

Social Software Learnability Index

Nelson Bogomba Masese

Department of Computer Science, Kabarak University, Kenya

Abstract: *Social software, they bring people into creative interaction with one another, making the web an online meeting place where anyone can connect and collaborate with others it also enhances communication the user is able to post team updates and brainstorm on content ideas in an open, collaborative and searchable environment is well worth for different users. The paper evaluates the utilization of mobile social software and the need for social software's to provide customization in order to enhance software learnability. A sample of 340 respondents was selected. The data was collected through the use of interview and questionnaires targeting mobile social users in Kericho County Kenya. The researched randomly sampled WhatsApp, Facebook, and Twitter as software's used in this study. Descriptive statistics were used to analyze the data The finding indicated that It was also observed that a majority of Facebook users used the software to meet new friends commanding 38.8%. This was followed by WhatsApp and Twitter at 22.6% and 2.8% respectively. 34.8% of the respondents affirmed that they frequently use the Facebook software in uploading and downloading items on social media followed by WhatsApp and Twitter with 16.2% and 6.7% respectively. Regarding customization 58.0% avowed that customization does not create errors in WhatsApp as compared to Facebook and Twitter mobile social softwares. However, 36.5% contested that customization does not downgrade the performance of the software Learnability can be optimized by creating simple user interface designs that are predictable in layout and navigation.*

Keywords: Learnability, utilization, customization

1. Introduction

Social software, also known as Web 2.0 applications or social apps, include communication and interactive tools often based on the Internet. Communication tools typically handle the capturing, storing and presentation of communication, usually written but increasingly including audio and video as well[1]. Interactive tools handle mediated interactions between a pair or group of users. They focus on establishing and maintaining a connection among users, facilitating the mechanics of conversation and talk[2].

Social software and social media: a range of tools that facilitate social networking, typically personal web pages including bios, interests, links, photos, videos, personal networks, posts, and comments; web and mobile applications used to turn communication into interactive dialogue, sharing, and assistance Social software is primarily used within an enterprise (private) [3]. Social media is primarily used externally (public). Offering a broad portfolio of social software helps democratize knowledge and better links people[4] Social networking sites such as Facebook and Whatsapp LinkedIn have attracted huge numbers of users. Given the popularity of these sites, it may be possible to capture some of this user enthusiasm within an organization by providing similar functionality [5].

Learnability is the ease with which a mobile social software application can be picked up and understood by mobile social users. The better the learnability of an mobile social application, the less training and time it will take for a person to use it [6]. Learnability is important, because it is closely linked to usability. It is vital that users can pick up how to use an application quickly. If you are creating social software for professional use, this can be especially important, as users are less likely to spend monetary on software that requires costly training for users[7].

The objectives of the paper are to establish the level of utilization of selected mobile social software and to identify

effect of mobile social software customization on social software.

2. Related Literature Review

Learnability is a quality of mobile social software products and interfaces that allows users to quickly become familiar with them and able to make good use of all their features and capabilities. Learnability is one component of usability and is often heard in the context of user interface or user experience design, as well as usability[8].

Learnability also is defined as the degree of ease with which a user can learn a newly-encountered system without referring to documentation, such as manuals, user guides or FAQ(frequently-asked questions) lists[9]. One element of first-time learnability is discoverability, which is the degree of ease with which the user can find all the elements and features of a new system when they first encounter it. Learnability over time, on the other hand, is the capacity of a user to gain expertise in working with a given system through repeated interaction [10]. According to [11] he stated the learnability of a product can be measured in the following ways:

- 1) **Effectiveness:** The number of functions learned, or the percentage of users who successfully learn and use the product.
- 2) **Efficiency:** The time it takes someone to learn (or re-learn) how to use a product, and their efficiency in doing so.
- 3) **Satisfaction:** The perceived value the person associates with their investment (time, effort, cost) in learning how to use the product.
- 4) **Errors:** The number of errors made, the ability to recover from those errors and the time it takes to do so.

2.1 Mobile Social Software Utilization

Mobile social software has benefited in a wide range of applications that are discussed in this sub section as follows.

