of Management studies

It is said that Management studies is the gate and key of the arts. According to the Mary parker follett Management is the art of getting things done through people. Managers are responsible for taking actions so that individuals can contribute their best to group objectives. Thus, management applies to every organization whether it is large or small, profit making or nonprofit making and a manufacturing or service enterprise, such as church, defence, sports authority, universities or hospitals. Effective management is the concern of every person in the organization, particularly the top level management cader.

In this modern age of Science and Technology, emphasis is given on arts such as commerce, economics, banking, financial, human resources Management studies, which is a arts by any criterion, also is an efficient and necessary tool being employed by all these arts. As a matter of fact, all these arts progress only with the aid of Management studies. So it is aptly remarked, Management studies is a Social of all Sciences and art of all arts.

Need for a management studies portal

The students, researchers as well as faculty members to access information keep shuttling between e-books, e-journals, patents, theses, e-database, management studies software, management research and so on. To give a bird's eye view of various resources in the field of management studies, a single window service was conceptualized in

the form of a management studies portal. It aims to provide information related to management studies and its allied subjects, through a single user interface and to access a wide variety of electronic resources in the field subscribed by the management studies institution and also other scholarly information sources that are available in full text on the web. Searching and filtering the sources available on the web and then judging what would prove useful to management studies students is of course a very tedious job.

Web Portal

A portal represents a website that provides a single point of access to applications and information. The portal can access from an end abuser perception, a portal is a web site with pages that are organized by tabs or some other form of navigation. Each page contains a nesting of sub-pages, where individual windows that display anything from static HTML content to complex web services. Portals thus form a network of links present at a single site which acts as a node, and

This node creates a medium for information transfer and retrieval.
A portal is a software module which can run on any device with internet connectivity with it. It can run on the web browser of a computer or a phone. The major benefits of a portal are that user can configure, customize and personalize the contents within it.

Related work

Nagarajan.M (2012) The present study focuses the issues related to designing of portal for bioinformatics subject. In order to access information, students, researchers as well as faculty members keep shuttling between e-books, e-journals, patents, theses, e-database, bioinformatics software, research and so on. To give a birds eye view of various resources in the field of bioinformatics, a single window service was conceptualized in the form of a bioinformatics portal.

Dharanikumar.P, Gayathri.KN (2011) The portals are considered as the advanced tools of information retrival where the information can be personalise, customize and integrate in a web based environment for the users individual preference. The present study focuses the issues related in designing of subject portal for biochemistry subject. Study outlines for creating a web page and an attempt has been made to design a subject portal having qualitative information with all the ease of learning. This paper also discusses the issues related in getting free web space and hosting of subject portal and submission of portals to search engines.

Objectives of the Study

The main aim of the management studies portal is to fulfil the information requirements of the faculty members, researchers and students in the Department of management studies, and also its allied departments at management institutions. As such, its objectives are to:

- To the user can get all information, content and applications under a single portal.

- To design and develop a web portal for sharing the management studies databases and web resources.

- To evaluate the web portal for its usefulness and the friendliness of the user in the field of management studies.

Answering these objective questions contributes to a better understanding of Web Services and Web Portals. Helping the designers to better develop the appropriate tool for the user.

Scope and methodology

The present research is focusing on creating of subject portal in Management Studies using HTML5, CSS at front end and PHP, Jquires at the back end. The windows platform is the operating system on which portal runs, Apache as a server, MySQL as database and PHP as the scripting language. The scope of this research is limited mainly to Management subject offered in Management Studies institutions. Management Studies is a major branch of study related to many interdisciplinary components such as Commerce, Corporate Sectoryship, Economics etc., so the available information is more both in terms of printed and online. For the convenience of the research we consider curriculum structure of the subject as a limitation to surf the information. For designing the subject portal we collected the some relevant sources of information according to the syllabus offered by the Management Studies institution.

Operational definitions

The portal file contains all the components that make up that particular instance of the portal, such as books, pages, portlets, and look and feel components. Many components have a hierarchical relationship to each other. For example, a book contains pages and pages contain portlets. The definitions of the key terms employed in this studies are given below:

Management studies:

The field of commerce, business consists of the following areas of studies viz., management studies is a rapidly developing branch of online trading and is highly interdisciplinary, using techniques and concepts from informatics, Management studies was applied in the creation and maintenance of a database to store Inter related subjects Management Modeling, Business Communication, Commerce, Cost Accounting, Economics, Management studies Programming, Organizational Behaviour, Operational Research, Financial Analysis, Management Information System, Marketing Management, Statistical Analysis, Research Methodology, Operations Research, etc.,

Desktop:

A desktop an on-screen representation of desktop, which is used in the macintosh, windows 2000 and windows NT. A buzzword attached to applications traditionally performed on more expensive machines that are now on a personal computer.

Internet Explorer:

Internet explorer is a free internet browser from Microsoft corporation which works across many different computer platforms. Regardless of the website we visited, internet explorer can display the most complex web pages.

Shell:

An outer layer of a program that provides the user interface, or way of commanding the computer. Shell are typically add-on programs created for command-driven operating systems, such as UNIX and DOS. It provides a menu-driven or graphical icon-oriented interface to the system in order to make it easier to use.

Page:

Pages contain the portlets that display the actual portal content. Pages can also contain books.

Menu:

An on-screen list of available functions that can be performed at this time, whether it is a set of tabs, a set of links, or a tree structure. Web Logic Portal provides two types of menus: single-level and multi-level.

Layout and Placeholder:

Layouts and placeholders (not to be confused with personalization placeholders) work together to structure the way portlets and books are displayed on a page. A layout is a

combination of HTML tags DIVs, SPANs, and so on and CSS styling used by a page to determine the physical locations of portlets on the page. Administrators and users can choose different available layouts for pages. Placeholders are the individual cells in a layout in which portlets are placed. WebLogic Portal ships with some predefined layouts, and you can also create your own custom layouts.

HTML

Short form of Hypertext Markup Language, HTML is what web designers and developers write when they create web pages. HTML isn't really a programming language as it is missing many of the standard features associated with programming languages. It is more a way to describe how things should appear in a web browser. With it one can make sections of text bold or make the typeface bigger.

