Chat Metric For Li(fe)brary at Home WhatsApp Forum with User Satisfaction of NIELIT – Itanagar Library, Arunachal Pradesh

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Abstract

Good Library User service is like an analog clock where all the gears work seamlessly in a coordinated manner. The mechanism is reliable and effective but malfunctioning of just one gear can bring the whole clock to a standstill. Although the performance of library user service might not be dependent on just one factor, tracking key live chat metrics can help avoid common issues like long waiting queues, missed chats, bad user experience, and ultimately frustrated Library Users. WhatsApp is the third most used social media app in the world. As the user base continues to grow, so does the number of messages sent on a daily basis. This is a text and sentiment analysis of a WhatsApp group chat of Li(fe)brary at the Home WhatsApp Forum with User Satisfaction of NIELIT – Itanagar Library, Arunachal Pradesh. For the purpose of librarian service to the library users during lockdown created to this group and found Impact of 178 days and 193 library users with 1088 messages, shared 323 Media messages and found the most active day in this Forum is October 24th, 2020. 93.8 percentage of Nielit Library Users in this li(fe)brary at Home stated for Forum activity like library at home.

Keyword: chat metrics, Library, links, resources, messages, WhatsApp**,** Library users, librarian

Introduction

While research has explored many aspects of text and instant messaging over the past 15 years, the majority of this work has focused on individual messages. Relatively little is known about group messaging, which has become increasingly popular. Group messages are text or instant messages sent to two or more recipients. Responses are sent to all members of the group, as with Reply All emails, with each message often generating a new mobile phone notification. Messages are organized in conversation threads among those people. Other group messaging apps, include: text messaging (MMS), iMessage, Facebook Messenger, Google Hangouts, Kik, Skype, WhatsApp, and Viber. All of these tools allow users to send group text and multimedia messages, and many offer additional group features, such as naming message groups or liking messages.

Use of social media has established itself as one of the important information carriers in the field of disaster management. However, use of Twitter and Facebook by victims, first

responders and others generates information that is varied, unstructured and unreliable. On the other hand, NGOs, operating in the disaster area, are often involved in intra-organizational communication using messaging apps like WhatsApp, and their group interactions can help in gathering meaningful data for situational analysis and need assessment. Our focus is to automate the process of filtering relevant information, query-based clustering of pertinent information from a WhatsApp group conversation of a specific volunteer group, so that situation analysis and need assessment can be done more rapidly. We have evaluated our scheme using WhatsApp chat log of a medical volunteer group in two post-disaster scenarios and concluded that it can provide valuable insights about region-specific resource requirements and allocation for effective decision making.

Chat Metrics Many chat metrics simply mirror their live-agent counterparts. For example, customer satisfaction for chat is the same metric as customer satisfaction for the live (voice) channel. However, the values for the metrics in each channel are likely to be different. Customer satisfaction in the traditional voice channel might be 80 percent, while customer satisfaction for chat might be 90 percent, or vice versa.

WhatsApp and Library (Librarians with User)

WhatsApp has its own advantages for service delivery in libraries and information centres such as: WhatsApp will encourage partnership and advance powerful correspondence between librarians and their users. Financially the costs of WhatsApp are perceived to be low, and using WhatsApp requires little training. Information about new developments in the library can be easily, quickly and cheaply disseminated. WhatsApp can increase the engagement and interactions among Librarians and their users. Librarians can create group chats with different disciplines and interact with students regarding new material, assignment help, reviews, new publications, new acquisitions or any useful information that a librarian has posted on Libguides: you will be promoting your Libguide at the same time.

There will also be a few challenges along the way, for example: WhatsApp requires considerable time commitment from library staff. There are limited funds available in libraries to support more advanced social media tools and the training that may be required to enable this. Librarians may not post PDFs of electronic books or articles on WhatsApp but may give instructions to users on how to access them via the library website or the Libguide. Students may suffer with data availability when they are not on campus but data for WhatsApp is cheaper than sending an email. Information technology has changed the nature of library services. Smartphone is the essential tool for today's life and we can use WhatsApp on Smartphone's to provide library services to users.

