AWARENESS AND USAGE OF WEB 2.0 TOOLS BY B-SCHOOL FACULTY MEMBERS

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Abstract:

The introduction of Web 2.0 has changed the internet into a network where content is created, shared and exchanged. One of the striking features of Web 2.0 applications is to provide global platform to the learning users. Web 2.0 tools such as social networking sites, RSS, Podcasting, tagging, Blogs, Wikis etc. have strong potential to change the conventional teaching methodology, make teaching more effective. It helps the faculty for getting latest insights about their teaching areas of interest which eventually helps them to engage students. It also provides a platform where students and faculty can synergize to make the learning more practical and interactive. However, studies have shown that the use of these technologies is not substantial due to various reasons. This research paper is empirical in nature and aims to reach out to Management faculty members of different B schools and try to find out their awareness and usage of these tools in classroom preparations and discussions. The questionnaire was prepared and administrated online for data collection among different B-schools. The result shows that the most of the B-school faculty members are aware about Web 2.0 tools out of which Social Networking Services, wikis and blogs are the topmost. The research analysis also indicates that most frequently / daily tool is wikis for lecture preparation and en.wikipedia is the most popular one.

Key words: Usage of web 2.0 tools in B schools, Management faculty, Innovative teaching methods, Wikis, SNS, and Blogs.

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Introduction

Web 2.0 describes World Wide Web sites that emphasize user-generated content, usability, and interoperability. The term was popularized by Tim O'Reilly and Dale Dougherty at the O'Reilly Media Web 2.0 Conference in late 2004, though it was first coined by Darcy DiNucci in 1999. A Web 2.0 site may allow users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community, in contrast to Web sites where people are limited to the passive viewing of content. Examples of Web 2.0 include social networking sites, blogs, wikis, folksonomies, video sharing sites, hosted services, Web applications, and mashups.

2.0- Web 2.0 is a service "built using the building blocks of the technologies and open standards that underpin the Internet and the web" (Anderson, 2007: p. 7). These services include blogs, wikis, browsers with plugins, social networking, multimedia sharing, content syndication, podcasting and content tagging services (think of tagging a person in a photo to identify their name).

Blogs - A blog is similar to an online diary. It is a webpage "consisting of brief paragraphs of opinion, information, personal diary entries, or links, called posts, arranged chronologically with the most recent first, in the style of an online journal" (Anderson, 2007: p. 7).

Facebook - Facebook, initially created for college student synergy, is an online network that allows people to have personal page and grants them the ability to stay in touch with other people (Fuller, 2011).

Podcast - A Podcast is an audio or video file created for use on mp3 players or on a computer (Baker, Harrison, Thornton, & Yates, 2010).

Twitter - Twitter is a free micro-blogging application that allows for quick exchanges of thoughts, ideas, and information, which are delivered as messages up to 140 characters each (Wankel, 2009).

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Wikis - Wikis are a "type of Web site that makes it easy for users to contribute and edit text content and graphics without any knowledge of Web page development or programming techniques" (Laudon & Laudon, 2009: p. 66). Wikipedia is one of the best (and biggest) examples of a Wiki.

YouTube - YouTube "is the most popular and widely accepted video sharing website on the Internet"

Web 2.0 is an emergent key driver changing learning paradigms at academic institutions. Besides technology, Web 2.0 challenges intellectual property and transform consumers in active users creating and curating knowledge. The use of Web 2.0 can support innovative teaching methods and is associated with concepts like communities of practice, syndicated content, learning as a creative activity, peer-to-peer learning, creation of personal learning environments, and non-formal education (Bartolomé, 2008). Such tools can be used to develop Learning 2.0 strategies that can enhance student motivation, improve participation, facilitate learning and social skills, stimulate higher order cognitive skills, and increase self-directed learning (Redecker et al., 2009). However, in India until now, universities have not made the needed efforts to adapt to the new needs of the network society and digital natives and immigrants studying and working there. Web2.0, which is conceptualized as the second generation of web is a technology of interactive communication. Thus, O'Reilly (2005) observes that the change in the web environment has evolved personal web-pages into blogs, encyclopedia into Wikipedia, text-based tutorials into streaming media applications, taxonomies into folksonomies, and question-answer/e-mail customer support into instant messaging services. The implications of this revolution in the web are enormous. There are many contemporary forms of internet application which are seen to embody Web 2.0 qualities.

