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Social website technologies and their impact on society

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Introduction

Web applications have dominated the concerns of most people because they take a lot of their time.

Among the most prominent of these concerns is the social networking that is available through social network applications on the internet. Social websites have impacted heavily on social and national identity as well as on the social bonding within the community. Why does the social network matter? Human nature is generally social and people like to live in a community rather than in isolation. Social networks play this role electronically by connecting people as a community regardless of the distance. Evidence shows that these applications are attractive and have a strong influence in various areas.

The deductive approach has been used in this chapter which analysed texts relevant to the subject of the study. Descriptive documentary in the collection of information from sources and references associated with the subject of the study described and employed an approach to describe the phenomenon as list of the diagnosis and detection aspects to determine the relationship between elements with a prospect for the future and predict scientific outcomes.

SECTION-1

The concept of social networking

The terms “websites” and “internet” have become household names and are always linked to each other although they have different meanings. In fact, some experts tend to confuse the two terms. *The internet* is a universal network connecting millions of computers, where a user who has permission at any one computer can access and obtain information from any other computer within the network. *Websites* are one of the more popular global network services on the internet and are sometimes referred to as web services (Shelly, Cashman, Wells, & Freund, 2008). “Websites” are the main method through which internet contents can be accessed. This technique can be local on a personal machine, a group of computers or globally where access can be obtained from any computer around the world, and are called internet websites. The term “web” comes from the expression World Wide Web (WWW) which also refers to accessing information globally.

In terms of internet website developments, there are four generations of the web to date, and are explained as follows;

WEB 1.0: Web 1.0 is the first generation of internet websites, which appeared in 1991. Kidd and Chen define it as "a system of interlinked, hypertext documents accessed via the internet"(Kidd & Chen, 2009). In the initial use of web 1.0, users mainly used this technique to access data saved on different servers (computers) around the world. Web 1.0 is also known as static, read-only, and client-server web-based where users can access to data but are unable to interact directly with other users or modify the contents on this data.

WEB 2.0: Web 2.0 is the second evolution of the web. It appeared in 1999 (DiNucci, 1999). Due to rapid developments in the use of this generation of the web, it is difficult to define or explain it accurately (Giustini, 2006; O reilly, 2007). However, metaphorically, Lincoln improved the definition of web 1.0 to explain what web 2.0 is. He described it as a web in which people can interact and participate, rather than just read (Lincoln, 2009). So, the fundamental difference between the previous version and web 2.0 is interactivity. The Web 2.0 is a dynamic way of interacting among users using a technique called web applications. Since 1999, users have become involved in and were able to participate and contribute to internet content, so the web concept is no longer “read-only”.

Social network sites: Social web is part of web 2.0 which has many known synonyms such as social web, social websites and social media. There are many definitions of social networks or social websites as defined by different researchers. However, in the context of web 2.0, Ellison described social websites as follows. They are web-based services that allow individuals to: (1) construct a public or semi-public profile within a bounded system; (2) articulate a list of other users with whom they share a connection; and (3) view and traverse their list of connections and those made by others within the system (Ellison & Boyd, 2007). SixDegrees.com, which was set up in 1997, seems to have been the first social network site (Andrews, 2011; Ellison & Boyd, 2007). Social websites are mainly focused on individuals rather than businesses. Facebook, Twitter and Flickr are well-known examples of web 2.0 applications. Generally, those websites are used for exchanging social activities and tend to have a high level of use. For example, according to the Facebook website which was established in 2004, more than 500 million active users were recorded by the middle of 2011 (Facebook, 2011).

Web 3.0: Web 3.0, or the semantic web, appeared in 2006 in an attempt to make electronic devices more intelligent by enabling them to understand each other through web application communications (James, 2010). Understanding data is what distinguishes web 3.0 from previous versions. Web 3.0 not only allows humans alone to deal with web applications effectively, but also allows other modern devices such as mobile phones and PDAs to have their own applications that can communicate with other computers using web applications.

The future of the web: (Web 4.0) is also known as the “symbiotic web”. This version, however, is still in the process of being developed. The aim of the earlier versions of the web is to provide users with smart web solutions. Notice that the solutions already existed but the web presents them in simpler more artistic ways. The idea behind web 4.0 is that the web thinks of solutions for the users (The Hammersmith group, 2009).

