A Survey on Social Networks and Organization Development

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Abstract- **Social networking sites emerged with the development of Web 2.0 tools and technologies. This phenomenon has grown in momentum with the appearance of popular websites such as Facebook, YouTube, LinkedIn and Twitter. However, apart from personal use, social networks have become an important constituent in the business field. This research introduces the evolution of social networking in relation to organizational development. Furthermore, it investigates multiple aspects and linkages between social networking and organizational development. This is in terms of creating a collaborative and a knowledge sharing social networks to produce more productive organization.**

Keywords - Social networking; organization development; social network analysis; group dynamics; action research; social networking sites; collaboration, knowledge sharing.

I. INTRODUCTION

Social networks (SN) are probably as old as humanity, not something new that has been invented. However, it evolved to new forms of interactions and relationships through Internet and telecommunications. Social networking sites have become widely used in the past few years due to its nature that allowed people to meet other peoples with similar interests [1]. It also spread across the business environment due to the increase in Internet penetration and various electronic- services [2] such as Web 2.0. There are many definitions for Web 2.0 but almost all definitions agree on defining it as the social use of the Web which allows people to collaborate, to get actively involved in creating content, to generate knowledge and to share information online [54]. Web 2.0 allows users create, describe, post, search, collaborate, share and communicate online content in various forms [55], e.g., music, bookmarks, photographs, documents, commenting, tagging, and ratings. As per [46] Facebook was the most popular social networking site by July 2010 and 7% of organization Internet traffic was due to accessing Facebook pages during working hours. It has been highlighted in [44] that Facebook costs organizations 1.5% of total productivity, and that one in every 33 employees has built their entire profile during work time.

Decision makers generally pay more attention to introducing latest technologies to increase efficiency and effectiveness of their organizations. However, this may lead to imposing sticker reporting routes in order to support such decisions. Therefore, it is envisaged that supporting such decision making processes is enhanced by creating a positive working environments through using SN activities and sites. Notably, SN can also assist decision makers facilitate organizational change and improve organization operations. However, decision makers do not give enough attention to the informal side of SN – relationships and interactions such as friendships created between colleagues - that are available within a working environments to support a decision making process [3]. Moreover, sometimes good administrators fail to adequately understand the social structures in SN and most importantly, are unable to evaluate their impact on organization performance and survival [4].

However, this is a first point in which SN can come in towards helping alleviate this problem. Social network can affect the effectiveness of leaders through three types of networks; the direct surrounding ties, the organizational ties both direct and indirect, and linkages created by being representatives of organizations [4].

In terms of their more general positive outcomes, SN facilitated connection between people across boundaries. SN also assisted in knowledge sharing and collaborations [5]. More particularly research showed how the online media could assist in increasing collaboration and knowledge sharing within organizations leading to better organizational performance [6]. Traditionally, organizational development is defined as a planned effort to increase productivity and performance of the organization [7]. Moreover, collaboration and knowledge sharing that online SN platform creates; facilitated communications among different groups within organizations [8]; which in turn contributes organizational development, i.e. increasing the productivity and performance of the organization. Therefore, it is important to understand the underlying costs behind such advantages and related hindrances. Such issues were supported in recent research [9] and hence, valid research question here.

Thus, it is hypothesized here that the positive impact and the business benefits of SN outweigh significantly the negative perceptions that limit the utilization of this technology. As stated by Bennett [9], SN technology can facilitate improved workplace productivity. This is resulting from enhancing the communication and collaboration between employees, which facilitated knowledge transfer and consequently leading to

more successful organizations. According to AT & in [10], 67% of European employees whose companies use SN sites believe their organizations have become more open and transparent. On the other hand, 79% of employees report on possible negative impacts of SN such as distraction and leak of confidential information, which however as argued in [9], is usually far outweighed by the positive impacts.

The main purpose of this paper is to provide organization decision makers with knowledge and awareness of the impact of SN in organization development. Our aim is to provide an overview of this rapidly developing field of research which could lead to the development of effective policies and guidelines to support and implement SN in organizational development efforts and decision making processes.

