

Usability Evaluation of Social Network

Shamsu Shehu

Al-qalam University Katsina, Department of Mathematical Sciences

Abstract: *Recently, the number of social networking is rapidly increasing, and the numbers of users joining are dramatically increasing as well. In today's era online social networks are getting extensive popularity among internet users. People are using online social networks for different purposes like sharing information, chatting with friends, family and planning to hang out. It is then no surprise that online social network should be easy to use and easily understandable. Previously many researchers have evaluated different online social networks but there is no such study which addresses usability concerns about online social network with a general view. The main rationale behind this study is to find out efficiency of different usability testing techniques from social network's point of view and issues related to usability. To conduct this research, we have adopted the combination of both qualitative and quantitative approach. Users from different countries participated in the study. Our findings are to evaluate social network based on four criteria (i.e. content and organization, navigation aid, user interface attraction, performance and effectiveness)*

Keywords: Usability Issues, Usability Evaluation, Online social networks, Usability.

1. Introduction

Background

These days World Wide Web has gained immense popularity because it provides different kind of services and applications to facilitate internet users[3][2]. Online social networks is one of them where people meet for different purposes such as to find the people with similar interest, to play Games join groups for discussion and to hang-out with others[6].

Since the introduction of social network sites years ago, to communicate with friends and family has been easy once you have access to internet[13]. The internet has given us the ability to connect with people from around the globe with a few clicks of a button. And you can easily send information to a friend or get information. Social network sites (SNSs) such as MySpace, Facebook, YouTube, Skype etc, have attracted millions of users[12][8], many of whom have integrated these sites into their daily practices. People consume a lot of time on this sites uploading or downloading, getting information concerning their career or academic work. People are always online every second, chatting with friends, watching online movies[9]. Social site has become a habit for some people[14][9]; they find it difficult to study for one hour without login to one network site, Social networking began in 1978 with the Bulletin Board System (or BBS.)[11] The BBS was hosted on personal computers, requiring that users dial in through the modem of the host computer, exchanging information[23]19[2] over phone lines with[18] other users. This was the first system that allowed users to sign in and interact with each other, although it was quite slow since only one user could be logged in at a time[22]. Later in the year, the very first copies of web browsers were distributed using the bulletin board Usenet. Usenet was created by Jim Ellis and Tom Truscott, and it allowed users to post news articles or posts, which were referred to as "news". The difference between Usenet and other BBS [4]and[5] forums was that it didn't have a dedicated administrator or central server. There are modern forums that use the same idea as Usenet today,

including Yahoo! Groups and Google Groups[12]. The first version of instant messaging came about in 1988 with Internet Relay Chat (IRC). IRC was Unix-based, limiting access to most people. It was used for link and file sharing,[14] and generally keeping in touch with one another[7][2][4][20].

Problem Statement

In this thesis we will evaluate online social network to find out efficiency of different usability testing techniques from social network's point of view, possible extension of usability testing techniques and also to find out usability issues.

General Objective

The main rationale behind this study is to find out efficiency, recommendation (when necessary), users expectation, satisfaction and possible improvement in the existing social network using different usability techniques, for example to address whether real social relationship is preserved in social network or not, Part of the aim will be achieved by using a questionnaire based evaluation:

Specific objectives

The specific objectives of the study were to:

- Know how to prepare usability problem in social networks
- Experimental result in form of table that investigate the efficiency of usability from social network's point of view
- To prepare a list of recommendation to improve the usability of social networks

2. Methodology

In this regard questionnaire were prepared and forwarded to students of different countries i.e. Nigeria, Malaysia, England, Uganda, Yemen, Cameroun, Bangladesh, Pakistan, Saudi Arabia and United Arab Emirate and Djibouti. Given to all those participants who participated in usability test. In this study, questionnaire based evaluation method by (Chiew&Salim, 2003)was adopted. The questionnaire was divided into two sections. The first section addressed the

characteristics of participants, including: Gender, Category, Internet Experience, and impression about the interface design in social network sites. The second section included twenty four questions that were used to evaluate the usability of social network. The questions were classified into four categories namely:

- Content and organization
- Navigation aid
- User interface attraction
- Performance and effectiveness

Research Model

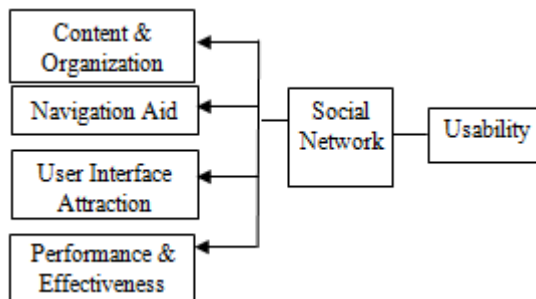


Figure above show that the research model which consists of dependent variable (usability) and independent variable (online social network). Content & organization, navigation aid, user interface attraction and performance & effectiveness are sub categories of usability. These usability criteria can serve as a guideline and can also be used for measuring usability level of online social network.

