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Content Analysis of Engineering College Library Websites

B. U. Kannappanavar
Kuvempu University, kannappanavar@gmail.com

Mr. Jayaprakash
Management Studies and Technology Mapusa, jaypee_prakash@yahoo.co.in

M M Bachalapur
Kalpatru Institute of Technology Tiptur, bachalapur@yahoo.com

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Dr. B.U. Kannappanavar
Librarian
Sahyadri Arts College
Shimoga-577203, Karnatak, India

Mr. Jayaprakash
Librarian
D.M's College of Arts, Science, Commerce, Management Studies and Technology
Mapusa – 403 507

Dr. M M Bachalapur
Librarian (Sl.Gr)
Kalpatru Institute of Technology Tiptur-572 202

Introduction

India, though one of the developing countries in the world in the sphere of education with its 66 percent literacy, has enormous specialist manpower in every possible area, and outstrips many developed countries in terms of scientists, technologists, software specialists, management experts, and so on. Facilities available for education in all specialization are also of no mean measure. There are six Indian Institutes of Technology and six Indian Institutes of Management which rank among the top most in Asia. There are also 17 Regional Engineering Colleges.

Engineering Education in India

Technical education in India contributes a major share to the

overall education system and plays a vital role in the social and economic development of our nation. In its very broadest sense, the discipline of engineering is concerned with that body of theory and practice that is relevant to the design and construction of real-world artifacts arising from human endeavor. Engineering education is not only teaching in basic science, but also relies on training some personal and technical skills, modifying the student's way of thinking in a more logical way to achieve creativity at the end.

India has the potential to be a global technology leader. The Indian economy has been growing at the rate of 8 to 9% per year. The Indian industry has also become globally competitive in several sectors and can increase its global market share. A critical factor in this will be the success of the technical education system in India. With economic growth and the spread of technology, the demand for engineering has increased manifold. This has been matched by an increase in enrolments in engineering as well as rise in number of engineering institutions in India. The number of engineering colleges in India increased from 158 in 1980 to 3575 in 2009. Most of them produce quality engineers capable of working in world environment.

Engineering Colleges in India (other than IITs, NITs and IISc)

The engineering colleges in India can be classified as

a. Affiliated Colleges

b. Autonomous Colleges

c. Deemed Universities

In the case of affiliated colleges, the institution is affiliated to a university, which is the degree granting body. The college has no flexibility or powers related to curriculum or evaluation. The academic powers rest with the university. In the case of autonomous colleges, the institutions have academic flexibility viz they can make curriculum changes and conduct examinations and evaluation. However, they are nationally under the university and have relatively less financial autonomy. Institutions that have acquired deemed university status have maximum academic and financial autonomy. In India, most of the colleges are affiliated.

In India, apart from IITs, NITs and IISc there are several other state government run engineering colleges that have an established reputation. These colleges are affiliated with different universities. Besides, there are a huge number of private unaided engineering colleges in India and about seventy five percent engineering graduates are taught in the private engineering colleges. At present more than 3500 engineering

colleges are running various disciplines of engineering with modern equipped facilities and curriculum.

The AICTE has distributed all engineering institutions in seven regions of India, among those Southern region is having highest 974 college, South West region is having Karnataka 485 (among these 195 are Private Un-aided Colleges) and Kerala 117 colleges.

History of Technical Education in Karnataka

Imparting of technical education as a part of curriculum made its beginning only in the latter half of the 19th century, when the first institute, the School of engineering was established in Bangalore in 1862. The school had two classes and was intended to train men for employment in subordinate engineering services. This was affiliated to Madras University. However, the school had a short tenure, for in 1880 the idea of training men for university examination was abandoned and the instruction in the school was confined to the requirements of the subordinate services as it was in the earliest stage of the engineering school. Even the school of Engineering, Bangalore the only institution in old Mysore for several years. Thereafter, Public Works Department School was established by Rao Bahdur Arcot Narayanaswamy Mudaliar in Civil and Military station in 1873.