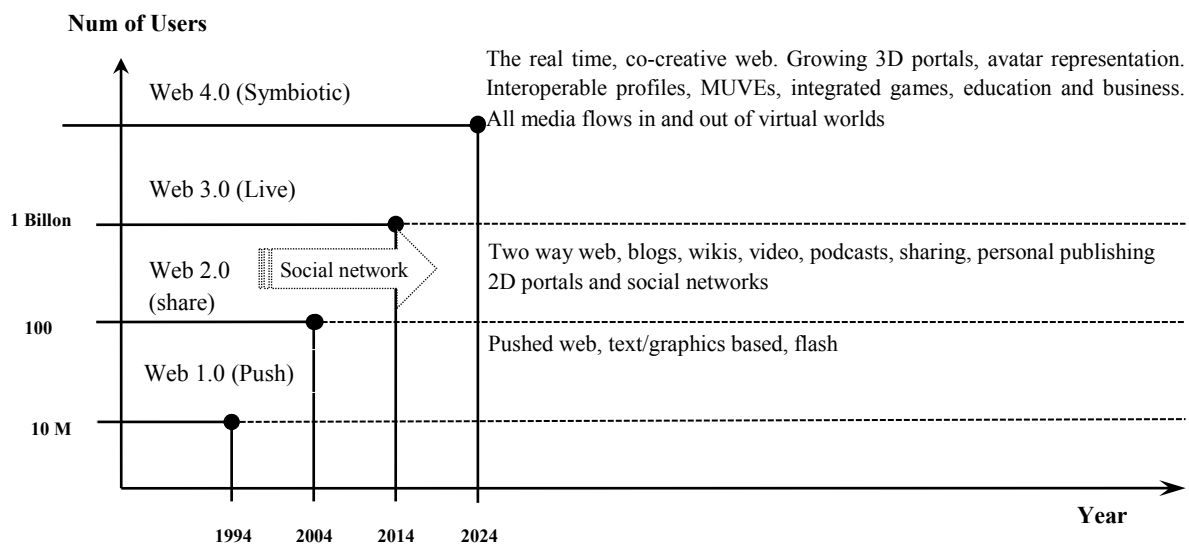


Figure 1: The changing in web – from 1.0 to 3.0, adapted from (Hayes, 2006)

The appearance of a new generation of the web does not mean the disappearance of previous generations; it means that there is a major shift from one concept and technique to another. Figure 1 shows that web 1.0 was popular between 1995 and 2002 and web 2.0 from 2000 and

2010. Although web 3.0 appeared in 2006, web 2.0 is still extensively used. Web concept has changed from being static; where content on websites is accessed by users without being able to make any changes, to being more dynamic, social and semantic.

Among the types of web technologies social websites are considered the most popular. Social websites are distinct from other sites in the World Wide Web, in terms of connectivity. The goal of social networking sites is to create a virtual and technical atmosphere of communication in community. It combines groups of people from different regions and countries on a single site. They are different in many aspects but they use the same technique to communicate. The purpose of communication is different from one person to the other. It could be for the purpose of dating, cooperation, consultation, entertainment only, formation of new relationships, or even for exploration purpose only. The user in this community is an active member; sends, receives, reads, writes, involved, hears and speaks. The users' role in social networks has exceeded the negative role of listening and viewing only. The role of the owner of the site (administration) in these networks is supervision only to ensure that the website is on the right track.

Types of social networks:

Social network divisions depend on three criteria; the service provider, the target from its establishment and the access level.

It further can be divided into three main types based on the purpose of establishing these websites. Firstly, personal social websites: which are limited to individuals or group of friends to enable them to create friendship such as Facebook. Secondly, cultural social

networks: which focus on a specific art or subject of certain gathered interested in a particular topic such as LibraryThing which is a cataloguing and social networking site for book lovers. Thirdly, professional social networks: which gather people from a similar academic subject to create an environment of effective education and training. LinkedIn is a well-known example of this type of social websites.

Social network can also be divided according to the way we communicate and these fall into three types. Networks allow text communication, voice communication and they also allow for visual communication. Today social network websites compete with each other to provide more than one way of meeting the needs of all people.

In terms of access level, there are two types of social network; internal social network sites and external social network sites and which are also called local or global. The internal consists of networks of a group of people representing a closed society or privately representative individuals within a company. The educational institution or organization controls the invitation of other people to enter the site and participate in the activities of recording and exchange of views, documents, attend meetings and engage in discussions. The external social websites are networks available to all internet users, but are specifically designed to attract users to the network and allows for many users to participate in its activities as long as the user has registered on the site, such as a network Facebook.

