

## COMPETENCIES ON WEB 2.0 SKILLS OF LIS PROFESSIONALS WORKING IN CENTRAL UNIVERSITY LIBRARIES OF SOUTH INDIA: A STUDY

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The purpose of this paper is to evaluate the competencies and skills of LIS Semi-professionals and Professionals of Central Universities of South India in handling Web 2.0 technologies. A survey was conducted using a structured questionnaire circulated personally among 100 LIS Semi-professionals and 30 LIS Professionals in eight Central University Libraries of South India. The primary outcome of the investigation is that there exists a significant difference in Web 2.0 skills of LIS Semi-professionals and Professionals. Library Professionals responded that they have sufficient skills in social networking. Also, the study proves that there is no significant relationship between the knowledge of collaborative skills of LIS Semi-Professionals and Professionals. The originality of the study is the first of its kind dealing with the evaluation of Web 2.0 skills of LIS Semi-professionals and Professionals in central universities of South India. However, the geographical area of the research was restricted to eight Central University Libraries of South India.

**Keywords** - Web 2.0 skills, Collaborative skills, Central University libraries, Semi-professionals, Professionals, South India

### INTRODUCTION

Web 2.0 tools and techniques have robust features and potentials to spread out and reshape the entire process of teaching and learning. It also has the functionality for creating personalised web services, real-time communication etc. Today, Web 2.0 has emerged as the most powerful medium for information retrieval, entertainment, learning and much more. It provides new tools to make the library space (both virtual and physical) more interactive, collaborative, driven by community needs. It encourages cooperative two-way social interactions between library staff and library users: web 2.0 support libraries, librarians and users to connect even if they are geographically apart. The advent of Web 2.0 has created a new break for librarians to deliver information services to users at their expected range.

Harinarayana and Vasantharaju (2010) stated that “Web 2.0 is a space that allows anyone to create and share information online – a space for collaboration, conversation, and interaction; a space that is highly dynamic, flexible, and adaptable”. Today, Web 2.0 has emerged as the most powerful medium for information. Ajeemsha and Madhusudhan (2012) listed the technology that serves as the foundation for Web 2.0:

- RSS (Really Simple Syndication)
- Wikis
- New, simple and revised programming methods like AJAX, J2EE, widgets, gadgets, Mashups, and API (Application Programming Interface)
- Blogs and blogging
- Advanced portals
- Commentary and comments functionality – everywhere
- Personalisation and ‘my profile’ features
- Personal media such as podcasting and mp3 files
- Streaming media audio and video formats
- Reviews and user-driven ratings
- Personalised alerts
- Web services for enhancement and data mining
- Instant messaging and virtual reference including co-browsing
- Folksonomies, tagging and tag clouds
- Photos (e.g. Flickr, Picasa)
- Social Networking Sites
- Open access and open content
- Socially driven content
- Social bookmarking (such as del.icio.us)

## REVIEW OF RELATED LITERATURE

Stern (2013) in his edited book on “Competencies for Science Librarians” explored the expectations and resources available to develop core skills for librarians. The book covers fundamental concepts of basic skills; Association of College and Research Libraries (ACRL) instruction competencies and role of professional associations in competency development. Besides job competencies, the book reviews career development concerns, continuing education tracks, and issues in collaborative assistance. This book is a valuable resource for beginners and a refresher for current librarians.

Partridge et al. (2010a) traced the traits needed for a ‘Librarian 2.0’ as: interpersonal and communication skills, change management skills, complementary skills, information management, innovative, adaptable, active learner, leadership, marketing, project management and community engagement. Another article by the same authors: Partridge et al. (2010b) described the effort they had undertaken to trace the skills, knowledge and attributes required to work in Web 2.0 platform. Qualitative research with 14 rounds of Focussed Group Discussions enabled them to indicate some of the professional traits that are essential for working in Web 2.0 platform.

Warraich and Ameen (2011) critically examined the employability skills of LIS graduates of Pakistan. The research revealed that LIS employers surveyed were not satisfied with LIS professionals and their marketability is low. The article reminded that theoretical knowledge of the academic subject is not sufficient enough to survive in the information market. Web 2.0 technologies diversified the working environment

of library professionals. The situation demands to check the Web 2.0 skills of working librarians. In this pretext, Sudhakaran and Sivankutty (2011) did an exploratory survey on the evaluation of Web 2.0 skills of LIS professionals in India through an online survey. The study shows a majority of the librarians are aware of Web 2.0 technologies. The respondents also stated that participation in training programmes and online tutorials help them to sharpen their skills.

