Survey of Social Media in Interdisciplinary Research

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Abstract - Social Media such as Facebook, Twitter, LinkedIn, MySpace, and Google Plus are gaining more and more popularity. They are being used in Interdisciplinary Research which are necessary to solve important problems. This paper presents sample use of social media in IR&D, such as in the U.S. Army, in 25 universities, in adult education, in NSF program, in CoolClimate network, and in translational research. Also discussed are fifty social sites for science researchers, and social media innovations for communities.

Keywords - Social Media, Interdisciplinary Research, Social Media Innovations

1. INTRODUCTION

As of April 2012, the number of Facebook users has reached 901 million [1]. Of course, Facebook is the most popular social media. The other top four are Twitter, LinkedIn, MySpace and GooglePlus. Of all the more than 100 social media sites, Facebook and Google account for 76% logins [2]. Many sources have given many reasons for the popularity of social media. Sample reasons are Global reach, Contact building, Flexibility, Low cost, Measurability, Simple to use Unlimited access and Etc. Interdisciplinary research and development (IR&D) are those that involve interaction among two or more disciplines. IR&D is needed to meet the demand of problems that cannot be solved by using any single discipline. All of the advantages of social media mentioned above are appropriate for IR&D.

This paper presents a survey of use of social media in IR&D, such as Developments of social networking supported by the US army. Social media in interdisciplinary research with 25 universities. Social media in news and entertainment. Social media in interdisciplinary research in adult education. Social media in NSF ADVANCE program. Social media tools for CoolClimate network. Social media tools for translational research Fifty social sites for science researchers Interdisciplinary approaches to social media research and Social media innovations for communities.

2. DEVELOPMENTS OF SOCIAL NETWORKING

The US Army Research Laboratory (ARL) gave a US$ 33 million grant to network science experts from government and a consortium of research centers. To explore social, Communication and information. Concerns at the Network Science Collaborative Technology Alliance (NS CTA). There are four Academic Research Centers (ARCs) at NSCTA. They are social/cognitive network (SCNARC). An ARC focused on information networks (INARC). An ARC focused on communication networks (CNARC). An interdisciplinary research center (IRC).
Two SCNRC researchers were invited to present their findings at the World Economic Forum in Davos-Klosters in Switzerland in January 2012.

The finding was that “If you can get at least 10% of the group to share your opinion, you can influence the entire group.” Social media can help in getting the 10 percent tipping point more effectively than to spend a lot of time trying thru deep personal contacts to influence a much larger percentage. Social media can also be used to collect data about what members of the group think and then analyze the data to try to prevent misunderstanding as well as finding out who has the controlling power over the group.

3. SOCIAL MEDIA IN INTERDISCIPLINARY RESEARCH WITH 25 UNIVERSITIES

A five-year project was established in the year 2009 by the name of GRAND (Graphics, Animation and New Media Canada, with “GR” from graphics. “A” from Animation. “N” from New. “D” from either Media or Canada. It got 23 million Canadian dollars from the Networks of Centres of Excellence (NCE) Program founded by the Canadian Government in the year 1989. The purpose of the grant is to integrate five fields, namely, New Media; Games and Interactive Simulation. Animation, Graphics and Imaging. Social. Legal. Economic and Cultural Perspective. Enabling Technologies and Methodologies. GRAND supports 34 research projects involving researchers from 25 Canadian universities with over 60 industry, government, and nonprofit partners.

An example of the 25 universities is Concordia University in Montreal which established the Research Center in Technoculture, Art and Games (TAG) as an interdisciplinary unit for research and development in game studies and design, and digital culture and interactive art. TAG brings together people from universities, industries and community based groups including: Scholars, Artists, Designers, Engineers and Students. TAG uses social networking extensively for communications.

4. SOCIAL IN NEWS AND ENTERTAINMENT

The news and entertainment people are interested in social media as can be seen in the International Workshop on Social Media Applications in News and Entertainment held in France on 16 April 2012 [3]. The purpose of the workshop is to share ideas and research results on applications of social media on two areas, namely, news and entertainment. The two areas may be considered interdisciplinary in the sense that they include fields such as Business, Computer science, Cultural anthropology, Cultural anthropology, Economic. History, Journalism, Psychology, Sociology and Etc. There are many challenges such as: Business models and business needs of social media in news and entertainment services. Case studies including large-scale data analysis of important news and cultural events. Data mining and information extraction from large-scale social media related to news and entertainment. Information visualization. Integration of professional and social media sources in news and entertainment.

News discovery and serendipity through social media. Novel systems and applications in news and entertainment. Psychological, sociological, and cultural factors in consumption and production of news and entertainment. Real-time aspects, efficient implementations and architectures in news and entertainment applications. Sample papers presented were “Improving News Ranking by Community Tweets”. “TwitterEcho: A Distributed Focused Crawler to Support Open Research with Twitter Data” and etc.

5. SOCIAL MEDIA IN INTERDISCIPLINARY RESEARCH IN ADULT EDUCATION

A team of researchers in the US, One from North Dakota State University, and the other from the University of Wyoming investigated collaborative and interdisciplinary research in adult education. They cited a necessary component for interdisciplinary research as social media. Social media implies user
participation in the creation of information and allows users to post, edit, contribute, share, and create their own contents. The use of social media is different from the past in the sense that everybody can participate and communicate with others in the creation and distribution of media in real time. Social media can be used to find colleagues, identify project partners, follow online discussions, share information, visualize data, schedule meeting times, and facilitate communications.