Regarding the structure of the paper, we first start by introducing the theoretical foundation of both the organization development and the SN areas. Then, the research addresses the impact of SN in organizational development, and we provide a discussion on current and future work. The research then discusses the research results highlighting current and future research in this important area. The research concludes with suggestions to deal with the challenges that arise from this research.

II. ORGANIZATIONAL DEVELOPMENT

This section aims towards introducing organizational development. Furthermore, we also introduce basic concepts related to it, such as action research, and group dynamics. Separate subsections discuss collaboration and knowledge management in more details to emphasize its important in building high performing teams and contributing to organization development.

A. Organizational Development Overview

Organization development (OD) is a planned, organization-wide process to change an organization and increase effectiveness and capabilities. It is intended to change the beliefs, attitudes, values, and structure of organization so that they can better adapt to new technologies and environmental changes [11] [47].

Organization development can be viewed as an effort by people towards changing the state of an organization. Furthermore, change or development occurs in the context of a failure or tackles certain issues within an organization [19]. As shown by Weick in [19] through his study, change or development process never stops as learning curve is continuous. The change is associated with three main types of problems as explained in [47]:

1) The unbalance between the individual and the surrounding environment at the level of the team, subunit, or organization as a whole. This can be overcome by socializing activities and collective gatherings

2) Intergroup conflicts due to changes in personalities, roles, responsibilities and range of tasks. This can be overcome by activities that aim at adapting to the scope of work and accepting realities and other personalities.

3) Mismatch between the social order of a subunit or the organization and demand put upon this entity by the relevant environment. This type of change is affects large groups and involves shifts in power balance.

Organization development also focuses on two themes; action research and group dynamics. Action research is learning by doing and group dynamics are studying the groups and their interactions [11].

Action research processes include planning, acting, observing and reflecting. These processes are used to track the effect of change and problem solving within organization [13]. It is also linked to Information system research by the concept of human actions are socially reflective. Thus, information systems use action research in developing systems according to individual process and actions [14]. Action research combined with social networking sites can achieve better knowledge sharing and collaboration environment between groups [48].

On the other hand, group dynamics also focuses on individual's interactions. It is related to outcomes experienced by the team [11]. This concept is important in organization development and decision making as it links directly to collaboration and knowledge sharing within organization employees and groups [15]. Enhancements in group dynamics also occurs by the increase of social networking whether it's physical networking or using Internet, which enable organization development and performance enhancements [51].

B. Collaboration

Collaboration is a process where two or more people or groups work together to reach shared goals [16]. Collaboration arises among individuals who share common goals and can be forced through organization structures. Studies showed that matters related to individuals are decided with consultation with other members including health and household decisions [17]. As highlighted by Hill in [16], face-to-face meetings are the first attribute in building trust and collaboration among individuals even in computer mediated environments.

Decision Making is proven to be effective when collaborative networks exist [18]. The work in [18] suggested a collaborative decision making system that combines trust based decision making & vote based decision making. (See Fig. 1). This decision process starts by identifying a problem, generating potential solutions and ranking the solutions individually and in groups to reach to the best identified solution.
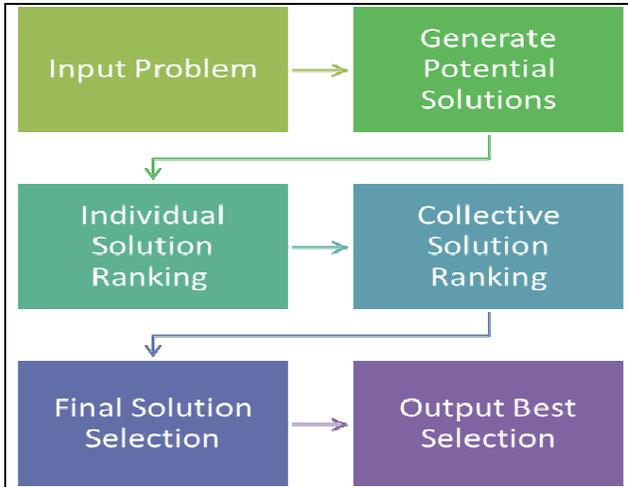
Figure 1. Collective Decision Making

C. Knowledge Management

Knowledge Management is set of strategies and practices used to exchange information, insights and experiences within an organization [11]. As stated by Allee in [11], Knowledge is considered a power that assists in building the capabilities of an organization. She discusses through her survey that people rely on the communities they belong to as their primary knowledge resource.