Gerolimos and Konsta (2013) investigated the qualifications and skills of the librarian's profession necessary in the current job market. It is found that employers seek professional skills and social skills from job aspirants. In total, the demand for ICT skills is more than other traditional library skills. Fadehan and Ali (2010) studied the librarian's educational needs in developing the digital environment in the state of Lagos in Nigeria. The study revealed that majority of the respondents was not acquainted with web-based programmes. Arokyamary and Ramasesh (2012) mapped the ICT skill levels of the LIS professionals of Vishveshwaraya Technology University Research Centre in Karnataka. The findings of the study showed that 57 per cent of LIS Professionals lacks the set of skills required to handle ICT tools and techniques.

Satpathy and Maharana (2011) attempted to evaluate the ICT skills of library professionals of engineering colleges in Orissa. The study shows that the working professionals in the libraries are sound in technical knowledge. But the major issue they highlighted was working schedule, inadequate infrastructural facilities and lack of cooperation from authorities that hinders them in enhancing their ICT skills. Kloppenborg and Lodge (2010) conducted a study on the perception of library managers on competencies/skills of library staffs.

Interpersonal and communication skills; general computing skills and a mix of professional expertise across the traditional library skills are recognised as popular. In total, all that required for library staff is a perfect blend of all necessary skills for their survival.

Ferreira (2007) compiled a list of core competencies and asked graduates of the University of Texas to attribute the degree of importance on each competency. The study asked library professionals to cite the knowledge they acquired in school, and college they use in exercising their profession, the skills they consider necessary but that they did not gain in school and the difficulties they encountered in applying their job and for which they were not sufficiently well prepared. The results of the study unravelled the fact that there is a gulf between knowledge and skills acquired in library school and those that are required in the job market. In particular, participants accepted that they lack command in ICT, which is a significant competence that they feel shortage. From the literature, we can identify that most of the studies in ICT skills dispense with evaluation of ICT skills. Also, the ventures on evaluating the ICT skills on emerging technologies and Web 2.0 skills of library professionals are too scanty. Coming to the competencies related to LIS professionals there are some works particular in elaborating the nature and dimensions of ICT competencies.

### **OBJECTIVES OF THE STUDY**

The present study attempts to achieve the following objectives:

1. To know the competencies and skills required to manage the Library and Information services in digital age by the Professionals;

2. To examine the competencies and skills among the Professionals to handle library and information services in collaborative age.
3. To examine the competencies and skills among the Semi-Professionals to handle library and information services in collaborative age.
4. To suggest new generation competencies and skills to strengthen the HRD in the libraries under study.

### **HYPOTHESES OF THE STUDY**

1. There is a significant difference among LIS semi-professionals in possessing web 2.0 skills.
2. There is a significant difference among LIS professionals in possessing web 2.0 skills.
3. Knowledge on collaborative skills differs significantly in between LIS professionals and semi-professionals.

### **METHODOLOGY OF THE STUDY**

The Survey Method was adopted for this study with the help of two structured questionnaires; one for LIS Professionals and another for LIS Semi-Professionals; which were designed keeping in view of the stated objectives and scope of the study.

### **SCOPE OF THE STUDY**

The scope of the study is confined to the evaluation of collaborative skills in handling library and information services of Semi-professionals (include Senior Library Assistant, Junior Library Assistant, Professional Assistant, Semi- Professional Assistant, etc.) and Professionals (University Librarian, Deputy

Librarian, Assistant Librarian, etc.) in the eight Central University Libraries of South India, viz. University of Hyderabad, Hyderabad (Telangana), English and Foreign Languages University, Hyderabad (Telangana), Maulana Azad National Urdu University, Hyderabad (Telangana), Central University of Karnataka, Kalaburgi (Karnataka), Central University of Kerala, Kasaragod (Kerala), Central University of Tamil Nadu, Tiruvarur (Tamil Nadu), Indian Maritime University, Chennai (Tamil Nadu) and Pondicherry University, Puducherry (Puducherry).

### **ANALYSIS OF RESULTS**

#### **Semi-Professionals**

A survey was conducted using a structured questionnaire circulated personally among 100 LIS Semi-professionals in eight Central University Libraries of South India. Out of which, 80 filled-in questionnaires were personally collected by the investigators, eliciting a response rate of 80 per cent.

#### **Gender wise Distribution**

A brief section of the questionnaire deals with the personal profile of the respondents. The qualitative part consists of questions based on demographic features. The responses are presented in Table-1.

Web 2.0 tools and techniques have robust features and potentials to spread out and reshape the entire process of teaching and learning. It also has the functionality for creating personalised web services, real-time communication etc. Today, Web 2.0 has emerged as the most powerful medium for information retrieval, entertainment, learning and much more. It provides new tools to

make the library space (both virtual and physical) more interactive, collaborative, driven by community needs. It encourages two-way social interactions between library staff and library users. In this context, competencies and skills in collaborative age are put forth for respondents to rate and results are depicted in Table 2.