2.1.1 Software Utilization

Utilization basically means the areas where social software has benefited. It includes, delivers collaborative collecting and indexing of information, the knowledge is no longer limited by historically constructed visions of curricula. There are new ways of organizing and finding knowledge objects that are of interest to you and the groups with whom you share interests [12]. Mobile social software allows syndication and assists personalization of priorities. There are mechanisms to be passively active, one can choose what information streams you want to be kept informed about and that information will come to you rather than you having to go and seek it [13]. It will help you both keep abreast with your co-workers' online activity and those other information streams you actually prioritize [14]

Social software includes new tools for knowledge aggregation and creation of new knowledge. The massive uptake of MP3 music players is indicative of a move to collecting material from many sources and aggregating it for our personal use [15]. There are also tools that allow that content to be modified and incorporated in new formulations the concept is known as mash-up [16] Social software also feeds several platforms as is appropriate to the creator, recipient and context. Creators and users of social software tools and content know their lives are not constrained to desktops, they use many media: mobile phones, personal digital assistant, MPEG-2 Audio Layer III players and games consoles [17] They increasingly expect that the digital part of their life will integrate with them in the context that they are in [18] Since there is no study that has been done on the relationship between utilization and learnability, there is need to carry out this study.

2.2 Social Software Applications

Social software applications relevant to this study include blog, wiki, social bookmark, and Really Simple Syndication.

2.2.1 Blog

A blog or weblog, is a website containing individual articles or post which are usually presented in reverse chronological order. Each post is associated with a uniform resource locator (URL) which makes it easy to find, even after the post has been relocated [19].

Many blogs encourage comments and trackbacks the comments in the form of a post made on the commenter's blog and linked back to the source post weblogs are best suited for experts to broadcast their expertise to a large audience as well as for average people to share their stories or diaries within a small group [20].

The blog offers an easy publishing tool for posting information as well as getting feedback to and from the public. Both of them are easy to learn and use with pre-designed templates and step by step user guidelines [21] Confidentiality and quality concerns have been included, all the postings go to public unless the site owner limits the access. Blogs are time consuming and involves a lot of efforts to maintain the quality of the site and keep it on task. Public publication can also result in becoming an easy target for spam or vandalism if not managed properly [22].

2.2.2 Wiki

A wiki is a website on which users collaboratively modify content and structure directly from the web browser. In a typical wiki, text is written using a simplified markup language and often edited with the help of a rich-text editor. According to [23] wiki software is created incrementally by a group of collaborative users. Wiki content pages resemble regular web pages the authors can write their own pages in plain text or with a simplified mark-up language. The wikis are like an online whiteboard which allows multi-users to edit the same document users can gradually improve each other's contribution [24].

The wiki eases the frustration of navigation for the posted articles and discussion in relation to particular topics. With recent change feature, wikis have the capability to track every edit and to revert back a previous version of postings despite that it has the limitation, anyone can edit so this may be too open for some applications, for instance confidential documentation [21] however advice on the need to regulate user access.

2.2.3 Social Book Marking

Social bookmarking is a way to store, organize, share and search bookmarks to web pages using a web service rather than the bookmarks or favorites function of a web browser [25] Most services encourage users to tag each bookmark with words which describe the meaning of the content which then serve not only as an organizational structure but also as a way of aggregating bookmarks posted by different people on the same topic [26].

Social bookmarking helps to share files, documents, research papers or other multimedia files from social media networking sites. It also helps to manage multiple accounts and despite that it has the limitation of the user need to manage his or her social bookmarking account regularly to get continuous traffic to his website. In some cases if you bookmark number of sites on social bookmarking network, a lot more time to find the website if you do not know the name of the required website is not known [27].

2.2.4 Really Simple Syndication (RSS)

RSS is a method of publishing frequently updated web content. Each Really Simple Syndication (RSS) feed is an XML-formatted document containing abstracts or the full text of each item when combined with an RSS aggregator or feed reading software the subscribers can automatically track a large number of websites without actually visiting the sites [28].

RSS feeds allow a user to keep track of many different websites in a single news aggregator. The news aggregator will automatically check the RSS feed for new content, allowing the content to be automatically passed from website to website or from website to user [29].

RSS feeds will automatically update themselves any time new information is posted, so the information your subscribers receive via their RSS reader or news aggregator is timely [30]. RSS is Spam free, thus subscribers don't have to worry about wading through huge amounts of spam in an attempt to get to the information they are actually interested

in. More so, it is easy to unsubscribe from an RSS feed. If one does not like information contained in an RSS feed, they can simply remove the RSS feed from their RSS reader or news aggregator in order to unsubscribe [31].

The major limitations in RSS is that it includes content that can easily be copied and replicated, regardless of whether you want it to be or not. Few aggregators respect the copyrights of content contained in an RSS feed and tracking subscribers is very difficult to due to the number of subscribers who read an RSS feed or the items contained in an RSS feed [32].