About Li(fe)brary at Home – WhatsApp Forum

Li(fe)brary at Home WhatsApp Forum created for National Institute of Electronics and Information Technology, Itanagar Centre, Arunachal Pradesh, India library users by the Assistant Librarian Dr. G.Stephen to provide the special library service to during Lockdown period of COVID-19 Pandemic. The main motto of this forum to provide the library services and resources (eBooks, electronic journal articles), online exam, online class notification alert, syllabus, model and old question papers shared etc. Also promoted the E-Learning environment like SWAYAM, Nielit e content, NPTEL portal, virtual lab use and access. This forum included 193 short term course students (CCC, PGDAPD), long term course students (O-Level), Faculty members, scientist and staffs. Forum started 27 March 2020 and deleted Sunday, 20 September 2020. Active duration of this forum exactly 25 weeks and 3 days that is 48.63% of 2020. Let Covid-19 not fully stopped NIELIT – Itanagar Library activities and its continued with Li(fe)brary at Home – WhatsApp Forum.

Review of Literature

Stephen (2019) completed study entitled the effective use of Whatsapp messenger among library and information science professionals in north east region, India. The study found that purpose of using WhatsApp among the LIS professionals 100% of the LIS profession using WhatsApp reply to the user queries and real time communication between library users and also disseminate the Library website/Social Media/Library Map/OPAC link. Considering the service possibilities via WhatsApp to the users Ask a librarian service, User discussion forum, reminders and notification library news services are 100% possible by the LIS professionals. About reply from the LIS professionals to users 100% of the LIS professionals using the way to reply simply text (Short Messages).

Niranjana and Chanda (2018) conducted a study WhatsApp as a means of Sharing information among LIS professional and found People mostly use instant messenger app for communication, in that case, it will be very effective if the library uses instant messenger app like WhatsApp for delivering information, and it would be a great opportunity for the library to implement WhatsApp to reach end users of the library for better service satisfaction. On the other hand, WhatsApp may also act as a tool for disseminating knowledgeable information among library and information professionals of North-East states of India.

Ansari and Tripathi (2017) studied, entitled Use of WhatsApp for Effective Delivery of Library and Information Services. In that paper the researcher tries to examine the librarians and the users' attitude towards getting WhatsApp as a tool for providing library information services and suggested Libraries can use WhatsApp for delivering library services. Findings indicated that respondents showed a positive attitude toward getting services over WhatsApp. Most of the

respondents believe that the use of WhatsApp can improve alert services (CAS, virtual reference, notifications) and libraries can utilize.

Y.Sudharani and K.Nagaraju (2016) conducted study WhatsApp usage among the Students of SVU College of Engineering that found majority of the respondents 93(82%) expressed that they are expecting WhatsApp a librarian service from their library. Only 20 (18%) responded negatively. "Whats App a Librarian" service is meant to provide general information to the users in shortest possible time. It is a direct and user-friendly service for Library users to use WhatsApp to contact librarians, so as to locate general library information and seek assistance when using the library. User can utilize the service to get a quick and brief answer of the library resources and services. \

Olaniyi (2015) had discussed the features and facilities of Whatsapp in academic libraries to easily send real time messages of individual or group who used library in free of cost. These facilities can provide anytime, anywhere required. He illustrated the process of implementation of Whatsapp in libraries.

Dayani Ahad & Ariff Lim (2014) study examines the Whats App usage among the undergraduates at University of Brunei, Darussalam. The study shows that a majority of the undergraduates use WhatsApp for more than three hour per day. The study found that Whats App was very useful for group discussions and interaction.31.61% of the respondents opined that it was disruptive to their study. The findings of this study revealed that a majority of the undergraduates (67.54%) do tend to disseminate information only if they believed it to be useful, relevant or true.

Aims and Objectives

- To find the total numbers of text and media messages are in the group during lockdown.
- To analyze the most popular day and active time by day of Forum.
- To examine the top five chat with user.
- To determine number of media message sent per user.
- To know who start the new session long and short inactivity.
- To identify who sends the Most? & who replies to user most often?
- To examine the satisfaction level of Librarian service during lockdown through Whatsapp Forum.