Linh (2008) observes that Web 2.0 tools have been strongly applied in the field of communication, entertainment and collaboration. However, many of these tools, namely blogs, wikis, tagging/ bookmarking, podcasts, RSS etc. have strong implications to change the learning practices and collaboration of today's students. Teachers can also introduce these tools to their current teaching practices to engage students as active collaborators in their learning; hence, the

Web 2.0 tools can make the teachers more efficient in teaching. Blog is the most powerful tool for sharing ideas; wikis are most useful to facilitate group planning and collaborative construction of knowledge; podcasts are useful for publishing audio recordings of interviews, speeches etc., while RSS feeds make it easy for teachers and students to track updates on websites, posts on blogs, collaborations on wikis, and audio recordings on podcasts.

Most of the studies found that the use of Web 2.0 technology in education is not very remarkable. Kleimann (2008) and Chan and Mcloughlin (2008) survey of students on the use of Web 2.0 found that they have low familiarity even with wiki and blogs. The application of the technology in higher education is still marginal and will have to overcome a lot of obstacles in order to hold its ground in higher education. Most of the researchers have revealed that lack of knowledge in using Web 2.0 is the most important factor for its low usability.

This paper assesses faculty awareness of the potential of Web 2.0 technologies to supplement the classroom learning and to assess their usage of such technologies.

Scope of the Study

This study mainly focuses on awareness of usage of web 2.0 tools by Management faculty.

Literature Review

Weyant& Gardner (2010) highlighted that for the past thirty years, information technologies have revolutionizedthe way faculty members teach and students learn.Fillion etal.(2006) said that in today's economy institutions ofhigher education must constantly produce at the human andtechnological levels in order to remain competitive. Gottwald (2005) well said that the Internet and other technologies are beingintegrated at the institutional level and become an interactive platform for communication andlearning. Anderson (2007) found in his study that Web 2.0 is a platform where knowledgesharing and collaborative learning became possible.Tyagi Sunil (2012) in his research work indicted that these Web 2.0 tools could improve students' learning, their interaction with faculty and with other peers, their writing abilities, andtheirsatisfaction with the course; few choose to use them in the classroom.

Virkus (2008) stated that the new Web 2.0 platform brings new types ofconnection, interaction, collaboration, distribution ofinformation, and social networking and currently, universities are attempting to apply Web 2.0social media tools as support tools for learning however it isstill in an initial phase, and a new phenomenon in this area. Eijkman (2008) said that socialized mediatools of the Web 2.0 platform progressively embrace ourdaily life activities, giving us the chance to have informationwithout the borders and bonds of location and time.

Hazari, North, & Moreland (2009)focused on engaging learners in an interactive format.Laudon & Laudon(2009) said that this is not surprising as the Internet has become the world'smost widespread unrestricted communication system. Williams &Chinn (2009)talks about increased attention to student engagementand active learning strategies have become particularlyrelevant in today's classroom environment. Thompson (2005) stated that the teacher's educationis a strong force to promote the appropriate use of technology,to support educational renewal and to prepare a skilled workforce for our Information Society.

L. Li, and J. P. Pitts(2009) stated that using Web2.0 technologies gives broad opportunities and possibilitiesfor improving present e-learning courses; for example, Web2.0 tools can be used in social networks. They make it easyto build online communities and also argued that the intention of using an interactive webenvironment is not to replace classroom teaching but is justto provide students with more learning opportunities and tohelp them become active and autonomous learners.