2.3 Significance of Mobile Social Software

Mobile social software takes the advantage of mobile computing algorithms wireless technologies and real-time location systems to help people re-connect with their physical communities and surroundings [33]. With the widespread adoption of powerful mobile devices such as smart phones these applications will fundamentally change the way we interact with each other and with the physical world such applications can help people stay in touch anytime, anywhere, provide real-time recommendations about people, places, and events and deliver personalized content function of the user's geo-social context [34].

The internet provides new opportunities to realize these relationships while small online communities have grown into huge portals. Additionally, weblogs have established themselves as a new medium and a form of social contact as well the number of private websites and personal repositories is enormous people are using virtual worlds to present themselves to others [35].

Many social networking sites incorporate an instant messaging feature, which lets people exchange information in real-time via a chat. Lastly, social media has revolutionized the speed of the news cycle. Most news organizations now rely on social media sites to collect and share information. Social media tools are steadily becoming a mainstream source for breaking news [36].

2.4 Customizability

Customizability has been defined as what many users desire when they want the interface to adapt to their needs and customs. This modification can be done by the user for easy adaptability. Some of the most common customizations that are required include; providing a choice of methods, allowing short-cuts and permitting users to change features [37].

Customizability is the modifiability of the user interface by the user. From the system side, the user is not concerned with modifications that would be attended to by a programmer actually changing the system and its interface during system maintenance. Rather, we are concerned with the automatic modification that the system would make based on its knowledge of the user [38].

Customization could be very limited, with the user only allowed to adjust the position of soft buttons on the screen or

redefine command names. This type of modifiability, which is restricted to the surface of the interface, is referred to as lexical customization [39].

Customizability of a software will generally produce the most efficient system as it can provide support for the specific needs of the user, which might not be available in an off-the-shelf solution and will provide greater efficiency or better user service [40].

2.5 Familiarity

The familiarity principle is concerned with the ability of an interactive system to allow a user to map prior experiences, either real-world or gained from interaction with other systems, onto the features of a new system. This is an externally oriented criterion, which captures the extent to which the user experiences a real-world parallel to the system. Familiarity attempts to measure the correlation of users knowledge with the skills needed for effective interaction [41].

Several interactive systems such as software applications are designed in such a way that their goal is to help the user to create an analogy between an object or situation and the computer application. The users will be more familiar with that application because they will be able to apply the knowledge that they have about the object or situation to the computer applications or computer based softwares [42].

3. Methodology

The paper adapted mixed research design. The primary data used in the paper was collected from a survey carried at Kericho county Kenya, targeting mobile social software users. Survey was used as it allows you to measure the significance of the mobile social software on the overall population, the target population was 6,000 and the sample size 361 of respondents was selected.

While interviews were used to validate the data that was collected by the questionnaires since mobile social software experts were interviewed the sample size of 30 respondents was selected.

The study achieved 94.9% response rate of the target. This response rate was considered appropriate for analysis and reporting as supported by [43] indicating that response rate of 90% and above is excellent. Descriptive statistics were computed, the results are tabulated in the next section.

4. Results

The following section provides results of mobile social software utilization and customization.

4.1 Assessment of Social Software Utilization

Analysis was computed to determine respondents' extent of utilization of the social software. It was observed that 40% of the respondents use WhatsApp to access advertisement and entertainments. It was also observed that the software was used in chatting and messaging with 38% of WhatsApp

users in the affirmative to this. Regarding video conferencing, Facebook led with a majority percentage of 31.6%, followed by Twitter at 17.4%. It was noted that WhatsApp was majorly used to keep in touch with professionals (38.8%). Facebook followed at 15.7% and lastly by Twitter at 3.8%.

It was also observed that a majority of Facebook users used the software to meet new friends commanding 38.8%. This was followed by WhatsApp and Twitter at 22.6% and 2.8% respectively. Concerning the search for job related information, majority of the respondents used Whatsapp (38.3%) followed by Facebook (17.7%), and Twitter at 5.8%. It was clear that 60.6% of the respondents agreed that they accessed the latest news across the three networks and that they also searched for knowledge, education and research (87.7%). Table 1 illustrates findings concerning respondent extent of utilization of mobile social software.