6. SOCIAL MEDIA IN NSF ADVANCE PROGRAM

The US National Science Foundation (NSF) ADVANCE program was established in the year 2001. By the year 2012 NSF has invested over US$ 135 million to support ADVANCE projects [4]. The purpose of ADVANCE is to increase the participation and advancement of women in academic science and engineering careers. A sample ADVANCE project is at New Jersey Institute of Technology (NJIT). NJIT pioneers the use of social media analysis to make institutional change and ensure the full participation of women in academic science and engineering [5]. Social media will make it easier to locate potential interdisciplinary researchers and to take snapshots of their professional networks.

7. SOCIAL MEDIA TOOLS FOR COOLCLIMATE NETWORK

The CoolClimate Network (CCN) consortium is an interdisciplinary research partnership between the University of California Berkeley and other organizations in private and government sector. The CCN purpose is to encourage individuals, organizations, and communities to develop, share, and act upon climate action plans to minimize climate change. CCN partners have access to all tools developed by CCN researchers. One set of the tools is on social network for individuals, households, schools, and small businesses developed by researchers at the University of California and partner institutions, including city, country, and state government agencies, non-profit organizations and businesses [6].

8. SOCIAL MEDIA TOOLS FOR TRANSLATIONAL RESEARCH

The Indiana Clinical and Translational Sciences Institute (Indiana CTSI) in Indiana, USA, has been using social media tools and knowledge management skills. To enable the Department of Knowledge Information and Translation, to create a visualization of utilization of resources across various CTSI programs. The result is that contacts with different resources per researchers increased. Every targeted program has been shown to be linked to another. Publications were analyzed and a baseline was found to further analyses of the scientific contribution of Indiana CTSI projects [7].

9. FIFTY SOCIAL SITES FOR SCIENCE RESEARCHERS

A list of fifty social sites has been compiled by two researchers for science researchers, professionals, and students. It was claimed that no matter which field you are in, you will find something to meet your academic needs. The list includes 10 networks, 20 blogs, 10 research sites, and 10 news sites [8]. Sample networks are Scispace.net. Project Bamboo. Scispace.net is designed for scientists by scientists. Project Bamboo is a multi-institutional, interdisciplinary, and inter-organizational effort that brings researchers together.

Sample blogs are Scitechnet. Scienceblog.com. Scitechnet is devoted to documenting online social networking services in science and technology. Scienceblog.com includes more than 60 bloggers selected on the basis of their originality, insight, talent, and dedication. Sample research sites are National Research Council site. National Science Digital Library. Sample News sites are Science News. Nature News.

10. INTERDISCIPLINARY APPROACHES TO SOCIAL MEDIA RESEARCH

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The Second International Congress on Interdisciplinary Research and Development, 31 May – 1 June 2012, Thailand
The Social Media (SM) Research Group at Fundacio Barcelona Media in Spain presented a review of its research efforts [9]. The SM Group includes Physicists, Mathematicians, Computer scientists, Sociologists and Communication scholars. The data to analyze includes “Who is talking”, “When?”, “Where?”, “To whom?”. The computer scientists, engineers, and mathematicians wanted to start by considering the tools to make analysis, but the social scientist. Wanted to start by trying to find out “What is being said?”, “Why?”, “How?”. “With what feeling?”. Finally they agreed on 4 objectives. The first objective is to develop tools to enable sociological studies of big data. The second objective is to design and develop a methodology for social media experiment. The third objective is to understand how and why workers are using social media. The fourth objective is to promote the possibility of using social media as a platform to support social innovation. The result of this research will be published later in the year 2012 or 2013.

11. CENTRE OF SOCIAL MEDIA INNOVATIONS FOR COMMUNITIES (COSMIC)

Indian Institute of Technology in Bombay (IITB), Nanyang Technological University (NTU) and National University of Singapore (NUS) established the Centre of Social Media Innovations for Communities (COSMIC). The purpose of the Centre is to empower communities, especially those underserved by technology and telephone vendors, to improve the way the community members live, work, and play. The Centre hopes to create social media innovations and provide training for a number of research students at the masters, doctoral and post-doctoral levels. The graduate student will be involved in setting up and maintain the computing environment for research and development, in being part of the research team to carry out various application and development work using mainly open-source tools, and to contribute in writing research papers [10].

12. CONCLUDING REMARKS

With the populating of social media, it is now used in all kinds of fields, especially in the field of interdisciplinary research. This paper presented Developments of social networking supported by the US army. Social media in interdisciplinary research with 25 universities. Social media in news and entertainment. Social media in interdisciplinary research in adult education. Social media in NSF ADVANCE program. Social media tools for CoolClimate network. Social media tools for translational research. Fifty social sites for science researchers. Interdisciplinary approaches to social media research. Social media innovations for communities. All interdisciplinary researchers and developers should follow the development of social media for the benefit of all parties concerned.

REFERENCES


   http://coolclimate.berkeley.edu/about

   https://www.indianactsi.org/rct

[8] Site Administrator, 2009, 50 Social Sites for Science Students, Researchers and Professionals,

[9] CENTRE OF SOCIAL MEDIA INNOVATIONS FOR COMMUNITIES (COSMIC), 2012,
   http://cosmiccentres.org/index.html

    http://www.barcelonamedia.org/section/bm-r-d/social-media