The table 2 reveals that Social Networking is the area where the Semi-Professionals flex their muscles regarding competency. Fifty-three per cent rated ‘good’ and 31 per cent rated ‘excellent’ in Social Networking. The anonymity rate was highest for podcasting with 35 per cent. The overall picture of competency on

**Table 1: Gender wise distribution**

Semi - Professionals			Professionals	
Gender	Number	Percentage	Number	Percentage
Male	52	65	15	75
Female	28	35	05	25
Total	80	100	20	100

**Table 2: Competencies and Skills of Semi-Professionals in Web 2.0 (N=80)**

Sl. No.	Collaborative skills	No. of Respondents				
		Excellent	Good	Fair	Poor	Unknown
01	Social Networks	25(31)	42(53)	07(09)	NA	06(07)
02	Tags	14(18)	27(33)	22 (27)	05(07)	12(15)
03	Reference via SMS	17(21)	26(32)	15(19)	07(09)	15(19)
04	Browser Toolbars	15(19)	25(31)	22(27)	06(08)	12(15)
05	Blogs/Weblogs	12(15)	24(30)	19(23)	04(06)	21(26)
06	Mobile Device Interface	12(15)	23(29)	23(29)	03(04)	19(23)
07	Instant Messaging	13(16)	22(28)	25(31)	02(03)	18(22)
08	RSS Feeds	10(12)	27(35)	22(27)	02(03)	19(23)
09	Wikis	11(13)	28(35)	25(31)	02(03)	14(18)
10	Streaming media	11(13)	25(31)	26(33)	03(04)	15(19)
11	Bookmarking	09(11)	27(33)	26(33)	02(03)	16(20)
12	Podcasting	06(08)	18(22)	25(31)	03(04)	28(35)
13	Portals	10(12)	27(33)	20(25)	05(08)	18(22)

Note: *Figures in parentheses indicate percentage.* NA=Not Applicable

collaborative skills by Semi-Professionals is that they are yet to be well versed. Sudhakaran and Sivankutty (2011) did an exploratory survey on the evaluation of Web 2.0 skills of LIS professionals in India. Their study shows that majority of the librarians are aware of Web 2.0 technologies. But they are not confident in their competency. The present study is conducted to examine the competencies and skills among the Semi-Professionals to handle library and information services in collaborative age also confirms the findings of their research which is presented in Table 2.

*There is a significant difference among LIS Semi-Professionals in possessing Web 2.0 skills.*

**Table 3: Testing of Hypothesis (Web 2.0 Skills of LIS Semi-Professionals)**

Sl. No.	Web 2.0 Skills	Possess	Do not Possess
01	Social Networks	74	06
02	Tags	63	17
03	Reference via SMS	58	22
04	Browser Toolbars	62	18
05	Blogs/Weblogs	55	25
06	MDI	58	22
07	Instant Messaging	60	20
08	RSS Feeds	59	21
09	Wikis	64	16
10	Streaming media	62	18
11	Bookmarking	62	18
12	Podcasting	49	31
13	Portals	57	23

The hypothesis aims to test any significance among LIS Semi-Professionals in having that skill. A t-test was conducted on the number of persons who possess the above qualifications and who do not. The results are presented in Table 3.

The assessment with t-test gives the p-value as 0.000, which is less than 0.05. Hence, it is concluded that the difference in the number of persons who possess and who do not possess the above skills differ significantly among the Semi-Professionals. Therefore, the hypothesis, there exist a significant difference among LIS Semi-Professionals in Web 2.0 skills is proved.

### **ANALYSIS OF RESULTS - Professionals**

A survey was conducted using a structured questionnaire circulated personally among 30 LIS Professionals in eight Central University Libraries of South India. Out of which, 20 filled-in questionnaires were personally collected by the investigators, eliciting a response rate of 67 per cent.

#### **Gender wise Distribution**

A brief section of the questionnaire deals with the personal profile of the respondents. The qualitative part of the survey consisted of questions based on demographic features. The representation of Professionals based on the gender was sought, and responses are presented in Table 1.

The advent of Web 2.0 has created a late break for Librarians to deliver information services to users at their expected range. Many mainstream libraries in India have started to equip their library websites with Web 2.0 technologies. Web 2.0 technologies allow users to interact and collaborate in social media. Table 4 presents the competencies and skills of LIS Professionals in collaborative age.