Purists believe that HTML shouldn't be used to specify content layout. They feel that the content should flow freely and fill the screen in whatever way best suits the end-user. It is best to think of HTML as the glue that binds all this functionality into something that a web browser can interpret and display for the end-user.

PHP

In web programming, PHP is a script language and interpreter that is freely available and used primarily on Linux web servers. PHP, originally derived from personal home page tools, now stands for PHP: Hypertext Preprocessor, which the PHP FAQ describes as a recursive acronym.

Server

A computer device on a network that manages network resources. It stores files and provides services to the client machines.

Apache

A widely-used public domain, UNIX-based web server from the Apache Group. It is based onb NCSAs HTTPd server. The name came from a body of existing code many patch files.

Hyperlink

An element in an electronic document that links to another place in some documents or in an entirely different one which supports linking graphics, sound and video elements in addition to text elements.

MySQL:

It is a multithreaded, multi-user, SQL Database Management System (DPMS). MySQL AB makes MySQL available as free software under the general public license (GPL).

Prototype:

Creating a demo of a new system. Prototyping is essential for clarifying information requirements. The design of a system must be finalized before the system can be built. While analytically-oriented people may have a clear picture of requirements, others may not.

Webmaster:

A persion responsible for the implementation of a web site. Webmaster must be proficient in HTML as well as one or more scripting and interface language such as JavaScript, Perl and CGI. They may also have experience with more than one type of web server.

Serial Crisis:

The serial price inflation that has severely afflicted academic libraries is known as serial crisis.

Web Portal:

Originally a general purpose Web site offering a wide variety of resources and services and links to other Web sites. However, the term is increasingly applied to Web sites that offer such services only within a particular industry, occupation, or field.

Design of Web Portal:

After creating the databases and deciding the hardware and software requirements, the prototype portal design process commenced. The web portal has been named as management studies portal which stands for management and business administration information.

It gives easy and user-friendly environment for the interaction of the faculty and students with the system through a conventional web browser. Management Studies Portal Supports a co-operative mechanisms for assisting the student whenever necessary.

Pilot study

A pilot study was conducted with a sample set of questionnaires from the target group comprising of research scholars and faculty members. Based on the study, a
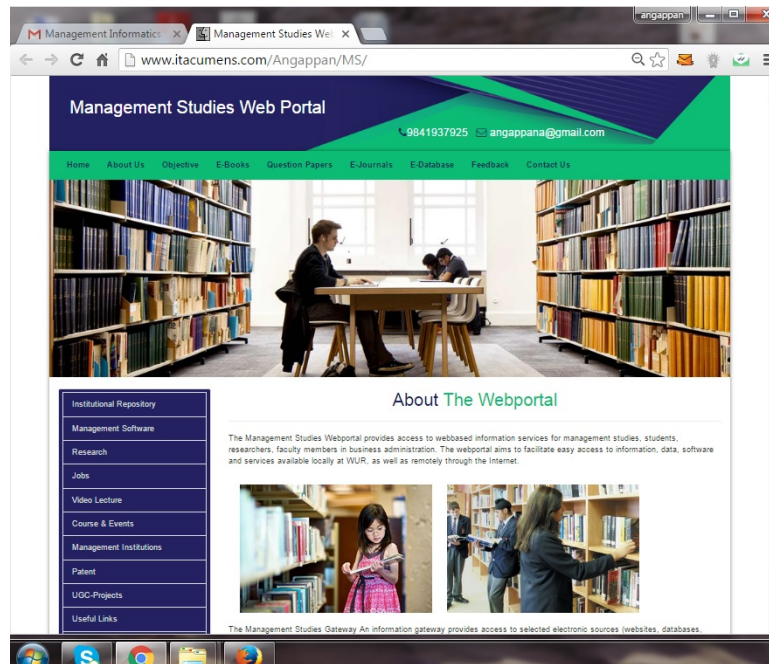
Figure 1: Home page of the Management studies Portal

few corrections were carried over in the questionnaire. The revised version of the questionnaire was finally administered.

The questionnaire was administered to a total of 75 users, of which 25 were faculty and the remaining 50 comprised of Research Scholars. All of them have positively responded to the researcher's distribution of the questionnaire.

Evaluation

The respondent's data evaluating the management studies portal was consolidated and synthesized. The indicators for evaluation include:

   i. Awareness of web portals

  ii. Relevance

 iii. Accessibility

 iv. Availability

  v. Structure

 vi. User friendliness

vii. Usefulness

viii. Satisfaction

Awareness of web portals

The study was undertaken to know as to whether the research scholars are aware of web portals and it revealed the fact that 92 percent of scholars and 100 percent of the faculty members are aware of web portals whereas 08 percent of the research scholars are not aware of it.

S.No	Opinion	Yes	No	Total
1	Research scholars	46 (92)	4 (08)	50
2	Faculty Members	25 (100)	0 (0)	25
Total		71	4	75

Table 1 Awareness of web portals

Relevance of Web Portals

The relevance of web portal research and e-book mostly like by research scholar, e-book and e-journal mostly like by the faculty members. The ranking of the relevance by the research scholars and faculty members are

S.No	Feature	Ranking by	
		Research scholars	Faculty members
1	E-Books	II	I
2	E-Journals	III	II
3	E-Databases	IV	IV
4	Courses & Events	V	VI
5	Management studies Institution	VI	VII
6	Management studies Software	XII	III
7	Research	I	IX
8	Jobs	XI	VIII
9	Patents	IX	X
10	Institutional Repositories	X	V
11	Video Lecture	VII	XI
12	Useful Links	VIII	XII

Table 2: Relevance of web portals

Conclusions

The findings from this study shown that the quality of the Management Studies web portal is low and that the portal itself is rarely used by the students. We proposed an approach for implementation and design of an interactive web portal for students, scholars and faculties for Management Studies department. The proposed portal provides a platform for knowledge sharing with interactive and user-friendly modules for increasing productivity and saving the user time. It enables students to get all the useful resources under one portal like e-books, e-journals, e-database ect,. The management studies web portal has been designed and evaluated for its performance among the target group and the major finding of the research are highlighted in this paper. This research is an outcome of the researcher; and the management studies prototype portal will be of great use and benefit to the management students, research scholars, faculty members and scientists, research and developing in the field of management study.