As a first step, industrial school was established at Hassan in 1889 and a similar school at Mysore in 1892. There were 14 industrial schools in old Mysore at the time of integration. Some of them were converted into industrial training institutes and some others closed. Sri Krishnarajendra Silver Jubilee Technological Institute was founded to commemorate the silver jubilee of the reign of Krishnarajendra Wodeyar in 1938 with Textile technology as the subject of study. Presently this is offering graduate and post-graduate courses in Textile technology.

The Sri Jayachamarajendra Occupational Institute (presently Sri Jayachamarajendra Polytechnic) was started in 1943, with a view to training youths required, by utilizing the munificent donation of Rs 2.00 Lakhs by Sir M Visvesvaraya. Before 1922, the Jaya Chamarajendra Technical Institute, Mysore had a civil engineering section imparting instructions in Civil and Mechanical engineering. The Engineering School, Bangalore was imparting instruction in Electrical and Mechanical engineering.

The expansion of industry during the war as well as in the post-war period created a greatly increased demand for technicians of grades, which was met by expanding the existing technical institutions. By 1955-56, the number of industrial and vocational schools rose to 15. The number of courses in Jayachamarajendra Occupational Institute also increased. Vocational Institutes were started at Hassan (1948), Davanagere (1949), Chinthamani (1950), Bhadravati (1950). In 1954, CPC Polytechnic at Mysore was started. By 1955-56, there were 9 institutions in the then Mysore

state (Karnataka Gazetteer, 1986).

In 1917, the Mysore Government started an engineering college at Bangalore. For a long time till 1946 this was the only college for the whole state. After 1946 three more colleges were started, one of which was by Government and the two where by private societies. And at the time of unification, there were four engineering colleges in Mysore region and one college at Hubli in the Bombay Karnataka region. They were the College of Engineering, Bangalore (Government), the B M S College of Engineering, Bangalore (Private), the National Institute of Engineering, Mysore (Private), B V B College of Engineering, Hubli (Private) and B D T College of Engineering, Davanagere (Government). The total student strength of five institutes during 1956-57 was 2,924 which included only 2 girls. Between 1956-57 and 1968-69, 10 Private engineering and one Government college i.e., Karnataka Regional Engineering College (KREC), Suratkal were established. Now it is renamed as National Institute of Technology, Karnataka. During 1960-1970 six more engineering colleges were added. Further, 21 engineering colleges were established during 1980-1990 to meet the demands in different parts of the state. This growth continued during 1990-2000 and the Karnataka state saw the birth of 24 engineering institutions during this decade. The demand for more colleges continued resulting in the establishment of 31 additional colleges during 2001-2004 bringing the total number of engineering colleges to 115 and one deemed to be University i.e., National Institute of Technology, Surathkal, Karnataka.

As a tribute to the great visionary Sir M.Visvesvaraya, the Government of Karnataka has established Visvesvaraya Technological University (VTU) at Belgaum as per the VTU act 1994, in order to affiliate and manage these engineering colleges.

The total intake of students for graduate courses in engineering education is 46000 in Karnataka. There are 27 engineering courses available for graduation study (CET Brochure 2010). Due to advancement in technology the total strength in engineering colleges is increased to satisfy the present need. For admission to Post Graduate courses Viz, MCA, MBA M.E and M.Tech in various universities and college, Government of Karnataka has made arrangement to conduct entrance exam PGCET through Visvesvaraya Technological University, Belgaum. About 7500 students are studying in post graduates courses.

Brief Information about Engineering Colleges in Tumkur District

Siddaganga Institute of Technology, Tumkur

The Siddaganga Institute of Technology (SIT), Tumkur, is one among the 130+ educational institutions run by the Sri Siddaganga Educational Society, Revered His Holiness Dr. Sree Sree

Sivakumara Swamiji of Sree Siddaganga Mutt, is its President and Sree Sree Siddalinga Swamiji, is the Vice President of SESS and the Junior Swamiji of the Mutt.