On the other hand, [20] discussed within their survey that many early initiatives have focused on information technology as a way to collect and manage knowledge and information in an organization. In addition, he stated, people missed the opportunities from interventions targeting knowledge embedded within networks of employees.

SNs are used in businesses to close deals [4]. Conducting a survey and several interviews within a bank, Mark in [4] could prove that employees use their social ties to get knowledge of their customers and close deals. Their research shows that individuals initiate social ties to solve problems or fill the need for resources or skills.

People use their immediate contacts to reach to other members with similar interests. This began to change with the emergence of online communities. People started focusing on using email contacts and websites to reach to other people [7]. The boom in online SN started to be an interesting field of research.

III. SOCIAL NETWORKING

In this section we introduce SN and brief of the start of social networking. SNs are social structures and relationships made up by individuals connected through special types of ties such as friendship, kinship or common interests and so on [7]. SN evolved with time and scholars had widened the field to cover different categories of the social ties which represent the fact that network matters to reach personal objectives [21]. Some scholars focused on sociological aspects and others moved to organizations and online structures.

In this research we concentrate on the online social network, which grew tremendously in the last few years [22]. As an example, Facebook visitors grew from 14 million to 132 million between the years 2006 to 2008 [7].

A. SN Web Sites

SN web sites are web based services or platforms that focus on building social ties among individuals who share common interests or activities over the internet [23]. SN sites allow users to share ideas, activities, events, and interests within their individual networks or groups.

SN sites are online places where people can create online communities and share knowledge and user created content [23]. It also allows people to get connected to other people and collaborate. This facilitates collaboration and communication environments [3]. Web 2.0 tools contributed significantly to the growth of SN. Unlike Web 1.0, Web 2.0 has the following distinctive features [56]:

- User as contributor.
- Participation not publishing
- Lightweight programming models
- Trust and collaboration
- Software above the level of any single device
- A rich user experience

Social websites are further categorized to SN sites and social media sites [23]. (See table I)

TABLE I.   CATEGORIES OF SOCIAL WEB SITES

Categories	Definition	Purpose	Example
SN sites	People stay connected with other people	General sites for the public & Vertical sites for specific groups	Facebook LinkedIn Bebo Hi5
Social Media sites	People share user created content	Media Types such as blogs, music, news, photos, etc.	YouTube Flicker MetaCafe Digg

The emergence of computer networking that facilitates social interactions between people had directed scholars to further categorize this field. The SN sites were available to the general public who used the internet. Then this emerged to organizations looking into possibilities of creating online communities in so-called "Enterprise Networking". The two categories of SN sites are:

1) Public SN

Public social networking website covers the free services offered by companies to the general public [23]. Examples of these websites include LinkedIn, Facebook, Google Buzz, Netlog, Twitter, Xing, and many others.

Web based social networking facilitated connection of people who share interests and activities across political, economic, and geographic borders [23]. Previous works

showed the impact of social networking sites. It highlighted the impact on privacy, identity, culture, beliefs and other aspects of people lives. It also focused on the positive impact of knowledge sharing, creating collaborative environments and educating people.

2)   Enterprise SN

Enterprise social networking focuses on use of online sites by organizations. It involves the usage of corporate or organization software or intranet to create online communities and groups [24]. Businesses and organizations realized the benefits of public social networking sites for marketing purposes. It was considered one of the best places to reach out to their customers across distributed geographical locations [24].

Enterprises who try to reach large number of population are starting to use social media which is the applications that is based on social networking sites. They are using social media to create benefits such as brand recognition, sales, search engine optimization, customer satisfaction, and web traffic [25].