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Utilization of Periodicals in Manonmaniam Sundaranar University: A study

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Abstract

The paper deals with the utilization of periodicals in Manonmaniam Sundaranar University. Survey research is used for this study. The data was analysis by using SPSS for percentage calculation. It was found that majority of the respondents are using library daily. 63(42%) respondents are using both print and electronic format. 50 (33.33%) respondents are strongly agree that the purpose of using periodicals to develop knowledge and update information. there is no major difference between the respondents have the opinion as moderate and good about the facility providing to access the periodicals. 55 (36.67%) respondents felt that lack of training is the major hindrance and 70 (46.67%) respondents are satisfied with the periodical collections.

Keywords: Periodicals, Utilization, Manonmaniam Sundaranar University, Tirunelveli

Introduction

A periodical is a type of serial, defined as a Publication with its own distinctive title, containing a mix of articles by more than one contributor, issued at regular stated intervals of less than a year, without prior decision as to when the final issue will appear. This includes magazines and journals, but not proceedings. Magazines, Periodicals or serials are publications, generally published on a regular schedule, containing a variety of articles, generally financed by advertising, by a purchase price or both. Magazines are also published on the internet. Many magazines are available both on the internet and in hard copy, usually in different versions, though some are only available in hard copy or only via the internet.

Periodicals fall in to two broad categories. Consumer periodicals and business periodicals. In practice, magazines are a subset of periodicals, distinct from those periodicals produced by scientific, artistic, academic or special interest publishers which

are subscription-only, more expensive, narrowly limited in circulation, and often have little or no advertising.

E-journals on CD-ROM are like having printed journals in the library, it of curse requires hardware and software to search and read. It provides full text of individual or collected journals of various subjects. When a library subscribes e-journals in CD-ROM some, they can preserve it for a long time like bound volumes and we can use them whenever we want. On the other hand online journals on the net can be accessed at anytime from anywhere. Online journals can be searched using number of online hosts like Dialog, search engines and known URL.

Review of Literature

Asundi, A.Y. (2000) studied that the advances in computer and communications technologies have improved the facilities of information access in house and or remote. The paper has made a comparative study of both print and electronic form of the Encyclopedia from the usage point of view and has concluded their mutual benefits.

Lutishoor Salisbury (2003) studied that the greater use is being made of the mathematics reading room and the virtual periodicals room than Mullins library periodicals room. Faculty and graduate students are beginning to accept the use of electronic journals. The majority of faculty and graduate students agree that electronic journals access is indeed a viable alternative to the physical mathematics reading room.

Kumbar, B.D. (2007) studied that periodicals are the most vital source to disseminate nascent information as the latest developments, achievements and advancements in any field are first reported in journals, reports, etc. The paper examines the extent of use of periodical sby the agricultural scientists working in the University of Agricultural Sciences.

Mindy M. Copper (2007) studied that a discussion of library literature that focuses on the practice and reasoning behind tracking usage of print and electronic journals will help librarians understand the complexities of use studies. The author examines both qualitative and quantitative studies by academic librarians to compare the usage of electronic versus print journals and the strengths and weaknesses inherent in the methods used.

Objectives of Study

- To analysis to find out the purpose of using Periodicals.

- To identify the level of utility of periodicals.

- To analysis the mode of access periodicals.

- To point out the hindrance while searching information of periodicals.

- To point out whether they are providing enough facility to access the periodicals.

- To know the extent of satisfaction of users in periodical collections in the library.

Methodology

The study was conducted users such as students and faculty members of Manonmaniam Sundaranar University located in Tirunelveli. A Structured questionnaire was used to collect the data from the respondents. A total of 200 questionnaires were distributed and 150 questionnaires were received after filling the data and response rate is 75%. The data collected were converted into SPSS for data analysis.

Data Analysis and Interpretation

Category-wise Distribution of the Respondents

S. No	Category	No. of Respondents	Percentage	Male	Percentage	Female	Percentage
1.	Students	103	68.7	45	30.00	58	38.60
2.	Faculty Members	47	31.3	21	14.00	26	17.40
	Total	150	100.00	63	44.00	87	56.00

Table 1: Sex and Category-wise Distribution of the Respondents
Source: Primary Data

Table 1 shows the sex and category-wise distribution of the respondents. Out of 150, 103 (69%) respondents are students and 47 (31%) respondents are faculty members. This table also shows the sex-wise distribution of the respondents. 45 (30%) and 47 (31%) respondents are male in both categories and 58 (38.6%) and 26 (17.4%) respondents are female in both categories.

Hence it concluded that majority of the respondents are female and belongs to the category of students.

Frequency-wise Distribution of Respondents

S. No	Frequency	No. of Respondents	Percentage
1.	Daily	72	48.00
2.	Twice in a Week	40	26.60
3.	Three times in a Week	25	16.70
4.	Less than Once in a Week	13	8.70
	Total	150	100.00

Table 2: Frequency of Using Library
Source: Primary Data

Table 2 shows the frequency of using library by the respondents. Out of 150 72 (48%) respondents are using library daily, followed by 40 (26.6%) respondents are using library twice in a week, 25 (16.7%) respondents are using library three times in a week and 13 (8.7%) respondent using library less than once in a week.

Hence it stated that majority of the respondents are using library daily.

Mode of access to Periodicals-wise Distribution of Respondents

S. No	Format	No. of Respondents	Percentage
1.	Print	41	27.30
2.	Electronic	46	30.70
3.	Both	63	42.00
	Total	150	100.00

Table 3: Mode of access to Periodicals
Source: Primary Data

Table 3 shows the mode of access to periodicals of the respondents. Out of 150, 63(42%) respondents are using both print and electronic format of periodical followed by 46(30.7%) respondents are using electronic format whereas 41(27.3%) respondents are using print format.