Statistics

There are number of social network sites around the world. All versions of social websites aim to connect people together. They share quite a similar concept which is based on sharing text, multimedia and other contents. Using social networking applications via the internet has spread to smartphones and increased the speed of communication between individuals. Most social networking sites are available on smart phones and there are some social websites applications which are available only on the smartphones. Figure 2 shows the most used of these websites. The figure is general as the interest and use in each of them differ from one country to other (Saw, Abbott, Donaghey, & McDonald, 2013)

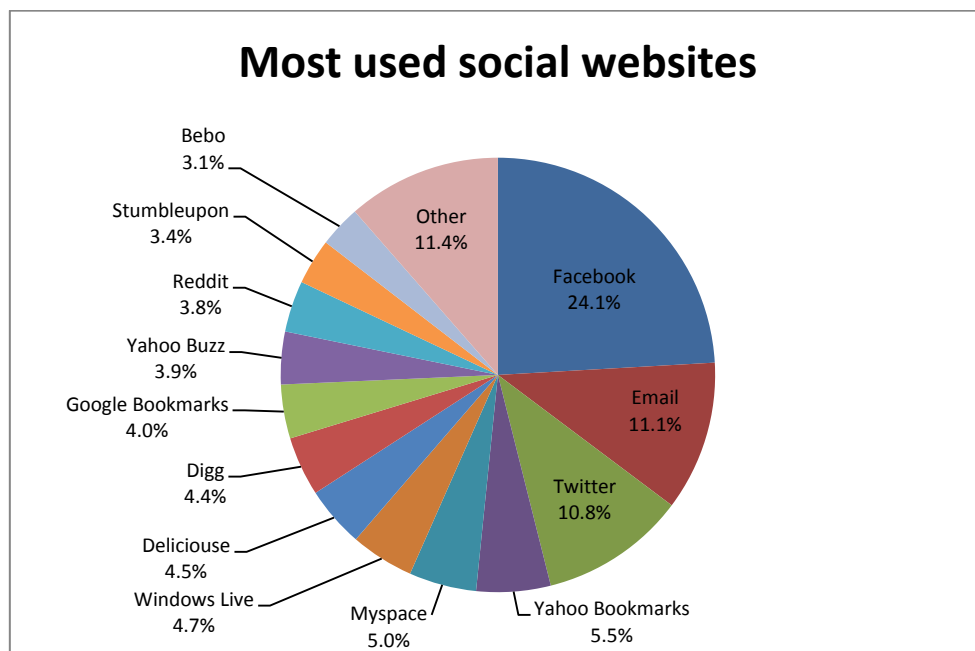


Figure 2: Social websites users' statistics (SocialNetworkStatistics, 2013)

As mentioned earlier there are many purposes of using social websites. 82% of the users of social websites are aged between 18 to 30 years old. The percentage of teens aged from 12 to 18 years old is 73%. After the age of 30 the use of social websites continues to decrease with an increase in the age of the user as shown in figure 3.

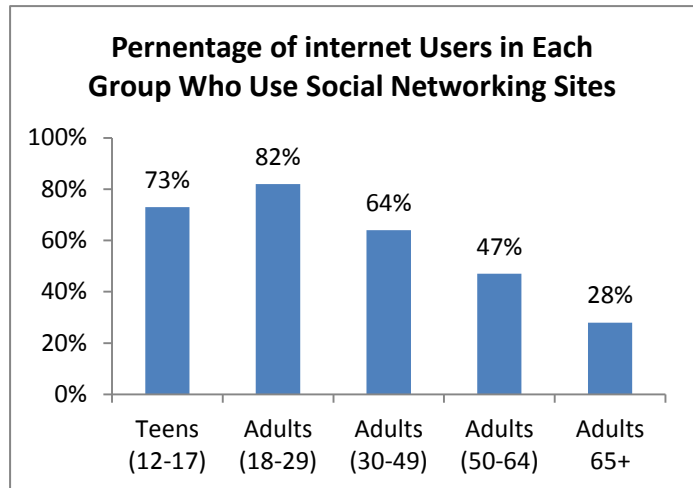


Figure 3: Social websites users (SocialOgilvy, 2013)

(Kilian, Hennigs, & Langner, 2012)) classified the motivation to use social websites into four categories; entertainment, information, personal identity and integration and social interaction. The entertainment concept is still overwhelming in the use of social network sites compared to other three categories (Lin & Lu, 2011). Social network sites have been widely used in business marketing settings although; this use is still not formal but rather friendly to attract the high number of social websites users.

SECTION-2

Social networking risk or Opportunity

Social websites have become an outlet for those who were unable to air their voices to the public. Social websites users have been offered a free and easy access avenue to share their views globally with “almost” no restrictions. This access has resulted in a mixture of advantages and disadvantages based on their use.