Anderson (2007) and Brown & Adler (2008) Web 2.0 could facilitate a change of paradigm in learning where teachers should change their roles to become coaches and facilitators of the learning process.Williams & Chin researched ways to support an activelearning experience using Web 2.0 tools, and proposed alearning method for classrooms.

Majhi and Maharana (2011) conducted a study on awareness of Web 2.0 and its application in learning in two Indian Universities. The study was conducted to assess the familiarity of Web 2.0 tools and their application in learning. The research found that the academic communities are quite interested to use those tools in their learning process, but they do not have sufficient knowledge and skills to use them.

Eijkman studied Web 2.0 as a non-foundationalnetwork-centric learning space, and this author gave deepphilosophical explanations towards foundational and non-foundationallearning. Ullrich et al. (2009) stated an argument that isinherent to pedagogy related to the use of technology, that is,Web 2.0 pedagogy is best associated with constructivismand social learning.

Yates (2010)stated in the research that between2002 and 2006, online learning increased by 21.5%while the entire higher education student body only increasedby 1.5%.Li and Pitts (2009) indicate that one key area where Webbasedtechnologies is predicted to have a significant impact isin their ability to transform the way in which professors andstudents are using it.

Research Objectives:

1.　To understand the awareness of web 2.0 tools among B school Faculty.

2.　To understand the usage of web 2.0 tools among B school Faculty.

3.　To know the nature of benefits perceived by the faculty.

Research Hypotheses

H1. There is relationship between designation and usage of blogs

H2: There is relationship between designation and usage of wikis

H3: There is relationship between designation and usage of social networking

H4: There is relationship between age and usage of blogs

H5: There is relationship between age and usage of wikis

H6: There is relationship between age and usage of social networking

H7: There is relationship between department and usage of blogs

H8: There is relationship between department and usage of wikis

H9: There is relationship between department and usage of social networking

H10:Usage of the different web 2.0 tools by the faculty members is not same.

 Research Methodology:

This research study is an empirical study of management faculty across B schools for their awareness and usageof web 2.0 technologies in class room teaching. Survey method is used for data collection with the help of structured questionnaire as an instrument to find faculty perspectives on web 2.0 technologies. Simple random sampling technique is used for data

collection using Google form. A sample size 66 faculty members having different designations like Professors, Associate Professors and Assistant Professors are covered to get a wider view. The responses were tabulated and the data was analyzed to explain the awareness and uses of these tools in B-Schools.Various statistical techniques likeDescriptive statistics, Representation of data,Chi square, ANOVA and used to analyze data and generate results.

Data Analysis and Results:

Responses from all levels of facultymembers were taken and gave the following results:

Findings about the awareness level: The survey results reflected the various responses that were obtained when faculty members were asked about their awareness about the various popular Web2.0 tools. Wikis, blogs and social networking websites are popular web2.0 applications among the faculty members (Please refer to the Figure 2 in Appendix). Though the use of blogs (82%) and wikis (76%) is a relatively not a new phenomenon and people today are keen to share their knowledge and experiences. This is particularly helpful when experts write their blogs and update wikis that students start following them. Students are free to refer to these blogs. Often people can post their doubts as comments and get very quick responses from either the writer himself or from other people who happen to visit that blog. That is the main reason of blogs becoming so popular day by day.

Findings about the usage: The most often used Web2.0 tools from amongst the sample group are blogs, wikis, social networking and multimedia sharing. 72% of the faculty members used social networking websites(Please refer to the Figure 3 in Appendix). The recenttrends of sharing experiences as well as the need to collaborate and communicate with peers are major driving factors behind this. Social networking may be used as a means of communicating with peers, student's community at large and thus find out more and more about the available opportunities as well as to seek guidance in times of need, when it is not possible to meet people face-to-face in these very busy times. A healthy interaction is thus brought about.