It is concluded that majority of the respondents are using both print and electronic format of periodical to access information.

Purpose of Using Periodicals-wise Distribution of Respondents

The study is analyzed to find out the various purposes of using periodicals in the university library on Likert's five point scale such as Strongly disagree, Disagree, Undecided, Agree and Strongly Agree.

Sl. No	Description	SD	DA	UD	A	SA
1.	To support research work and teaching in the university	12 (8.00)	20 (16.67)	25 (20.00)	38 (25.33)	45 (30.00)
2.	To develop knowledge and update information	8 (5.33)	10 (6.67)	45 (30.00)	37 (24.67)	50 (33.33)
3.	To prepare articles and paper presentation	10 (6.67)	13 (8.67)	37 (24.67)	60 (40.00)	30 (20.00)
4.	To learn examine oriented	2 (1.33)	5 (3.33)	49 (32.67)	56 (37.33)	38 (25.33)
5.	To spent leisure time	22 (14.67)	28 (18.67)	40 (26.67)	35 (23.33)	25 (16.67)

Table 4: Purpose of Using Periodicals
Source: Primary Data   Percentage denoted in Parenthesis
(SD - Strongly Disagree; DA-Disagree; UD-Undecided;
A-Agree; SA-Strongly Agree,)

Table 4 reveals that the purpose of using periodicals. Out of 150 respondents 50 (33.33%) respondents are strongly agree that the purpose of using periodicals to develop knowledge and update information, followed by 45 (30.00%) respondents are strongly agree that the purpose of using periodicals to support research work and teaching in the university, 38(25.33%) respondents are strongly agree that the purpose of using periodicals to learn examine oriented whereas 30 (20.00%) respondents are strongly agree that the purpose of using periodicals to prepare articles and paper presentation and 40 (26.67%) respondents are undecided about the statement that the purpose of using periodicals to spent leisure time.

Opinion of facility-wise Distribution of Respondents

S. No	Opinion	No. of Respondents	Percentage
1.	Good	68	45.33
2.	Moderate	72	48.00
3.	Poor	10	6.67
	Total	150	100.00

Table 5: Opinion of facility providing to access the periodicals
Source: Primary Data

Table 5 shows the opinion of facility providing to access the periodicals. Out of 150, 72 (48.00%) respondents have the opinion as moderate, followed by 68(45.33%) respondents have the opinion as good and 10 (6.67%) respondents have the opinion as poor.

Hence its concluded that there is no major difference between the respondents have the opinion as moderate and good about the facility providing to access the periodicals.

Hindrance-wise Distribution of Respondents

S. No	Hindrance	No. of Respondents	Percentage
1.	Materials not updated and available	22	14.67
2.	Lack of Training	55	36.67
3.	Lack of Time	33	22.00
4.	Physical Hindrance	20	13.33
5.	Library Staff Non-cooperation	7	4.67
6.	Lack of funds	10	6.67
7.	Others	3	2.00
	Total	150	100.00

Table 6: Hindrance while searching information of periodicals
Source: Primary Data

Table 6 explains the hindrance face by the respondents while searching information of periodicals. Out of 150, 55 (36.67%) respondents felt that lack of training is the major hindrance, followed by 33 (22.00%) respondents felt that lack of timing as hindrance, 22 (14.67%) respondents have the hindrance as materials not updated and available, 20 (13.33%) respondents have physical hindrance whereas 10 (6.67%) respondents felt that lack of funds as hindrance. 7 (4.67%) respondents facing hindrance as library staff non-cooperation and 3 (2.00%) respondents have other hindrance than mention above.

Satisfaction-wise Distribution of Respondents

S. No	Opinion	No. of Respondents	Percentage
1.	VDS	3	2.00
2.	DS	5	3.33
3.	N	42	28.00
4.	S	70	46.67
5.	VS	30	20.00
	Total	150	100.00

Table 7: Satisfaction of Periodical Collections in the Library
Source: Primary Data
(VS - Very much Satisfied; S-Satisfied; N-Neutral; DS - Dissatisfied; VDS -Very much Dissatisfied)

Table 7 shows the satisfaction of periodical collections in the library. Out of 150, 70 (46.67%) respondents are satisfied with the periodical collections, followed by 42 (28.00%) respondents are neutral with the opinion about the satisfaction of periodical

collections whereas 30 (20.00%) respondents are very much satisfied, 5 (3.33%) and 3 (2.00%) respondents are dissatisfied and very much dissatisfied with the collection of periodicals in the library.

Findings

The study was conducted users such as students and faculty members of Manonmaniam Sundaranar University located in Tirunelveli. A Structured questionnaire was used to collect the data from the respondents. A total of 200 questionnaires were distributed and 150 questionnaires were received after filling the data. 103 (69%) respondents are students and 47 (31%) respondents are faculty members. majority of the respondents are female and belongs to the category of students. 72 (48%) respondents are using library daily. 63(42%) respondents are using both print and electronic format of periodical followed by 46(30.7%) respondents are using electronic format. 50 (33.33%) respondents are strongly agree that the purpose of using periodicals to develop knowledge and update information. 72 (48.00%) respondents have the opinion as moderate. 55 (36.67%) respondents felt that lack of training is the major hindrance. 70 (46.67%) respondents are satisfied with the periodical collections, followed by 42 (28.00%) respondents are neutral with the opinion about the satisfaction of periodical collections.

Conclusions

The study reveals the utilization of periodicals on Manonmaniam Sundaranar University. Majority of the respondents are actively participated in the study. The study denotes that utilization of periodicals is essential for both faculty members and students. The periodicals give the information about the current trends in the field. In order utilize periodicals the respondents are visiting university library daily. There are utilizing the periodicals daily. Both print and electronic format of periodicals are using by the respondents in major level. The respondents are strongly agree that they are utilizing periodicals to develop knowledge and update information. the respondents have the opinion as moderate and good about the facility providing to access the periodicals. lack of training is the major hindrance while searching information of periodicals and the respondents are satisfied with the periodical collections in the university.