Many studies have discussed the advantages and disadvantages of using social websites e.g (Bosch, 2009; Krivo et al., 2013; Shih, 2013). This section focuses on the impact of these sites on the society and the individual rather than on organizations. Since the first use of social media, many researches have been conducted to assess the advantages and disadvantages of using them in various aspects such as politics, economic technology use, etc. In this section the focus is on the social impact.

Positive uses of social networks:

There is no doubt that social websites have changed the way of communication in most societies. Using social networks eliminate geographical and spatial barriers, and shatter the international border, where the individual can easily communicate with other people in any part of the world. The nature of social networks is based on the interactivity where the concepts of share, reply, post, invite etc. are very commonly used. It usually involves groups of people where users are required interact unlike other generation of web.

1. Improve society ability to use technology

Using social media requires basic skills of using technology. Some people learn the technology just for the purpose of taking advantage of online social communications. Learning the concepts and how to use these applications gives the users the ability to learn other computer applications as there are other general computer applications concepts (Lenhart, Arafeh, Smith, & Macgill, 2008).

2. Personal communication uses.

In general the internet has contributed to facilitate communication between people (Coyle & Vaughn, 2008). For example, e-mails which are one of the first-generation have significantly contributed in improving personal communication. However the technique of contact in social websites is more attractive and is considered friendlier. Many social applications have been widely used for audio and video communication. They play the same role as phone calls and provide more features during the communication such as exchange of documents and texting. Social websites provide users with many services within one website. Most social websites consist of group of services in one their websites. Services such as live chat, emails, invitations, posts, reminders of social events and other features used to be provided separately in earlier versions of web technologies. Skype is a well-known example of these applications. It has been used socially and officially to reduce the cost of calls and to provide interactive communication via online session.

3. Link society members

Social networks improve social relationships in society (Aslam et al., 2012). They keep friends, relatives and family members connected especially when they are geographically far from each other. Social websites users publish their activities and social events online so their friends and family members can interact and make comments.

4. Educational uses

Social network has not been a widely used concept in learning in terms of exchange of knowledge (Alshahrani, 2013). The role of social networks in the development of e - learning works to add a social aspect and participation of all parties in the system of education beginning from the school principal to the teacher and the parents and does not just focus on providing schedules for students.

The use of social networks, increases the chances of networking and communication outside the school, and also breaks the barrier of time to communicate outside the school environment. It eliminates many of the formalities within the schools, and it can be used to communicate with the individuals or collectively with the teacher, which provides an atmosphere of taking into account individual differences. This also enables the student to learn other skills such as communication, discussion and providing their opinion.

Negative uses of social networks:

There are noticeable pitfalls of using social websites. Some of the pitfalls are related to the technical use of these websites while others are related to the misuse of some of the website features.

Abusive use

Hacking of social websites is easier than hacking of other types of websites and the relationship between users in these websites is usually more friendly and trustworthy (Greiner, 2009).

Scandals, defamation, harassment, extortion and fraud are common negative behaviours on the social websites. These behaviours appear on the web in general. Hacking social websites seems to be easier than hacking other websites. To do so one does not require advanced knowledge on websites programming or web security. Although there are laws and regulations for certain types of crimes in some countries, dealing with these crimes is complex because of the wide world use of these applications.

Extortion is one of most common crimes on social websites (Morselli & Décary-Héту, 2013). Some people use these websites to attack other peoples' privacy and then blackmail them. The information used for blackmail could be in the form of video clips, pictures or any sensitive information which the owner does not necessarily want spread on the web.

Impersonation is another form of misuse of social websites. When registering in most of social websites, there is no verification of users' identity. Users can register by providing information which does not necessarily represent them. For this reason, some users impersonate other people by using their names or photos to harm them by representing them badly or in some cases to exploit their popularity.

Some people use these websites for the purpose of committing offenses. In 2009 MySpace website which is one of the biggest social websites, reported and removed 90,000 known sex offenses in two day (Greiner, 2009).

As mentioned earlier, social websites have successfully gathered people with the same interests and ease the communication between them. Unfortunately, they also gather people with subversive ideas and to unite their efforts to effectively deploy them in the community. This feature is not common in other forms of communication via the internet.

Mislead and distraction

People use social media to distribute their opinions over the internet. Social websites users are free to post whatever they think and believe regardless whether it is right or wrong. There are endless contradictory views on social websites especially where videos and audios are used. For example, on YouTube which is a video-sharing website, when searching for guides, very convincing suggestions may appear which are not necessarily true and might be misleading.