Many organizations also started deploying this technology within their internal environments. They started promoting collaboration and knowledge sharing between their employees.

B.   SN Analysis

Social network analysis (SNA) is mapping and measuring of relationships and flows between people, groups, organizations, computers, URLs, and other entities [5]. It provides visual and a mathematical analysis of human relationships. The outcomes of SN analysis are often represented using diagrams [5]. (See Fig. 2). The diagram includes nodes that represent people, groups or objects, links or ties that represent type of relationship and information flow, which shows the nature of information exchange that takes place when interaction happens.
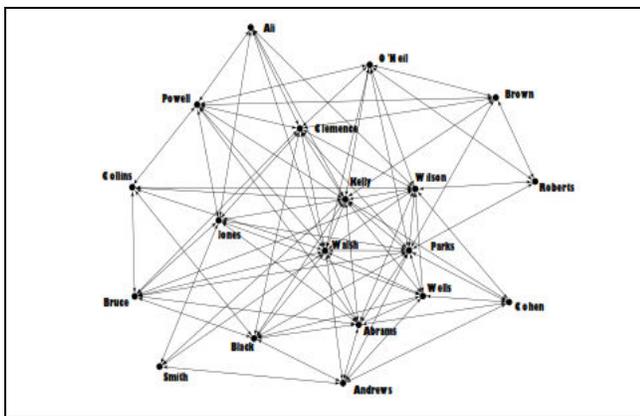

Figure 2. Network Analysis Diagram

Cross [26] showed through SNA and his research on several organizations that SNA is beneficial when restructuring or other strategic change occurs. It is framed in the classic unfreeze, transition and freeze model of organization change process.

IV.   THE INTERSECTION OF THE TWO FIELDS

SN and organization development are important fields in the business world. Organizations need SN between employees to run the business and their daily operations. Thus, SN plays a role in organization development.

SNs are built around the structure of relationships existence among people [5]. From this concept the online communities and forums came into existence to further support the interaction and social ties among people apart from the physical social networking that takes place in real world interactions.

A.   Social Network Analysis – A diagnostic tool

SN can promote collaboration and knowledge sharing among people through the interaction and social ties that it creates. Through a survey it has been discussed that Social Network Analysis (SNA) can be used as a diagnostic tool for managers [5] [52]. Cross [5] discovered that SNA can assist managers in discovering the social ties existing within their organization networks and help them to promote collaboration and knowledge sharing. [52] Showed that SNA can be used by organizations for exploring, representing and informing explanations about the individual relationships that impact team dynamics and organization performance.

Studies on impacts of SN on organization development emerged from Information Technology (IT) discipline where researchers started using sociometer, a wearable sensor device to capture human interactions to capturing organizational behavior, SNA and knowledge management applications amongst individuals [28]. These applications lead to building interaction models and diagrams to identify the influencers of the interactions and tackle them.

Fortino in [3], highlighted that SN creates four modes of communication groups; Professional networking, professional communication, professional knowledge bases and professional collaboration. These groups include people from different backgrounds from within the organization. Through detailed interviews and modeling they discovered the social ties within a specific organization. Fortino suggested that organization managers should utilize this knowledge and create the environment of knowledge sharing and collaboration within the organization.

Moreover, other research [45] through three case studies of IBM, SAP & Accenture revealed that SN sites have three modes of use within organizations. First, knowledge sharing with experts, second, building personal contacts to create common trust and enhance collaboration and third, fostering existing relationships and keeping in touch with existing personal network. By getting to know the structure and nature of relationships, they argued that organizations can achieve wide-spread adoption of latest technologies and evolving work practices side-by-side to the evolving technologies.

B.   Social Network Sites

Individuals use interactive online strategies to reduce uncertainty, which is created from not knowing the other party within the communication channel. Interactive communication is getting into live chats and interviews to get acquainted. This assists individuals in getting to know the other party and

building social ties [27]. The built ties can either be sexual, collaboration or knowledge sharing.