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Use of ICT in Selected Engineering College Libraries: A Study

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Abstract

Nowadays Information and Communication Technology provide access to information to its users at anytime anywhere (24 × 7). Information in this digital environment plays very important role in all walks of academic libraries and its users. Engineering college libraries are transforming the traditional printed resources to digital resources by using Information Communication Technology. . Purpose of this study was to find out the library and information professionals awareness of about digital resources and examine the availability of digital resources, facility to access digital resources, usage, barriers to access, and suggestion to improve the access of resources.

Keywords: Digital Resources, Digital Libraries, Information Accuracy-Satisfactory level of digital resources, Barriers of digital resources

Introduction

In Digital library services are fully Automated and all resources are in Digital form. It enables users to Interact effectively with information distributed across a network. It may be based on a subject a vocation or procession, a region or a nation. Digital libraries are electronic libraries in which large number of geographically distributed users can access the contents of large and diverse depositories of electronic objects.

Review of Literature

Baljinder Kaur and Rama Verma (2006) found that The use of e-journals has increased manifold. The printed material is being quickly replaced by the electronic resources. R. Arumugam (2013) found that The term user study focuses on information use patterns, information needs, and information-seeking behavior. Sampasivam K (2002), reveals that each and every user activity information is emerging as a valuable resource at

all levels, such as education research and development etc. R. Arumugam (2016), discussed that AICTE norms clearly describes requirement of books while starting a college/course, yearly addition of books, technical journals both printed and online journals [2] (IEEE, ASME, ASCE, Springer, Science direct etc), internet facility , computer requirement, space for reading, working hours, qualification and salary details of librarian, budget allocation etc. Owen (1999), found that The speed of transactions in the dynamic economy requires the ability to interpret and respond to information about changes in the environment almost instantaneously. R. Arumugam (2015), reveals that information seeking behavior of Engineering colleges libraries, such as Frequency of visit to library, purpose of using library, purpose of using internet, search engines, information sources availability and usage details, Reason using/not using library resources and satisfaction level of the users of Self Financing engineering college libraries in IT Highway Chennai.

Functions of Digital Library

The key functions of digital library are:

1. Provide access to very large information collection

2. Support multimedia

3. Network accessible

4. Provided user friendly interface

5. Unique referencing of digital objects

6. Enable link

7. Support advanced search and retrieval

8. Information available is available for every long time

Advantages of Digital Library

1. It helps in presentation of materials

2. Saving the space

3. It also provides facility for downloading and printing.

4. Provides universal accessibility.

Problems Associated with Digital Libraries

1. Information Accuracy

2. Compatiability of Hardware/Software

3. Shelf life

4. Other issues

Methodology and Limitations

This study conducted at four Engineering colleges library in Chennai - Bangalore Highway, Chennai. Questionnaire consisting digital resources availability, usage details of digital resources, barriers of digital usage designed and submitted to 60 users of engineering college libraries and out of which 54 filled questionnaires received and it is taken for analysis.

Data Analysis, Findings and Suggestions

E-Resources	Available	
	Yes	No
Licensed Databases	12 (22.2%)	42 (77/8%)
E- Journals	36 (66.7%)	18 (33.3%)
E- Books	24 (44.4%)	30 (55.6%)
OPAC	44 (81.5%)	10 (18.5%)
CDs/DVDs	41 (76%)	13 (24%)

Table-1 Types of Available Digital resources

E-Resources	Satisfactory Level				
	Highly Satisfied	Satisfied Satisfied	Less Satisfied	Dissatisfied Dissatisfied	Highly Dissatisfied
Licensed Databases	10	8	18	12	8
E- Journals	16	28	3	4	3
E- Books	6	13	8	12	21
OPAC	17	23	6	3	5
CDs/DVDs	7	15	12	13	7

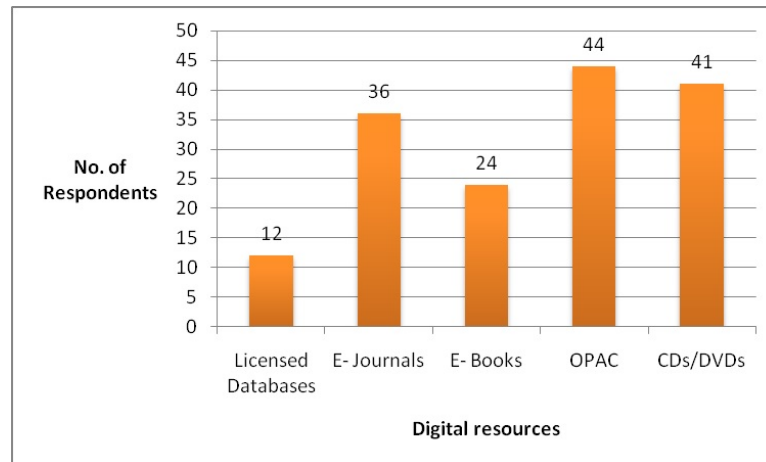Table-2 satisfactory level Digital resources and services

Figure 1: Type of Digital resources available

From table-1 and Figure -1, found that 81.5% of the users use OPAC facility, 76% of the users use CDs/DVDs and 66.7% of the users access e-journals available in the engineering college libraries situated in Chennai-Bangalore Highway Chennai.

It is observed from the above table-2 and Figure -2, that 74% of the users satisfied with OPAC services, 63% of the users satisfied with E-journals and 40.7% of the users of engineering college libraries satisfied with CD/DVDs.