Present frequency and the percentage distribution of respondents shows that a total number of 211 respondents participated in the study were 90.48% are male and 9.52% were female. For internet experience, 2.38% of the respondents have less than 1 year, 30.48% have 1-5 years' experience, 48.10% have 6-10 years' experience and 19.05% have more than 10 years of internet experience. Thus showing that majority of the respondents have good internet skills with 42.38%

3. Analysis and Interpretation of Data

Table 1: Response regarding Evaluating Content and Organization

S/No	Statement	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly Disagree	WA (Mean)
1	I can find buddies or searching in social network	88 (41.90)	83 (39.50)	28 (13.30)	11 (5.20)	3.18
2	I can easily preserved my social relationship in social network	61 (29.00)	110 (52.40)	31 (14.80)	8 (3.80)	3.07
3	The content of social network is well organized	52 (24.80)	112 (53.30)	33 (15.70)	13 (6.20)	2.97
4	Real life social interaction can be brought to social network	44 (21.00)	79 (37.60)	54 (25.70)	33 (15.70)	2.64
5	I am comfortable and familiar with the language used in social network sites	45 (21.40)	110 (52.40)	35 (16.70)	20 (9.50)	2.86

- Majority of the respondents agrees that they can easily find buddies or searching in a social network.
- Majority of the respondents agrees that they can easily preserved their social relationship in a social network.
- The content of social network is well organized.
- The real life social interaction can be brought to social network.
- The users are comfortable and familiar with the language used in social network

Table 2: Response regarding Navigation Aid

S/No	Statement	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly Disagree	WA (Mean)
1	It is easy to move around in all social network by using the links or back button in the communication environment	42 (20.00)	125 (59.50)	28 (13.30)	15 (7.10)	2.92
2	The links in social network are well maintained and updated	52 (24.80)	103 (49.00)	40 (19.00)	15 (7.10)	2.91

- Majority of the respondents agrees that it is easy to move around in all social network by using the links or back button in the communication environment.
- The links in social network are well maintained and updated.
- Placement of links or menu is standard throughout in social network and it can easily be recognized.

Table 3: Evaluating User interface Attraction

S. No	Statement	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly Disagree	WA (Mean)
1	The social network interface is attractive	57 (27.10)	106 (50.50)	31 (14.80)	16 (7.60)	2.97
2	I am comfortable with the colours used in the social network	63 (30.00)	97 (46.20)	37 (17.60)	13 (6.20)	3.00
3	Social network contains no features that irritates me such as blinking text and looping animations	38 (18.10)	77 (36.70)	65 (31.00)	29 (13.80)	2.74
4	The design of the social network makes sense and it easy to learn how to use it	49 (23.30)	113 (54.40)	32 (15.20)	15 (7.10)	3.08

- Majority of the users agrees that the social network interface is very attractive
- All colours used in social networking sites are comfortable by users
- It does not contain irritating features
- Interface designed is very easy to learn

Table 4: Response Regarding Evaluating Performance and effectiveness

S/No	Statement	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly Disagree	WA (Mean)
1	I need not wait too long to open a link in a social network	44 (21.00)	109 (51.90)	45 (21.40)	12 (5.70)	2.88
2	I can easily distinguish between visited and non visited links	39 (18.60)	86 (41.00)	61 (29.00)	24 (11.40)	2.67
4	Social network responds to my actions as expected	45 (21.40)	100 (47.60)	52 (24.80)	13 (6.20)	2.84
5	It is efficient to use social network	50 (23.80)	114 (54.50)	36 (17.10)	9 (4.30)	3.12
6	Social network does not contain too many web advertisements	35 (16.40)	70 (33.30)	53 (25.50)	52 (24.80)	2.42

- The respondents agree that they need not wait too long to open a link in a social network environment
- Visited and non-visited links can easily be distinguished
- Majority of the users agree that their actions are responded as per request in the interface
- It is too efficient and does not contain too many web advertisements
- Sometimes it takes long time to send the message
- Sometimes I cannot send any message (public or private) to some friends
- Lighter pages

According to the Findings:

Usability Issues

The strengths and weaknesses related to issues of usability of social network which were obtained from the qualitative data (open-ended questions) are summarized below:

Common strengths

The results show that most of the respondents expressed their opinion which expressed that social network were strong in the following usability issues:

- Dating
- Meeting new people
- Chatting

Common weaknesses

The evaluated social network has the following weaknesses in common:

- Invisibility of members sometimes but their status is online
- Lot of problems in chatting
- No voice chat facility most of the time
- Usually message not sent

Unique weaknesses

The respondents mentioned some unique weaknesses related to social network:

- Respondents indicated that they do not like colours of social network interface as it makes it unattractive.
- The placement of links or menu on social network are not well organised and contains inactive links.
- Search results pagination
- It indicates that social network members want more privacy.
- Searching is not always identical
- Not accurately buddies search
- Searching options needed to be improved

4. Conclusion

Most common features of social network. There are different usability issues in social network such as issues in media, chatting, privacy control, teenager's access control by parent, profile, changing profile name etc.. The result has identified the strengths and weaknesses associated with social network. Therefore this model can serve as guideline for evaluating usability of social network in order to know if it has meet the needs of its intended users or not, assist the software designers

to know the usability aspects that need to be improved and in building more usable online social network sites.