Methodology

Chatvisualizer is generating data visualizations of WhatsApp chats. Retrieving chat logs from the Android or iOS app is very straightforward: Simply choose "More" in the menu of a chat, then "Export chat" and export the history to a txt file. Once data obtained the txt file, it is

necessary to load the file into the chatvisualizer website. The tool/website can handle txt and zip files directly, so simply upload the file name. The website is extremely versatile and allows researcher to obtain a host of information about the messages. This is a group Li(fe)brary at home chat amongst a group of NIELIT library user that during lockdown period, with the data frame being made up of 1088 messages. After cleaning the data and removing profanities, let's have a look at the results:

Data Analysis and Interpretation

Details	Result
Duration	**March 27 – 2020 – 21 September - 2020**
No of Days	178
Total members chat	193
Messages Total	1088
Media Messages	323
Words total	72,936
Letters in Total	470,135
Most Active Day	Oct-24,2020
Longest message	**17862 Character (User 1)**
Shortest Message	**2 Character (User 87)**
Averages	
Word Per message	78.26
Letter per message	504.44
Messages per day	6.11
Letter per day	1,141
Total file and location send	321

Table 1 - WhatsApp Data Analysis Overview   *Figure 1 – Forum Display*

Above the table indicated clearly the total number of messages (1088), total number of media messages (323), words in total (72,936), letters in Total (470,135), most active day (October 24th, 2020), longest message with 17862 characters by the librarian (User 1) and shortest message with 2 characters by the faculty (User 87). Averages also found word per message, letter per message, message per day, letter per day and also total file and location sent in this Forum.
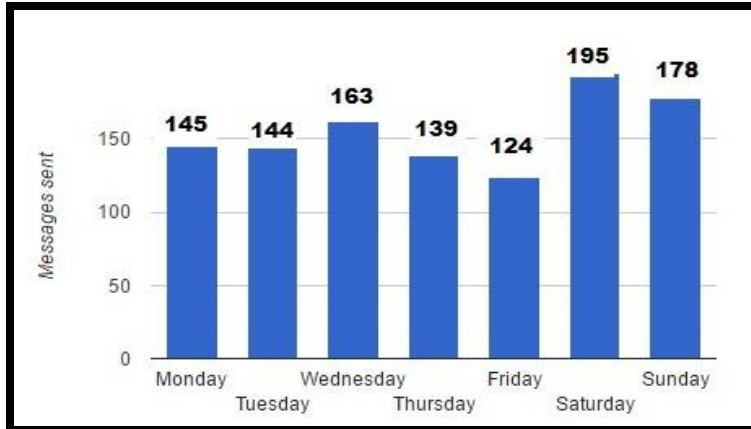
Most popular day for texting

Figure 2 - Most popular day for texting

Social media marketing and Library services is an ever-changing game, no matter what platform uses. Marketing tactics and Library services evolve along with social media platforms. After analyzing WhatsApp messaging data here at Simple Texting, a common theme was present. The most common day to send is Saturday with 195 messages and the least popular day to interact is Friday with 124. The second and third popular day in this WhatsApp Forum of Li(fe)brary at Home is Sunday (187) and Wednesday (163).
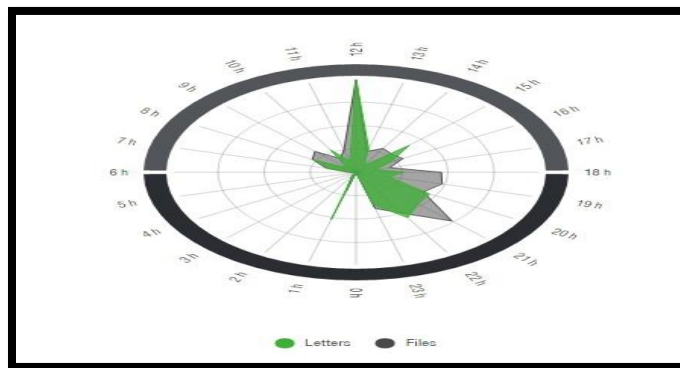
Active Time by Day