Barriers	Agreed	Percentage
Lack of ICT Knowledge of users	31	57.4%
Rapid changing of Technology time to time	29	53.7%
Lack of ICT Skill LIS professionals	19	35.1%
Cost of E- resources	42	77.8%
Virus Problems	39	72.2%
Networking problems	29	53.7%
Maintenance cost	33	61.1%

Table-3 Barriers of Digital resources and its usage

77.8% of users opted that cost of e- resources, 72.2% of the users opted virus problem, and 61.1% of the users opted that is the main barriers of digital resources. Some of the respondents suggested that ICT training for both users as well as LIS professionals to utilize all e- resources in engineering college libraries (Ref. Table-3 and Figure-3).
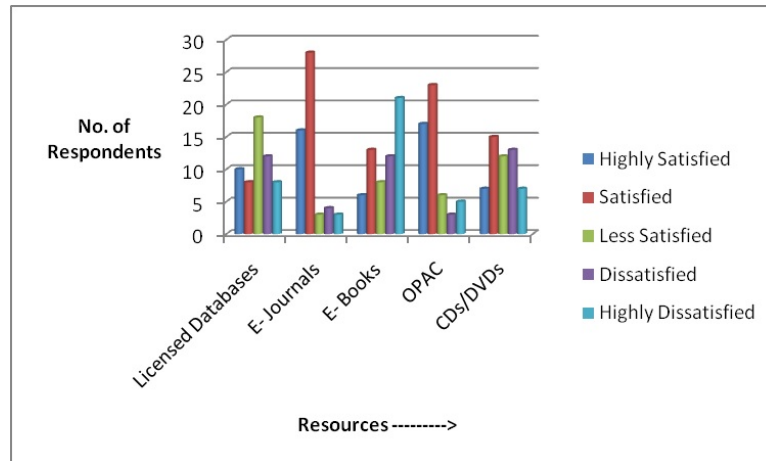
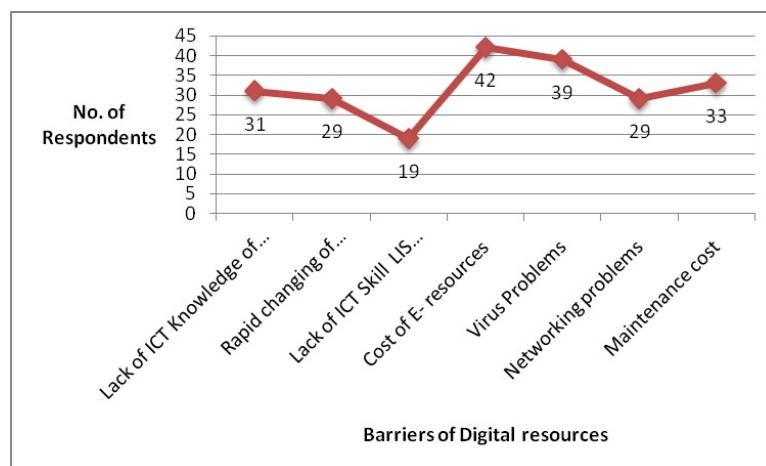Figure 2: satisfactory levels of Digital resources

Figure 3: Barriers of Digital resources and its usage

Conclusion

From the above study we can conclude that very large number of users satisfied as well as maximum utilization of all the available resources by digital services only. It gives information within a fraction of seconds with accuracy. some demerit of digital format like lack of ICT knowledge of users, LIS professionals, cost of e-resources, maintenance cost etc., also clearly discussed in this paper. Availability of OPAC facility and its services took prominent role in engineering college libraries. Implementation of digital format mainly affected in engineering college by its cost and ownership(Renewal/copy right) problem.

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Usage of e-Resources at K.S. School of Engineering and Management Library: A Comparative Study of two Databases

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Abstract

Academic libraries are facing challenges with limited budgets and high costs of subscription to e-Resources. VTU Consortia was established to reduce the burden of its affiliated institutes. It provides homogenous contents to the users at least cost. The study is focused on the usage pattern of IEL Online and Springer e-journals databasessubscribed through VTU Consortia. The study used quantitative methods to show the usage of e-Resources of the selected databases covering the period of 3 years 2015-17.

Keywords: VTU-Consortium, Databases, Digital Library

Introduction

Advancements   in Information and Communication Technology (ICT) brought drastic and far-reaching impacts on knowledge creation, organization and dissemination. In the 21st century, it is witnessed that most of the users are looking for e-Resources such as e-Journals, e-Books, e-Databases, e-Theses and Dissertations and so on, due to many reasons such as easy to access simultaneously from any part of the work by breaking the time restriction (Singh, 2013). It is also common to see that users needs are varied and demand more of e-Resources than printed materials. Most of the publishers are also started bringing out the electronic resources. In this connection, VTU have gone for consortia with some of the publishers in order to meet the academic and research purpose of the users. In this situation, evaluation of the usage of the databases enables the librarian to identify the database which is preferred more and the librarian can focus to promote the usage of less used database.

About KSSEM Central Library

Central Library at K. S. School of Engineering and Management was established in the year 2010. It has collection of around 18,800 books, 51 periodicals, 10 newspapers of different languages and is a member of VTU consortia. The users of KSSEM Library comprises of students, faculties and research scholars.

VTU Consortia

VTU Consortia for e-Resources was formed as per the recommendations of the 107th meeting of the Executive Council held on 7th Sep 2013. Its main aim is to provide e-Resources to all its affiliated institutes at an affordable cost. It meets the diversified needs of users for their academic and research purpose.

Databases Chosen for the Study

1. IEL Online provides resource for discovery of scientific and technical content published by IEEE. It provides unlimited and full text access to its contents which covers journals, transactions, magazines, conference proceedings and standards. It covers subject areas such as Electrical and Electronics Engineering, Computer Science, Telecommunications and Computer Science Engineering and related allied disciplines.

2. Springer is a global publisher that serves and supports the research community. Springer Link journals covers varied disciplines such as Electrical and Electronics, Mechanical, Civil, Computer Science, Engineering (Allied Subject), Chemistry and Material Science, Mathematics, Physics.

Literature Review

There are many studies on usage of e-Resources have been conducted all over the world. Some of the studies on usage of e-Resources are listed below.

1. Londhe and Deshpande (2013) in their study found that databases that are related to chemistry are being used more. Databases which are related to specific subjects are being widely used than the database which contains multi-disciplinary subjects.

2. Tripathi and Kumar (2014) made quantitative analysis of the usage reports of e-Resources and indicated seasonality effects the usage of e-Resources. Since, downloads are high just before examinations, libraries should be provided with more computers to access e-Resources during peak period.