The various purposes for which Web2.0 tool may be used include interaction with other students and faculty, submission of assignments, projects, etc, collaborating with students from other

institutions and exchanging knowledge and also for further reading and research purposes. As per our study results, most students used Web2.0 tools extensively for research purposes. With online web resources and journals available research has definitely gained impetus. These come in handy when students are interested in obtaining in-depth knowledge of their subject. Web2.0 tools are also used extensively for submitting assignments and projects.

Summary of Testing of Hypothesis

Chi square test is use to the relationship between usage of different web 2.0 tools and across different parameters like, designation of a faculty member in school, Age and departments wise. A summary of the different hypothesis and test used is given below:

Research Hypothesis	Test statistics used	P value	Results	Conclusion
H1.: There is relationship between designation and usage of blogs	Chi Square test	0.987 (Refer table1)	Hypothesis **not supported** as the p value is less than 0.05 alpha level of significance	There is no relationship between designation of a faculty and usage of Blogs
H2:There is relationship between designation and usage of wikis	Chi Square test	0.238 (refer table 2)	Hypothesis **not supported** as the p value is less than 0.05 alpha level of significance	There is no relationship between designation of a faculty and usage of Wikis
H3:There is relationship between designation and usage of social networking	Chi Square test	0.202 (refer table 3)	Hypothesis **not supported** as the p value is less than 0.05 alpha level of significance	There is no relationship between designation of a faculty and usage of Social networking
H4:There is relationship	Chi Square	0.964 (refer table 4)	Hypothesis **not supported** as the p value is less than 0.05	There is no relationship

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between age and usage of blogs	test		alpha level of significance	between age of a faculty and usage of blogs
H5:There is relationship between age and usage of wikis	Chi Square test	0.001(refer table 5)	Research Hypothesis **supported** as the p value is less than 0.01 alpha value.	There is relationship between age of a faculty and usage of Wikis
H6:There is relationship between age and usage of social networking	Chi Square test	0.114 (refer table 6)	Hypothesis not **supported** as the p value is less than 0.05 alpha level of significance	There is no relationship between ageof a faculty and usage of social networking
H7:There is relationship between department and usage of blogs	Chi Square test	0.521 (refer table 7)	Hypothesis **notsupported** as the p value is less than 0.05 alpha level of significance	There is no relationship between department of a faculty and usage of Blogs
H8:There is relationship between department and usage of wikis	Chi Square test	0.002 (refer table 8)	Research Hypothesis **supported** as the p value is less than 0.03 alpha value	There is relationship between department of a faculty and usage of Wikis
H9:There is relationship between department and usage of social networking	Chi Square test	0.06 (refer table 9)	Research Hypothesis **supported** as the p value is less than 0.07 alpha value	There is relationship between department of a faculty and usage of social networking

ANOVA

ANOVA test is applied to see the usage of different Web 2.0 techniques used by the faculty members. Since rating scale (1-almost daily and 4- never used) is used across various web 2.0 tools there for ANOVA is applied.

Research Hypothesis: 10: Usage of the different web 2.0 tools by the faculty members is not same.

Results:

ANOVA

usage_rating

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	120.545	5	24.109	23.555	.000
Within Groups	399.182	390	1.024		
Total	519.727	395			

Conclusion: Research hypothesis 10 is supported as the p value of ANOVA is 0.000 so more strongly it can be concluded that usage for different web 2.0 tools is not same. Post Hoc test is used for multiple comparisons of web 2.0 tools and Scheffe's test ascertains:

a.   Significantdifference lies between use of Blogs and wikis.

b.   Significant difference lies between use of Blogs and Social book marking.

c.   Significant difference lies between use of Blogs and Social Networking.

d.   Significant difference lies between usage of Wikis and Blogs.

e.   Significant difference lies between usage of Wikis and RSS feeds.

f.   Significant difference lies between usage of Wikis and Podcasting.

g.   Significant difference lies between usage of RSS Feed and social book marking.

h.   Significant difference lies between usage of RSS Feed and social networking.