On the other hand, Yang et al. [8] added advancements to social ties between individuals. They quantified the knowledge sharing basis between collaborators by using content discovery and a real time system to discover collaborator interactions. Their work resulted in a mathematical equation of Quality of content resource (QoR) = Rating of the resource (REP) x total number of times resource is accessed (TOA) x content matching with knowledge domain (MD). This equation can assist in knowing the collaborators who appear knowledgeable and extensively share knowledge.

Studies showed that organizational structures and established rules and regulations might restrict the development of information systems and technology inside organizations [21]. This might lead to restrictions in SN sites deployment within organizations. On the other hand, recent studies showed that organizational changes can be monitored through email communications through deployment of SNA [29]. The study emphasizes that even with set rules; behavioral changes within organizations whether positive or negative can be monitored and tracked through other type of social networking.

Besides, the work carried out in [53] showed that social network recommendation systems have positive impact on business profits and continuous revenue increase. The massive amount of data about social network sites and the customers using those sites, provide researchers and business managers the understanding of the nature of social connections and interactions available and the habits of customers consuming the products or buying different online goods.

C. Enterprise Social Network Media

SN impacts and benefits are limitless in the fast growing technological world. Organizations started using SN sites in acquiring human services throughout different organization development phases [12]. They also use it to market their brand and outreach to people around the world [30]. This assists organizations take their business to another level of technology implementation and lays the grounds for electronic commerce as well.

Efforts in combining SNA, data mining and sensing human interactions has been employed to effect change in organization behavior, which is part of organization development. Data and results from this combination can be used for organization restructuring, team building and promoting specific behavior [31].

Organizational cultures differ according to the geographical location and differences of concepts of powers, values and beliefs. This affects the standardization of IT systems [32]. Thus, social network sites are customizable as per individuals and connect people across boundaries. This can be considered a challenge in deployment of SN within organizations. It opens a question whether the cultural difference can play a role in social network implementations?

However, SNs face many challenges. Organizations usually lack the knowledge of five potential risks emanating from social media: malware, brand hijacking, lack of control over content, raising customer expectations, and non-compliance with regulations [30]. These challenges are still unanswered at large by developers and researchers where issues like privacy, security and trust are still challenging more specifically.

V. FUTURE WORK

The existing work on SN and organization development has limitations. The literature showed the benefits of understanding the social ties but it limits the impact of SN media in promoting organization development. SNs are important part of organization development but what are the challenges of deploying SN that has been proven to be effective in other geographical locations? What are the cultural differences challenges?

SN have been proven to be effective in promoting collaboration and knowledge sharing, but what are the standards and best practices to consider? Is it worth investing in if already social ties exist among employees?

Furthermore, the risks of privacy, trust and security are still fields under development. Researchers are trying to overcome these challenges to promote SN within organizations and attract users.

VI. CONCLUSION

This research attempted to introduce relevant literature to SN and organization development and at the same time, endeavored to integrate them to achieve better organization development. Despite the wealth of research across the two fields, there has been an increasing interest in identifying ways to utilize SN to attract organization development, e.g. exploring, quantifying, and providing guidelines regarding optimizing beneficial synergies derived in both directions. The impact of enterprise SN in organization development had added a new field in enhancing social network site's features and increasing organization performance.

There is already important empirical evidence regarding the effectiveness of such synergies. Noticeably, after tailoring them to the specific cultural practices and requirements of other regions, enterprise SN have proven effectiveness within European companies [10] Through survey conducted on IBM employees worldwide in [50], the authors could conclude that enterprise SN sites can contribute to the information seeking and sense making activities that underlie organization learning and cultural education specifically for new employees and employees who are geographically distant from headquarters. Furthermore, SNS offers benefits for work productivity by getting to know work practices followed by co-workers at other geographical locations.

Of course, there are risks and limitations to SN deployment. However, this leads to the need for more research in the field of benefits and risks of enterprise SN, and especially considering the specificities of different regions, e.g. cultures, sectors, so that guidelines can be derived towards successful deployment in a wider set of conditions. The benefits accruing from such synergies between SN and organization development have just come to fruition and the future is expected to hold many promises for their success.

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