

Effects of social computing on students of agricultural sciences

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Abstract

With the advance of internet and web technologies, the increasing accessibility of computing resources and mobile devices, the prevalence of rich media contents, and the ensuing social, economic, and cultural changes, computing technology and applications have evolved quickly over the past decade. They now go beyond personal computing, facilitating collaboration and social interactions in general. As such, social computing, a new paradigm of computing and technology development, has become a central theme across a number of information and communication technology (ICT) fields. It has become a hot topic attracting broad interest from not only researchers but also technologists, software and online game vendors, web entrepreneurs, business strategists, political analysis, and digital government practitioners, to name a few. This research study explores the aftereffects or consequences of using the Internet sources of information as perceived by the students in their academic as well as social life. To answer the question, 'What are the aftereffects of social computing on the students?' a study was conducted with the specific objective to analyze the effects of social computing as perceived by the students of agricultural sciences. The study was conducted in Varanasi district of Uttar Pradesh. One university, two colleges and 210 agricultural students, pursuing UG, PG and PhD, doing social computing formed the sample of the study. It was found that the students made new contacts, learnt new study techniques and had more reliance on self-study through social computing without having less contact with teachers or offline friends and less time for physical exercises.

Highlights

- The agricultural students made new contacts (18.61%), learnt new study techniques (15.18%) and had more reliance on self-study (12.56%) as the major effects of social computing.
- The agricultural students had less contact with teachers (4.22%), less contact with some offline friends (5.02%) and less time for physical exercises (6.28%) as the minor effects of social computing.

Keywords: Social computing, Social media, Perceived effects, Internet use, ICT, Web 2.0, Virtual communities

The Internet is used by some 3.61 billion people worldwide (49.2% of the World population), by some 1.79 billion Asians (44.2% of the Asian population) and by some 462 million Indians (36.5% of the Indian population) (Internet World Stats, 2016). The history of social computing or social software is deeply entangled with the evolution of the computer and the internet. The actual term

'Social Software' surfaces in the eighties but takes off after 2002 when it is used to describe the new kind of social networking tools that seem to drive a new generation of web communities. Social computing has exhibited a prolific growth since its genesis in 2003 and, since 2005, has achieved unprecedented levels of global usage (Huijboom *et al.* 2009). In 2006, the amount of content created, captured and



replicated on the internet was about 3 million times larger than the information contained in all the books ever written (Gantz 2007).

According to Dasgupta (2010), social computing implies two components: a social behaviour component and a computational system or technical component. The technical component provides the environment in which people interact. Another definition of social computing refers to the use of technology in networked communication systems by communities of people for one or more goals (UCSB 2016). Thus, social computing is an area of computer science that is concerned with the intersection of social behaviour and computational systems. It is based on creating or recreating social conventions and social contexts through the use of software and technology (Wikipedia 2016). Social computing takes many forms including social networks, RSS, blogs, search engines, podcasts, wikis, and social bookmarking (tagging), etc. A number of other terms are used loosely to refer to social computing. They are: online communities, Web 2.0, immersive web, virtual communities, social software and social networking. These terms have similar definitions, and these definitions sometimes overlap (Parameswaran and Whinston 2007). Based on the considerations in our study, social computing may be defined as the system concerned with information generated and used by the students in computer-mediated social networks and platforms. In other words, social computing may be defined as the process of interaction and sharing of information among the members of a social group through web-based social softwares to achieve their common goals.

A review of the literature on social computing shows that social computing continues to grow in popularity and penetration across the globe and has entered the mainstream and now attracts users across all generations and levels of society. For the younger generations, social computing has provided a medium for expression of interests and opinions, for collaboration and for building communities unbounded by locality. Today, hundreds of millions of users worldwide are using social computing applications such as social networking sites, blogs, collaborative filtering of content, file, photo and video sharing, tagging, online multi-player games and collaborative platforms for content creation, sharing and supporting creation of value (Ala-

Mutka *et al.* 2009). Social computing has grown from a marginal community pastime to become the dominant internet trend today. This research study explores the aftereffects or consequences of using the Internet sources of information as perceived by the students in their academic as well as social life.

In view of the above facts and notions, the present study was carried out with the specific objective to analyze the effects of social computing as perceived by the students of agricultural sciences.

Materials and Methods

The study was carried out at Institute of Agricultural Sciences, Banaras Hindu University, Udai Pratap Autonomous College and Rajkiya Degree College, Jakhani in Varanasi district of Uttar Pradesh, which were selected purposively in order to elicit the overall social computing pattern among the agricultural students. The students were utilizing the Internet for various purposes in general and for educational and research purposes in particular. A sample size of 210 students out of nearly 2100 representing B.Sc.(Ag.), M.Sc.(Ag.) and Ph.D.(Ag.) degree programmes was selected by applying stratified proportionate random sampling technique. To conduct the research, a structured interview schedule was prepared with experts' opinion and administered to the respondents. Statistical methods such as frequency, percentage and rank order were used for precise and meaningful analysis of the data collected.