5. Recommendation

One of the most frustrating features of social networks is unwanted invitations from different groups. There is no mechanism to avoid such invitations. Examples of such invitations cause invitation, café world neighbor request, what does your name mean request etc. There should be a mechanism to avoid such invitations so that it does not create frustration, also once a message is deleted from inbox it cannot be retrieved, there should be an option so that if any message is deleted from inbox it is moved to recycle bin. And later if someone wants to retrieve that message he/she can get it. Online social networks do not provide any mechanism to its members for customizing their profile according to their needs. Profile customizing feature can be very beneficial.

References

- [1] Agarwal, R., & Venkatesh, V. (2002). Assessing a firm's web presence: a heuristic evaluation procedure for the measurement of usability. *Information Systems Research*, 13(2), 168-186.
- [2] Asiimwe, E. N., & Lim, N. (2010). Usability of government websites in Uganda. *Electronic Journal of e-Government*, 8(1), 1-12.
- [3] Adebisin, T. F., Villiers, M. R. D. & Ssemugabi, S. 2009. Usability testing of e-learning: an approach incorporating co-discovery and think-aloud. *Proceedings of the 2009 Annual Conference of the Southern African Computer Lecturers' Association*. Eastern Cape, South Africa: ACM
- [4] Abran, A., Khelifi, A., Suryan, W. & Seffah, A. 2003. Usability Meanings and Interpretations in ISO Standards J Software Quality Control. 11, 325-338.
- [5] Ballard, J. K. (2010). Web site usability: A case study of student perceptions of educational web sites (Doctoral dissertation, University of Minnesota).
- [6] Brinck, T., Gergle, D. & Wood, S. D. 2002. *Usability for the Web: Designing Web Sites that Work*, San Francisco, Morgan Kaufmann Publishers.
- [7] Breakwell, G. M., Hammond, S. & A. SMITH, J. 2006. *Research methods in psychology*, London, SAGE publications Ltd
- [8] Battleson, B., Booth, A. & Weintrop, J. May 2001. Usability Testing of an Academic Library Web Site: A Case Study. 27, 188-198.
- [9] Boren, M. T. & Ramey, J. 2000. Thinking aloud : Reconciling theory and practice. *IEEE transactions on professional communication*, 43, 261-278
- [10] Bautista, J., Schmieder-Ramirez, J. Sparks, P.; Asher, A., (2010), "Students' perspectives on university Web site usability: An evaluation", Pepperdine University.
- [11] Baauw, E. & Markopoulous, P. 2004. A comparison of think-aloud and post-task interview for usability testing with children. *Proceedings of the 2004 conference on Interaction design and children: building a community*. Maryland: ACM.
- [12] Bevan, N. Year. Usability is Quality of Use. In: *Proceedings of the Sixth International Conference on Human-Computer Interaction*, 1995 Japan. 349-354.
- [13] Brace, I. 2008. *Questionnaire Design: How To Plan, Structure And Write Survey Material For Effective Market Research*, London, Kogan Page Ltd.
- [14] C. ; Tselios, N. ; Xenos, M. 2012. Perceived Usability Evaluation of Learning Management Systems
- [15] Chiew, T. K., & Salim, S. S. (2003). Webuse: Website usability evaluation tool. *Malaysian Journal of Computer Science*, 16(1), 47-57.
- [16] Chew, M., Balfanz, D. & Laurie, B. 2008. (Under)mining Privacy in Social Networks
- [17] Donghee Yvette Wohn, The "S" in Social Network Games: Initiating, Maintaining, and Enhancing Relationships, Michigan State University, USA, 2011.
- [18] Dominic, P. D. D., & Jati, H. (2010, June). Evaluation method of Malaysian university website: Quality website using hybrid method. In *Information Technology (ITSim)*, 2010 International Symposium in (Vol. 1, pp. 1-6). IEEE.
- [19] Dumas, J. S. 2003. User-based evaluations. *The human-computer interaction handbook: fundamentals, evolving technologies and emerging applications*. L. Erlbaum Associates Inc
- [20] Dix, A., E. Finlay, J., D. Abowd, G. & Beale, R. 2004. *Human-Computer Interaction, 3rd Edition*
- [21] Drury, J. 2000. Extending usability inspection techniques for collaborative systems. *CHI '00 extended abstracts on Human factors in computing systems*. The Hague, The Netherlands: ACM.
- [22] Dray, S. & Siegel, D. 2004. Remote possibilities?: international usability testing at a distance %J interactions. 11, 10-17.
- [23] Dickstein, R. & Mills, V. 2000. Usability Testing at the University of Arizona Library: How to Let the Users in on the Design. *Information Technology and Libraries*, 19, 141-151