It was established in the year 1963 starting with three Courses leading to Bachelor of Engineering in Civil, Mechanical and Electrical Engineering, and is now offering undergraduate degree courses in 12 disciplines. In addition it also runs post-graduates programmes in 7 disciplines, including MBA and MCA Courses. It has nearly 4000 students pursuing the above courses with faculty strength of about 273. The Institute is affiliated to Visveswaraya Technological University, Belgaum and has granted permanent affiliation to SIT.

The Institute is one of the 14 Engineering Colleges under the Technical Education Quality Improvement Programme (TEQIP) a World Bank Project, administered by the Government of Karnataka in the state and is granted Academic Autonomy from the Year 2007-08. From the academic year 2007-08 the 1st Semester is run under the autonomous status. Its undergraduate courses are accredited by the National Board of Accreditation (NBA), an Autonomous body of the All India Council of Technical Education (AICTE), New Delhi.

Shri. Siddartha Institute of Technology, Tumkur

Sri Siddhartha Institute of Technology (SSIT) is one of the premier institutions started in the year 1979 with Civil & Mechanical Engineering by Sri Siddhartha Education Society (SSES), Tumkur. Since then, it has grown with time. At present, the institution runs 9 under graduate courses in Bachelor of Engineering (BE), in addition it also offers post graduation programs in Master of Computer Application (MCA) and Master of Technology (M.Tech) with an annual intake of about 595 students.

Sridevi Institute of Engineering and Technology, Tumkur

Sri Shridevi Charitable Trust (R) was born in the year 1992 with a mission to impart the best quality education to students from all sections of the society. Ever since its inception, the Trust has been engaged in establishing and managing educational institutions in various domains, considering the needs of the society. Presently, the Trust through its education wing, Shridevi Education is managing a hospital, diagnostic lab, College of Nursing, College for Physiotherapy, College for Medical Lab & Technology, Teacher Education, College of Engineering & Technology which runs 6 under-graduate courses in Bachelor of Engineering, Polytechnic, ITI, Management School, Degree College, PU college, Post Graduate Centre, Research Centres, Distance Education Studies, Basic education from pre-school to High school etc

H.M.S. Institute of Technology, Tumkur

H.M.S. Institute of Technology was established in the year 1997-98 with the objective of providing Technical Education and runs 4 courses in B.E and an M.B.A.

Akshaya Institute of Technology, Tumkur

Akshaya Education Trust was established in the year 2003 with the mission of imparting the best quality education to all sections of the society. The Trust has rendered the service to the society in the field of education and health by establishing an engineering college, nursing college and college of education.

Akshaya Institute of Technology is established in the year 2009. And it is having 4 courses in B.E.

Channabasaveshwara Institute of Technology, Gubbi, Tumkur

Channabasaveshwara Institute of Technology is running under the auspices of Sri Channabasaveshwara Swamy Rural Education Society. CIT is having 4 disciplines in B.E. course.

Kalpathru Institute of Technology, Tiptur

Kalpataru Institute of Technology, Tiptur was established in the year 1986. KIT offers five under graduate course in B.E. and Post Graduate course Master of Business Administration (MBA).

Importance of Institutional Web Site

A Website is an extension of the educational institution. Website is a collection of related web pages, images, video or other digital assets that are addressed relative to a common uniform resource locater (URL), often consisting of only the domain name, or the IP address, and root path in an Internet protocol based networks. A website is hosted on at least one web server, accessible via network as the Internet or a private local area network.

Educational networking sites are also growing in use. These sites are used by educators for both professional development and as a teaching tool, and are usually restricted to selected users and not available to the general public.

Website is one of the important tools to publish the activities of the college. Website will provide the details of programmes, admission, examination, fees, faculty, calendar of events, placements, research and publications, library facilities and resources.

Need for the Study

Since all the technical education institutions in India are very much powerful in providing advanced technology to its students and faculties. Libraries are playing an important role in supporting and disseminating information services. According to fourth law of library science we have to "Save the time of the users" Now a day, every student / faculty wanted to save their time in getting relevant information, so it is not possible for the people residing in different places to get basic / advanced information from these college libraries, without having full information about the library resources and services on their websites.