3. Kumar, Manjunath and Moorthy (2012) are of the opinion that studying the usage pattern helps in the collection development of the library. ICTs are influencing the dissemination process and hence LAN and broadbands should be improved to promote the usage of e-Resources.

4. Nazir and Wani (2015) are of the opinion that UGC-Infonet provides vast range of e-Resources. The users are getting homogenous contents through the consortia. It is a cost effective model to subscribe more databases at least cost. Bringing awareness to users of social science and humanities departments can benefit in maximizing the usage of the contents.

5. Singh, Singh and Chandel (2009) in their study showed that there is an increase in the usage of e-Resources except for Emerald. They concluded that identifying the maximum and minimum usage of resources of different publishers would be more beneficial to measure the user satisfaction from these resources.

Objectives

Following were the objectives of the study

1. To find total number of downloads for each database.

2. To find out total number of downloads for all the databases.

3. To find out the average no. of downloads made in each year.

4. To know the preferences of the users.

5. Ranking databases by total downloads.

Scope and Limitations

This paper studies the usage pattern of e-Resources by the users of K.S. School of Engineering and Management. The present study is limited to the following two databases only. Selected databases have the content on varied disciplines. Total for all downloads from 2015-17 i.e. three years was considered. Since few of the publishers could not provide the month wise usage report and access to few databases were not provided in the previous years, only these two databases are considered as subject for study.

Total no. of downloads made from IEL													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015	0	42	2608	994	315	518	241	342	582	405	354	166	6567
2016	188	14	26	215	10	12	3	9	88	199	57	68	889
2017	119	407	290	2456	764	286	696	174	700	1039	181	0	7112

Total 14568
Average no. of downloads per year 4856

Methodology

Month wise usage data was collected from the respective publishers. For few months, usage data was not available with the publishers. Total for all downloads was considered for the study. Data received was entered in the tabular columns of excel work sheets. Later it was analyzed, calculated and presented in tabular and graphical form.