Wiki, social bookmarking and Social networking are the tools which is more often used B School Faculty members over Blogs, RSS feeds and Pod casting.

Descriptive

usage_rating

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Usage of blogs	66	3.2879	.87293	.10745	3.0733	3.5025	1.00	4.00
usage of wikis	66	2.4545	.96368	.11862	2.2176	2.6914	1.00	4.00
RSS Feeds	66	3.4242	.70297	.08653	3.2514	3.5971	1.00	4.00
Podcasting	66	3.1061	.97868	.12047	2.8655	3.3466	1.00	4.00
social book marking	66	2.0909	1.22446	.15072	1.7899	2.3919	1.00	4.00
Social Networking	66	2.0909	1.22446	.15072	1.7899	2.3919	1.00	4.00
Total	396	2.7424	1.14707	.05764	2.6291	2.8557	1.00	4.00

Multiple Comparisons(Post Hoc)

(I) parameter	(J) parameter	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Usage of blogs	usage of wikis	.83333[*]	.17611	**.001**	.2443	1.4223
	RSS Feeds	-.13636	.17611	.988	-.7254	.4527

	Podcasting	.18182	.17611	.957	-.4072	.7708
	social book marking	1.19697*	.17611	**.000**	.6080	1.7860
	Social Networking	1.19697*	.17611	**.000**	.6080	1.7860
usage of wikis	Usage of blogs	-.83333*	.17611	**.001**	-1.4223	-.2443
	RSS Feeds	-.96970*	.17611	**.000**	-1.5587	-.3807
	Podcasting	-.65152*	.17611	**.019**	-1.2405	-.0625
	social book marking	.36364	.17611	.513	-.2254	.9527
	Social Networking	.36364	.17611	.513	-.2254	.9527
RSS Feeds	Usage of blogs	.13636	.17611	.988	-.4527	.7254
	usage of wikis	.96970*	.17611	**.000**	.3807	1.5587
	Podcasting	.31818	.17611	.660	-.2708	.9072
	social book marking	1.33333*	.17611	**.000**	.7443	1.9223
	Social Networking	1.33333*	.17611	**.000**	.7443	1.9223

Scheffe[a]

		Subset for alpha = 0.05	
parameter	N	1	2
social book marking	66	2.0909	
Social Networking	66	2.0909	
usage of wikis	66	2.4545	

Podcasting	66		3.1061
Usage of blogs	66		3.2879
RSS Feeds	66		3.4242
Sig.		.513	.660

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 66.000.

Recommendation and limitation of study:

Despite the fact that they have not been incorporated into classroom learning in a very big way, these tools continue to remain popular with the facultymembers. According to the survey responses students spend a significant amount of time using Web2.0 tools for educational purposes. 34% people spend more than 2 hours making use of these tools. This is proof of the fact that the tools are helpful and engrossing. In addition to this, the very fact that these tools are mostly self-explanatory and easy to use, no formal training is generally required, making them ideal for use by one and all. The time spent on these Web resources ends up being very productive as not only do students interact with other students and faculty members, they also get to tap into a huge database of collective knowledge and contribute to it in return, making the entire process a two-way situation.

Although majority of faculty members are using these tools to engage students by giving assignments and inviting them to comment on the blogs which stimulate synergy among students and faculty at large. At the institutional level workshops may be conducted for the faculty members who are interested in learning but are reluctant to use it.

Innovative ideas in subjects like HR and Marketing areas like making video assignments etc can involve students in more pragmatic ways.

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Future study on measures taken by the B Schools to encourage students and faculty members may be done. Student's feedback on learning and satisfaction level of these tools may be subject area of research interest.