Scope of the Study

For this study we have chosen only Private Un-aided Colleges run by the different educational societies and covered only engineering colleges of Tumkur District in Karnataka State.

Objectives of the Study

Study aims to know the information content on the library websites of engineering college libraries for better accessibility.

a. To know the resources and services available in the Library.

b. To know the manpower of these institute libraries and their designation with contact information.

c. To know the basic facilities provided by these libraries.

d. To know whether they are using any consortium to get e-books and e-journals.

e. To know whether they are inter-linked with each other.

f. To know whether they are having ILL with other libraries.

g. To know whether they are using institutional repositories for faculty publications.

Content Analysis of the Primary Data:

Table 1. Basic Information of the Engineering College Libraries

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	About the Library	Y	Y	Y	Y	Y	Y	Y
2.	Library Timings	Y	N	N	Y	N	N	Y

		SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
3.	Library Staff	Y	N	N	N	N	N	N
4.	Library Organization and floor plan	Y	Y	N	N	N	N	Y
5.	Library news and events	N	N	N	N	N	N	N
6.	Membership details	N	N	N	N	N	N	N
7.	Contact	N	N	N	N	N	N	N
8.	FAQ's	N	N	N	N	N	N	N
9.	Photo's	Y	Y	N	Y	Y	N	Y

Basic Information of the Engineering College Libraries

From the Table 1, it is observed that, library website of all the Engineering colleges under the study are provided information about the library and its Photo's (except SIET and CIT), only SIT, HMSIT, and KIT is provided library timings and only SIT library website provides information about its library staff, where as none of the engineering colleges are provided information about Library news and events, Membership details, Contact, FAQ's.

Table 2. Information about different sections of the Engineering College libraries.

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	Digital Library Section	Y	Y	N	N	N	Y	Y
2.	Circulation Section	Y	Y	N	Y	N	N	N
3.	Back Volume Section	N	N	N	N	N	N	N

Organisation of the Engineering College Libraries

Library organization consists of different sections of the library, and it is necessary that every library website must include information regarding their detailed department-wise collection. Table 2 shows that SIT, SSIT, CIT and KIT libraries are provided information about digital library. But regarding circulation section SIT, SSIT and HMSIT are provided information and none of the colleges are provided information about back volume section, acquisition section and technical sections.

Table 3. Information about collections of Engineering College

Libraries

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	Book Collection	Y	Y	N	N	N	Y	Y
2.	CD/DVDs	Y	N	N	N	N	N	N
3.	New Arrivals	N	N	N	N	N	N	N

Collection of Engineering College Libraries

Collection forms an important input in the library status. Hence it is necessary that every library website should include information about different kinds of materials. Table 3 depicts that library website of SIT, SSIT, CIT and KIT have information of Book collection. The study shows that only SIT is provided information about CD/DVD's. Not even single library website is provided information about the New Arrivals and Audio-Visual Materials.

Table 4. Information of Journals, databases and electronic resources

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	Back Volume of Journals	Y	N	N	N	N	N	N
2.	Electronic Journals Subscribed	Y	Y	N	N	N	N	Y
3.	Member of INDEST	Y	Y	N	N	N	Y	Y
4.	Links to electronic databases	Y	Y	N	N	N	N	N
5.	Electronic Books	Y	Y	N	N	N	N	Y
6.	Electronic thesis and dissertations	Y	Y	N	N	N	N	N

Journals, databases and electronic resources

Library website should include electronic resources which are very much important in this digital world. Table 4 shows that only SIT library website provided information about back volume of journals. Whereas, electronic journals subscription and electronic books information is provided by SIT, SSIT and KIT. Member of INDEST information is provided by SIT, SSIT, CIT and KIT. Only SIT and SSIT is provides information about electronic thesis and dissertations. But all colleges are not mentioned anything about List of Current Journals and Project Report resources.