URLS

1. IEL - http://ieeexplore.ieee.org/Xplore/home.jsp

2. Springer - https://link.springer.com/

Data Analysis

Findings

It was found from the study that, in the year 2015 there were 6567 downloads, in 2016 there were 889 downloads and in the year 2017 there were 7112 downloads, there were altogether 14568 downloads made from IEL Online. The average downloads made in each year was 4856. From Springer Link, in the year 2015 there were 487 downloads, in 2016 there were 437 downloads and in the year 2017 there were 468 downloads, there were altogether 1392 downloads made. The average downloads made in each year was 464. In both the cases, in the year 2016 the usage decreased and again in the year 2017 the usage increased. It was found that users prefer to use IEL Online more than Springer Link. This may be due to contents available in the database. From total no. of downloads made from the databases, IEL Online occupied the first place compared to Springer Link which ranks next.
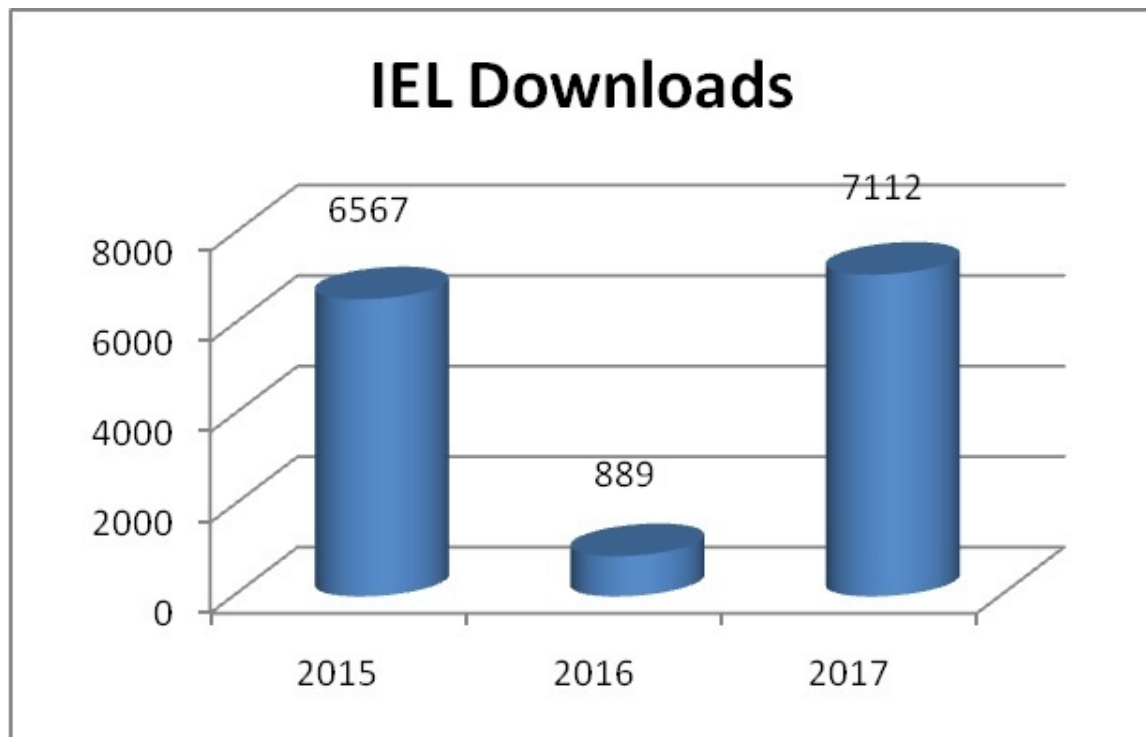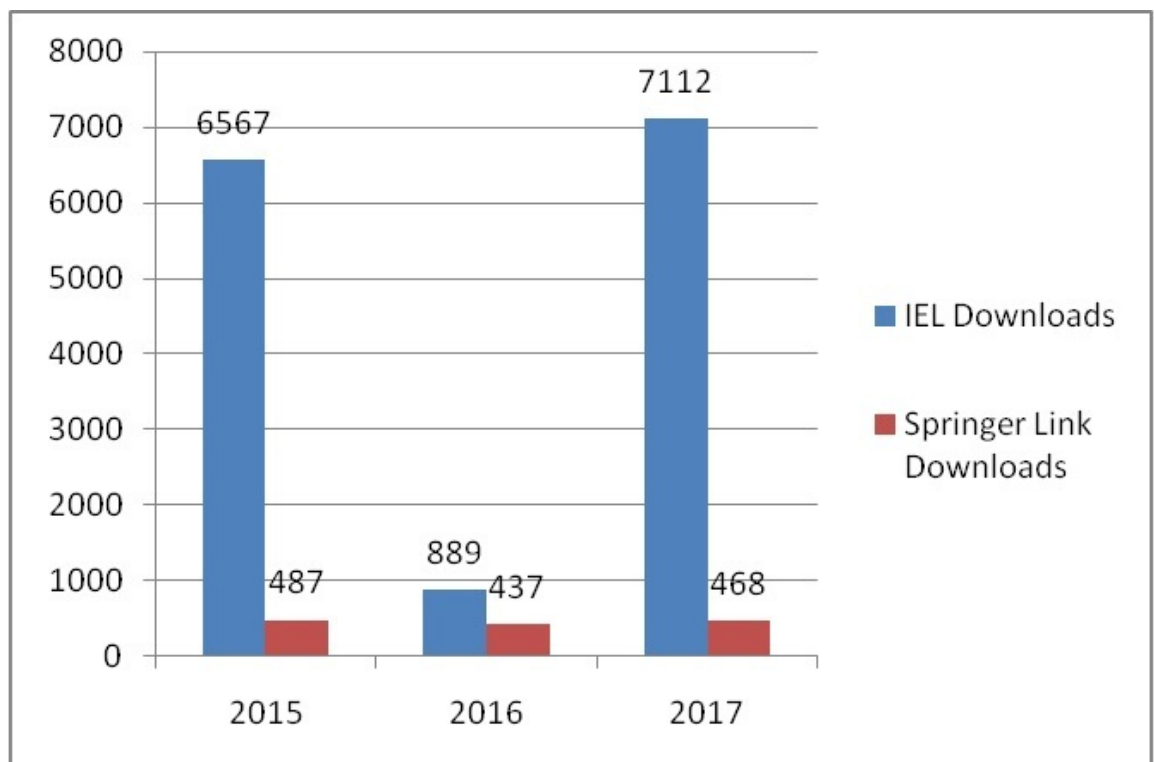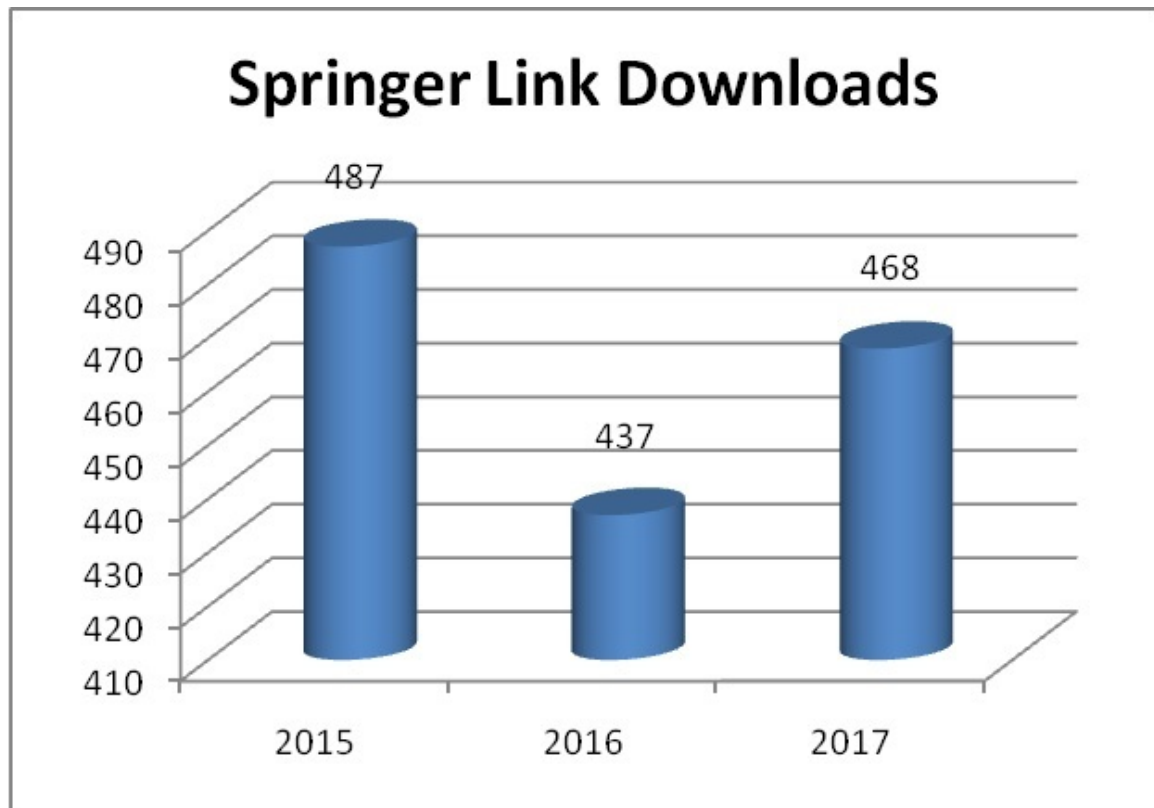
IEL Downloads

	Total no. of downloads made from Springer Link												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015	17	60	101	32	45	29	168	12	12	11	0	0	487
2016	81	20	63	30	8	169	13	13	0	21	19	0	437
2017	24	20	12	26	28	71	170	20	53	44	0	0	468

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Conclusion and Suggestions

VTU-Consortia has given a new dimension to the library collection. Since lakhs of rupees are being spent on subscription of e-Resources, it is the duty of the librarian to find out its usage pattern, so that more and more awareness could be created to promote its usage. As a bench marking practice, new contents available in the databases could be brought to the notice of the users.

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