Table 1: Extent of Utilization of Mobile Social Software

Software feature	Facebook %		WhatsApp %		Twitter %		Total %
	Yes	No	Yes	No	Yes	No	
Chatting and Messaging	17.7	11.0	38.0	23.5	5.5	4.3	100
Access Advertisements	15.7	13.0	40.0	21.4	5.8	4.1	100
Entertainment	15.4	13.3	40.0	21.4	6.1	3.8	100
Knowledge	13.0	15.7	33.0	28.4	4.6	5.2	100
Video conferencing	31.6	11.3	4.1	29.9	17.4	5.8	100
Education and Research	17.1	11.6	37.1	24.3	6.1	3.8	100
To keep in touch with professionals	15.7	13.0	38.8	22.6	3.8	6.1	100
Meet new friends	38.8	15.7	22.6	13.0	2.8	7.1	100
Access latest news	17.1	11.6	37.7	23.8	5.8	4.1	100
Search Jobs related Information	17.7	11.0	38.3	23.2	5.8	4.1	100
I spend more than 3 hours per day using the software	15.7	13.0	36.5	24.9	3.8	6.1	100
I have used the software for more than 3 years	21.5	7.2	45.2	16.2	7.5	2.3	100
I'm satisfied using the software	15.4	13.3	35.4	26.1	5.5	4.3	100
I frequently use the software in uploading and downloading.	34.8	12.5	16.2	26.7	6.7	3.2	100

Source: (Research Data, 2018)

The analyzed data show that 36.5% of respondents agreed that they spend more than 3 hours per day using WhatsApp,

Similarly, 58.0% avowed that customization does not create errors in WhatsApp as compared to Facebook and Twitter mobile social softwares. However, 36.5% contested that customization does not downgrade the performance of the software. This finding indicates that the social software allows the user to customize its features enhances learnability. WhatsApp was the most easy to customize its functionality without creating any errors.

5. Conclusion

The results indicated that as the given mobile social software is widely used, its learnability tends to increase. This is because of the fact that, as the users interact with the software, they learn through experience thus improving its learnability. There is therefore a positive relationship

followed by Facebook which had 15.7%. Only 3.8% of the respondents indicated that they used leased time on Twitter. It was clear from the findings that a majority of the respondents have had the WhatsApp software for more than 3 years followed by Facebook and Twitter with 15.7% and 3.8% respectively.

From the analyzed data, 34.8% of the respondents affirmed that they frequently use the Facebook software in uploading and downloading items on social media followed by WhatsApp and Twitter with 16.2% and 6.7% respectively. Finally, 56.3% of respondents agreed that they were satisfied using the mobile social application software across the three social networks under investigation while 43.7% were dissatisfied. This finding indicates that there are new ways of organizing and finding knowledge objects that are of interest to you and the groups with whom you share interests. This finding implies that as the given mobile social software is widely used, its learnability tends to increase. This is because as the users interact with the software, they learn through experience improving its learnability.

4.2 Customization

From the analysis at Table 2, it was noted that 57.7% of the respondents agreed that the WhatsApp the software allows the user to customize its features followed by Facebook and Twitter respectively with 17.3% and 7% percent respectively. Findings are as shown in Table 2.

Table 4.1: Percentage of agreement on Customization of Social Software

Software features	Facebook %		Whatsapp %		Twitter %		Total %
	Yes	No	Yes	No	Yes	No	
The software allows the user to customize its features	17.3	5.6	57.7	7.0	7.0	5.4	100
Customization does not need much effort	15.9	7.0	42.3	22.3	9.3	3.2	100
Customization enhances learnability of the software	25.3	2.6	52.7	7.0	6.0	6.4	100
Customization does not downgrade the software	15.9	7.0	38.3	26.3	9.3	3.2	100
Customization does not create errors	20.0	2.9	58.0	6.7	9.0	3.4	100

Source: (Research Data, 2018)

between social software utilization and learnability It was also noted that WhatsApp was the most preferred mobile social network as compared to the Facebook and Twitter. The research also observed that users were frequently using social software to access advertisements, video conference, for educational purposes and conducting research, meeting new friends, and for entertainment reasons. These elements to a large extent have enhanced the social software learnability by the user.

6. Recommendation

The most learnable applications are those that comply with the conventions of other similar programs. Learnability can be optimized by creating simple user interface designs that are predictable in layout and navigation. A great way to improve learnability is by finding out what the expectations

of your users are before they use the application. This can be in a focus group or through requirements engineering. learnability can also be used to discover how quickly end users pick up how to use the application. If the learnability test is carried out several times with the same user at different intervals, you can also see how memorable the application was.

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Author Profile

Masese Bogomba Nelson holds, Masters of computer applications degree from Periyar university India He is currently a lecturer in IT at Kabarak university Kenya. His research interest is mobile applications and security.