Results and Discussion

The respondents were asked to indicate their perceived effects or consequences of social computing activities according to the points under them. The analysis of the responses was undertaken and the same have been presented in Table 1. This section examines the quantitative values and attempts to discuss the probable reasons behind the highest and the lowest preferred points by the respondents.

According to Table 1, the important effects or consequences of social computing as perceived by the respondents were found to be maximum for the statement 'made new contacts' (18.61%) followed by 'learnt new study techniques' (15.18%), 'more reliance on self-study' (12.56%), 'improvement of life circumstances' (8.90%), 'changed study materials'

(8.45%), 'less time for study' (7.53%), 'less time for rest' and 'increase in health hazards' (6.62 per cent each), 'less time for physical exercises' (6.28%), 'less contact with some offline friends' (5.02%) and 'less contact with teachers' (4.22%).

Table 1: Distribution of respondents according to important effects or consequences of social computing

S. No.	Categories	Frequency	Percentage	Rank
1.	Made new contacts	163	18.61	I
2.	Learnt new study techniques	133	15.18	II
3.	More reliance on self-study	110	12.56	III
4.	Improvement of life circumstances	78	8.90	IV
5.	Changed study materials	74	8.45	V
6.	Less time for study	66	7.53	VI
7.	Less time for rest	58	6.62	VII
8.	Increase in health hazards	58	6.62	VII
9.	Less time for physical exercises	55	6.28	VIII
10.	Less contact with some offline friends	44	5.02	IX
11.	Less contact with teachers	37	4.22	X
Total		876*	100	

*Multiple responses

The statement 'made new contacts' got the maximum response (18.61%) from the students and found to be the most prominent effect of internet usage on the respondents because every year, through various events like academic, cultural and sports meets, they got involved with new students and resource persons of different colleges and universities online as well as offline. Also, the respondents made those new online contacts for sharing ideas, shedding loneliness, having fun and getting inspiration, encouragement, guidance, support, etc. According

to WorkMad (2008), psychology research shows that people who communicate via a computer (such as email, Internet chat room or a social networking site) are more friendly, disclose more information about them and thus can develop a close relationship more quickly than if they meet face-to-face. This is one reason why organisations should consider using technologies such as social networking to create communities and boost engagement in the workplace.

The statement 'less contact with teachers' got the minimum response (4.22%) from the students and found to be the least prominent effect of internet usage on the respondents. This might be due to the fact that though the students were getting their study materials more from the internet, yet they had to consult their teachers regarding the relevancy of the study materials as well as understanding the key concepts more lucidly. Therefore, it could be inferred that majority of the students had a regular contact with their teachers. Davidson and Price (2009) found that students in their ratings on Ratemyprofessors.com focused more on how easy, nice, helpful and entertaining professors are, and less on their teaching skills, knowledge and the teaching programme.

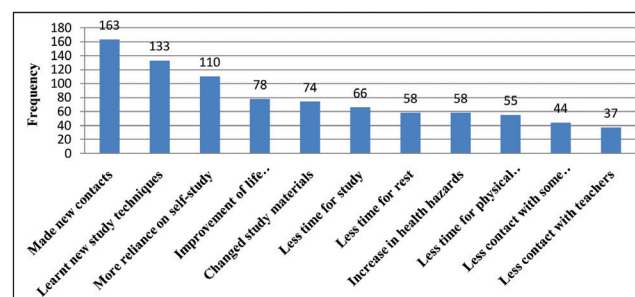


Fig. 1: Distribution of respondents according to important effects or consequences of social computing

Conclusion

Social computing is an exciting new direction in computing and a field for researchers both in information and social sciences. Over the past two decades, social software, from email to blog, has fundamentally changed our ways of living, working and interacting with each other. However, like all things, nothing can be too good to be true. With an increased amount of time spent on the internet comes with consequences (De *et al.* 2012).



The students made new contacts, learnt new study techniques and had more reliance on self-study as the major effects whereas they had less contact with teachers, less contact with some offline friends and less time for physical exercises as the minor effects of social computing. Thus, it can be concluded from the findings of the study that the students of agricultural sciences socialized more by making new contacts online without having any less contact with some of their offline friends and improved their studies by learning new study techniques online and having more reliance on self-study without less contact with their teachers along with finding adequate time for physical exercises. According to Robinson *et al.* (2016), technology has shifted the definition of friendship in recent years. With the click of a button, we can add a friend or make a new connection. But having hundreds of online friends is not the same as having a close friend you can be with in person. Online friends can't hug you when a crisis hits, visit you when you're sick, or celebrate a happy occasion with you. Our most important and powerful connections happen when we're face-to-face. So make it a priority to stay in touch in the real world, not just online.

Therefore, like every technology, social computing also has its pros and cons. Efforts should be made to use the social media as a powerful tool for the overall holistic development of the student community. It should incorporate the entire essential course curriculum, training programmes and an online repository to make the people e-ready and access all the desired information to get their queries resolved almost immediately (Biswas and De, 2016). So, it is suggested that apex bodies like UGC and ICAR take up ICT related curricula through social media to generate the interests of the student community towards effective utilization of the platform.

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