Table 5. Information search in websites

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	Access to Local Libraries	Y	N	N	N	N	N	N
2.	Fee based Online databases	Y	N	N	N	N	N	N
3.	WEB OPAC	N	N	N	N	N	N	N
4.	Search Engines	Y	N	N	N	N	N	N

Information search in websites

Any library website should contain the search box, so as to search the resources of the library within few seconds from different places. Table 5 depicts only SIT website is provided Access to Local Libraries, Fee based online databases and Search Engines information except WEBOPAC and all other colleges does not have any information on these website contents.

Table 6. Information on Library Services

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	Library Membership	N	N	N	N	N	N	N
2.	Circulation Services	N	Y	N	Y	N	N	N
3.	CD-ROM Search	N	N	N	N	N	N	N
4.	Xerox Facility	N	Y	N	N	N	N	N
5.	Book Bank	Y	N	N	N	N	N	N
6.	Reference Services	Y	Y	N	N	N	Y	N
7.	Digital Library	Y	Y	N	N	N	Y	Y
8.	DELNET Service	Y	Y	N	N	N	N	Y

Information on Library Services

Library plays a pivotal role in providing information by ways of different kinds of services. Table 6 shows various kinds of services which are available online, through the library website. Not even single library website is provided information about Library membership and CD-Rom search facility. SSIT and HMSIT websites

are provided information about circulation services; only SSIT is having information about its reprographic facility and SIT is provided information about its Book Bank facility. Reference service is mentioned in SIT, SSIT and CIT library websites. SIT, SSIT, CIT and KIT is provided information about digital library. DELNET service is mentioned in SIT, SSIT and KIT libraries. All the colleges are not provided their information about Inter-Library Loan facility, Electronic Document Supply and Services to Industries.

Table 7. Information on special collections of the Engineering College Libraries

Sl.No.	Website Contents	SIT	SSIT	SIET	HMSIT	AIT	CIT	KIT
1.	Standards	Y	N	N	N	N	N	N
2.	Patents	N	N	N	N	N	N	N
3.	Video Collections	N	N	N	N	N	N	N

Information on special collections of the Engineering College Libraries

Table 7 shows that, only SIT is having information about the special collections in their library website that too on Standards only. None of the colleges are reported for their project reports and video collections.

Findings of the Study

1. Engineering College libraries are not maintaining a separate library website, and limited information is provided through their institution website.

2. Libraries are providing automated services to the users and sufficient information is not furnished in their college website

3. Links to open access journals, e-books information is not available in their library website.

4. Only two libraries SSIT and KIT are providing Institutional Repository service to their users. For faculty publications to disseminate working papers and other research output of the institute.

5. Being a minority institution HMSIT Library is not informed about its book-bank facility for economically weaker sections of the society.

6. Not even single Engineering college is established 'Discussion Forum' to facilitate interaction and debate on various developmental issues of current and theoretical importance among their users.

7. None of the Engineering College library website provides information about Back Volume Section, Audio-Visual Materials, List of New Arrivals, List of Current Journals, Electronic list of students project reports, Contact, FAQ's, Free open Archives and e-resources. And even they have not provided Information about the library membership, Inter-Library Loan, Services to Industries and CD-Rom search on their respective websites.

8. Among these Engineering college library websites SIT, HMSIT, AIT and KIT colleges are registered their domain under academic; SIET and CIT are in registered their websites under organization domain

Suggestions and Recommendations:

It is recommended to meet the drawback of concerned Engineering college library websites which is mentioned in findings of this study and make alterations in their websites.

Conclusion

This paper gives an informative preview of the contents and design of Engineering College Libraries in Tumkur District. Website is the strongest tool to publish the information about the activities of the institute. It will help the users to know about services offered by the individual library. Although, Engineering College libraries have a web presence and varying levels of services, there is enormous scope for improving the websites. Regular updation is necessary. Library being a focal point of the institute should depict all the information on its website. To facilitate dissemination of required information to its users, librarians should take care of these all things and construct their own library website and connect it to the college website. Further, skills and technique for website designing should be learnt by undergoing training and constant use of Internet so that, libraries activities can be used better in the interest of Institutional goals.

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