**Table 4: Competencies and Skills of Professionals in Collaborative Age (N=20)**

Sl. No.	Collaborative skills	No. of Respondents				
		Excellent	Good	Fair	Poor	Unknown
01	Social Networks	07(35)	07(35)	03(15)	NA	03 (15)
02	Tags	03(15)	08 (40)	03(15)	03 (15)	03 (15)
03	Reference via SMS	03(15)	09(45)	03(15)	02(10)	03 (15)
04	Browser Toolbars	04 (20)	08 (40)	03(15)	NA	05 (25)
05	Blogs/Weblogs	05 (25)	06 (30)	03(15)	02 (10)	04 (20)
06	MDI	05 (25)	05 (25)	NA	05 (25)	05 (25)
07	Instant Messaging	04 (20)	10 (50)	NA	03(15)	03 (15)
08	RSS Feeds	03(15)	04 (20)	02 (10)	02 (10)	09 (45)
09	Wikis	05 (25)	08 (40)	03(15)	NA	04 (20)
10	Streaming media	05 (25)	05 (25)	05 (25)	NA	05 (25)
11	Bookmarking	04 (20)	06 (30)	02 (10)	03(15)	05 (25)
12	Podcasting	04 (20)	04 (20)	02 (10)	03(15)	07 (35)
13	Portals	04 (20)	06 (30)	02 (10)	03(15)	05 (25)

Note: Figures in parentheses indicate percentage. NA=Not Applicable

The table 4 details the competencies and skills among the Professionals to handle library and information services in collaborative age. The table shows that Social Networking is the most competent Web 2.0 tool for library Professionals. Most of the studies suggest that library Professionals haven't travelled beyond Social Networking. Web technologies are the technologies of the era. Information is not meant to preserve, but to share and disseminate. The sole principle of web technologies is 'give and take'.

*There is a significant difference among LIS Professionals in possessing Web 2.0 skills.*

A test was conducted on the number of Professionals who possess the knowledge of the collaborative skills significantly or not, as that for Semi-Professionals. The chosen test is *Wald Wolfowitz* run test which tests if the two sets of data come from the same distribution or not, under the assumption that they do. If not, they imply that there is a significant difference between the two sets of data. The Wald–Wolfowitz test is a non-parametric statistical test that checks a random hypothesis for a two-valued data sequence. It is to test the hypothesis that the elements of the series are mutually independent.

**Table 5: Testing of Hypothesis (Web 2.0 Skills of LIS Professionals)**

Wald Wolfowitz run test	Number of Runs	Exact Sig. (1-tailed)
Minimum Possible	4 <sup>a</sup>	0.000
Maximum Possible	8 <sup>a</sup>	0.013

Since both the significant values are less than 0.05, it is concluded that the difference in the number of persons who possess and who do not possess the knowledge of the above skills differs significantly. The study thus proves the hypothesis that there is a significant difference among LIS professionals in possessing Web 2.0 skills.

*Knowledge on collaborative skills differs significantly in between LIS Professionals and Semi-professionals.*

To compare the knowledge of the skills between the two groups (Professionals and Semi-Professionals), a chi-square test of independence is conducted (Table 3 and Table 4). This test gives p-value as 0.996610303 which is higher than 0.05, which implies that the two groups do not differ, i.e., the knowledge of the above skills does not depend upon the fact that the persons are Professionals or Semi-Professionals. Similarly, a chi-square test statistic for comparison between the two groups of people who do not possess the skills is 0.968544323 which is also higher than 0.05. Hence, it is inferred that the two groups of people do not differ significantly concerning the non-possession of the skills, as well. Hence we have to disapprove the hypothesis that there exist significant difference in collaborative skills between LIS professionals and semi-professionals.

## CONCLUSION

Web 2.0 technologies had opened a new arena which makes the virtual world more vibrant and dynamic. Our professionals should be metamorphosed to exploit all benefits of Web 2.0. Web 2.0 is the technology of today and social phenomenon concerned more in networking people. The findings of the study reveal that Social Networking is the area where both Semi-Professionals and Professionals are sound in their knowledge. For Semi-Professionals, Social Networking tops in the list and are rated ‘excellent’ by 31 per cent of respondents and 53 per cent as ‘good’. However, the rest of collaborative skills are yet to take a full-fledged momentum (Table 2). For Professionals also the rate of “excellent” and “good” in Social Networking was 70 per cent, combined (Table 4). Regarding the competency in handling other Web 2.0 technologies, the skill has been not up to the mark, which is identified for LIS Semi-professionals by t-test (Table 3) and Professionals by Wald-Wolfowitz run test (Table 5). The study also came up with the significant conclusion that there is no relationship between the knowledge on collaborative skills between Semi-Professionals and Professionals.

Web 2.0 has the feature for creating personalised web services; self-publishing on demand, real-time communication etc. Users are well aware of Web 2.0 features, and even beyond that, it is imperative for a Professional to have sound knowledge in collaborative skills. Today, Web 2.0 has emerged as the most powerful medium for information retrieval, entertainment, and learning. The professionals covered under the research have the basic idea about the Web 2.0 skills, but, these skills have to be developed further into advanced, that is the need of the hour



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