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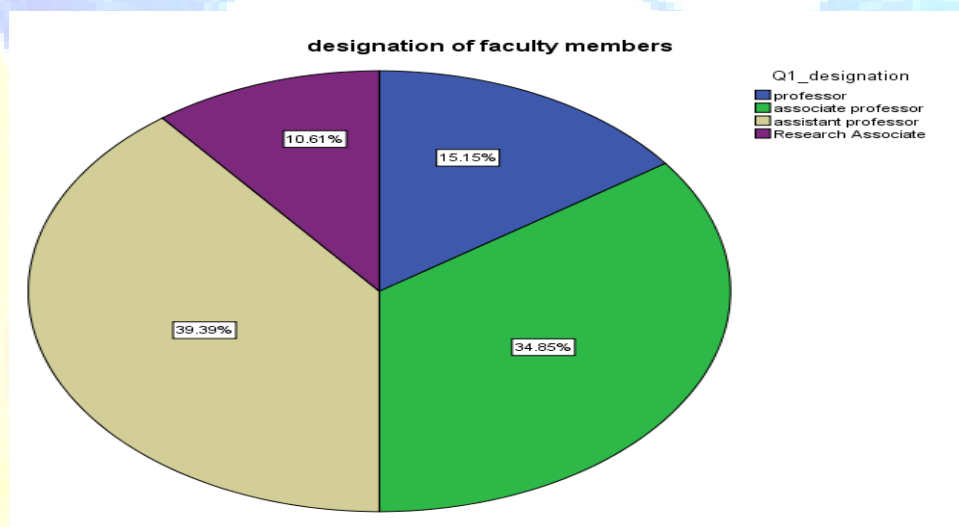
Appendix

Figure 1: Designation of faculty members

designation of faculty members

Q1_designation
- professor
- associate professor
- assistant professor
- Research Associate

10.61%　15.15%　39.39%　34.85%

Figure 2: Awareness level of Web2.0 tools

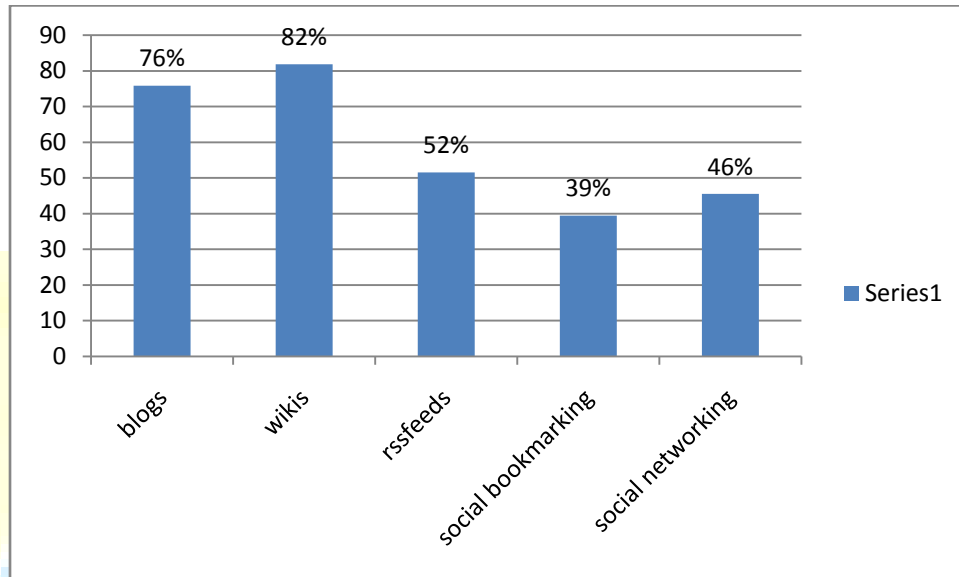**Figure 3: Usage of Web 2.0 tools**
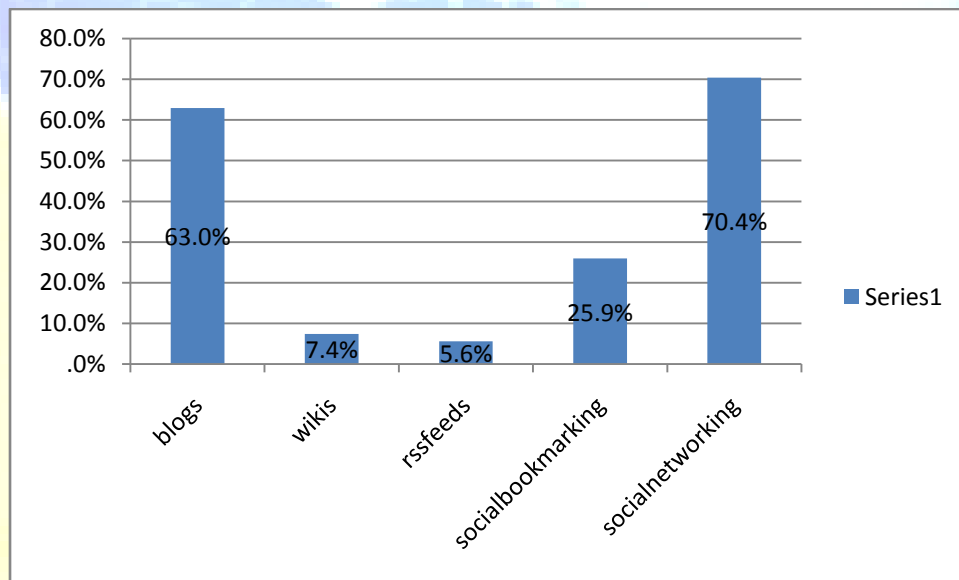
Table 1: (Designation Vs. usage of Blogs)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.135[a]	3	.987
Likelihood Ratio	.140	3	.987
Linear-by-Linear Association	.000	1	.991
N of Valid Cases	65		