In terms of distraction, the blame has been thrown on social media as a main distraction on people from their usual activities. Over the widespread use of these websites and the success that they have achieved the recreational use is still the most widely used (Whiting, 2013).

Security and privacy

Privacy is a big issue in social websites. It is responsibility of both, users and service providers to keep information secure. By registering in these websites users are required to provide personal information which could be misused when accessed by unauthorised persons. The level of privacy and security varies from one website to the other. Users are not necessary aware of all these options. Social websites are easy to use, symbols and images that are used in social websites have made it easier for users to use them regardless of the language used (Kamilaris, Michael, Pitsillides, & Fidas, 2013). However, it appears complicated for a normal user to understand the privacy and security options that these websites offer. It is easy for the user to share or publish his personal details accidentally. Yes! Social websites are easy to use but they are not necessarily easy to understand.

Attacking social websites is popular. The idea of attacking users' privacy is based on installing some of their information which helps the hacker to access their account. Hacking of social network sites is easier because communication between the victim and hacker is friendly. They share a kind of trust and therefore the victim might share information in good faith and trust.

According to (Thomas, Grier, Song, & Paxson, 2011) 17% of accounts on Twitter which is one of the biggest social websites rely on hijacking trends, while 52% of accounts use unsolicited mentions to reach an audience.

Isolation

Some people become addicted to social website. Studies found that the person who overuses social websites is less associated with society (Kuss & Griffiths, 2011). This leads to less engagement and contribution of the person in society. Studies also showed that social websites isolate family members within a single house (Kraut et al., 1998). Each member of

the family becomes busy in checking their friends' activities on social network which impacts on the unity of the family in the house.

Recommendations geared towards avoidance of the negative impacts of using social websites:

There is no magic prescription to avoid the negative impacts of social websites use. Each single person has his/her reasons for using them. In general users should compare the benefits of using social websites against the time that they spend on them. In terms of reducing the impact of social websites in peoples believes and opinions, it is essential that social websites users understand that these websites could circulate useful and non-useful/harm materials (Furht, 2010; Umezawa, 2008).

In relation to reducing the risk of electronic offenses, which is the highest risk of using social websites (Luo, Liu, Liu, & Fan, 2009), it is important to understand that attacking information through social websites is much easier than other online methods(Kizza, 2013; Luo, et al., 2009). There are caveats that should be taken into account when using the internet in general and social networking in particular. From the previously mentioned issues it is evident that most of the benefits of social websites can be are applied negatively and vice versa. There are some tips that could help the normal users to take advantage of using these websites;

- It is not really important how many friends or followers a person has, but the issue is how many of the friends of follower does the person know and trust. So it is recommended that one should not accept strangers' invitations for friendship in social websites.
- Websites and devices that are connected to the internet are not the safest place to save personal information.

- Account password is important and difficult/ complex to guess, and it is the gate for most of hackers. Easy passwords can easily be stolen by hacking tools. It is also recommended to change passwords from time to time and not to use the same password for different accounts.
- It is important to know who you add as friends or participants on your online social space. Being friends with someone means trusting him or her by giving part your personal information.
- Social websites provide a wide range and level of permission for sharing information. It is important to ensure the correct setting of privacy is chosen.
- Depending on the website; some websites share their users' information with a third party or other websites. Thus, it is important for social websites users to know the persons who have access to the information provided.

Opinion about social media uses

The nature of the relationship in the social websites is more likely to be friendly. However, various studies have found that the relationship between people in real life reflects on their association on social websites. People's views about using about social networks sites as official environment such as work places and education are varied. The relationship between friends in a social website cannot be compared to a study environment such as a student and a lecturer or a boss and a subordinate in a work environment (Alshahrani, 2013). Alshahrani

examined the acceptance of using social websites in teaching environment. His results showed that teachers are optimistic about the benefits of using social network sites for communication, but they still have major concerns about their usage. Teachers want to keep the level of power that they have in the classroom as there is no academic rule to control the relationship between “friends”, a fact is also supported by (Bosch, 2009). On the other hand, the results showed that a majority of the students were optimistic about using social network sites to contact their lecturers, but felt that the teachers did not reciprocate their feelings. From Alshahrani’s research it can be said that the nature of social websites is friendly and the success in the use of these websites is not necessarily applicable for formal settings.

Conclusions

Social websites is one type of website technologies. This type of web technology has become the most attractive type among other types of web technologies. The number of its users is sharply increasing. Social websites have improved people’s connectivity and have also contributed in making their voice heard. These websites are not free of drawbacks and risks of use. It is important for these websites’ users to understand the technical concepts of these websites and to be aware of the possible threats that could be associated with using them.

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