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is 1.29.

Table 2: (Designation vs. usage of Wikis)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.585[a]	9	.238
Likelihood Ratio	14.636	9	.101
Linear-by-Linear Association	4.668	1	.031
N of Valid Cases	65		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is .92.

Table 3: (Designation Vs usage of Social networking)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.198[a]	9	.202
Likelihood Ratio	16.060	9	.066
Linear-by-Linear Association	4.108	1	.043
N of Valid Cases	57		

a. 13 cells (81.3%) have expected count less than 5. The minimum expected count is .42.

Table 4: (Age vs usage of Blocks)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.007[a]	9	.964
Likelihood Ratio	3.933	9	.916
Linear-by-Linear Association	.973	1	.324
N of Valid Cases	66		

a.   12 cells (75.0%) have expected count less than 5. The minimum expected count is .12.

Table 5: (Age vs usage of wikis)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.717[a]	9	.001
Likelihood Ratio	24.037	9	.004
Linear-by-Linear Association	5.707	1	.017
N of Valid Cases	66		

a. 10 cells (62.5%) have expected count less than 5. The minimum expected count is .61.

Table 6: (Age vs Social networking)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.254[a]	9	.114
Likelihood Ratio	16.323	9	.060
Linear-by-Linear Association	.010	1	.918
N of Valid Cases	58		

a. 12 cells (75.0%) have expected count less than 5. The minimum expected count is .28.

Table 7: (Department vs Usage of Blogs)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.061[a]	15	.521
Likelihood Ratio	17.511	15	.289
Linear-by-Linear Association	4.117	1	.042
N of Valid Cases	66		

a. 20 cells (83.3%) have expected count less than 5. The minimum expected count is .12.

Table 8: (Department vs usage of Wikis)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.344[a]	15	.002
Likelihood Ratio	39.924	15	.000
Linear-by-Linear Association	.324	1	.569
N of Valid Cases	66		

a. 22 cells (91.7%) have expected count less than 5. The minimum expected count is .61.

Table 9: (Department vs usage of Social Networking)

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.200[a]	15	.062
Likelihood Ratio	28.148	15	.021
Linear-by-Linear Association	.000	1	.994
N of Valid Cases	58		

a. 20 cells (83.3%) have expected count less than 5. The minimum expected count is .21.