Figure 3 - Active Time by Day

Actually, the time *of* day, user post may be even more important than the day's user post to WhatsApp. No matter what day library user post, the user probably gets at least some engaged from the Forum. But timing is everything. And, of course, each day of the week has its best times to post! Here Chatvisualizer shown about Active time of texting message in this forum evening 20 – 22 Hrs and For Files sharing active time is thorough the day especially morning 8am to evening 9pm.

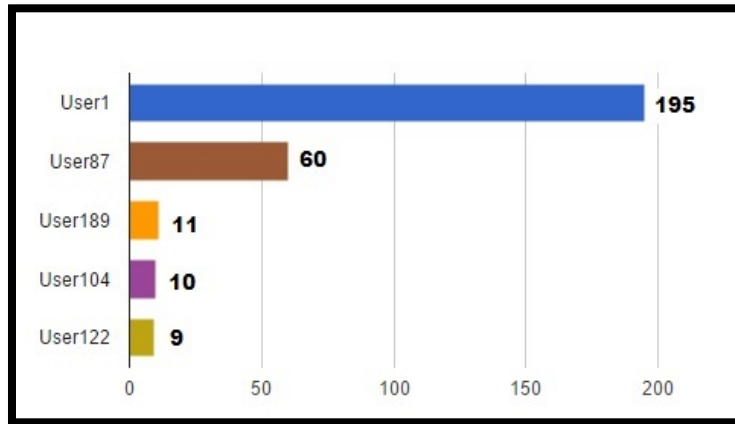**Top Five Chat With User**

Figure 4 - Top Five chat with User

Out of 193 Nielit Ita Library users in this Forum of Li(fe)brary at Home, the top 5 users are identified and visualized through chatvizualizer tool. The most messages library sources (ebook, links, article, exam information) are shared by the super user as a librarian. 195 messages are shared in this forum. Followed by user 87 a faculty of Nielit long term course shared 60 messages. Remaining three are active students with 11, 10, 9 messages respectively.

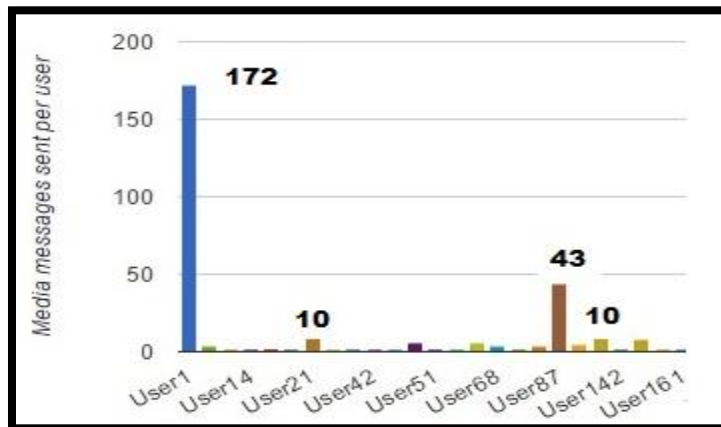**Media Message Sent Per User**
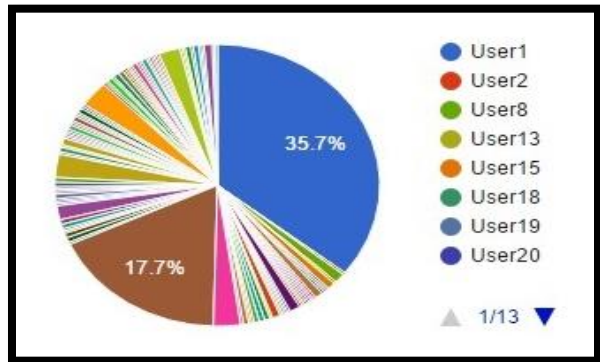

Figure 5 - Media Message sent per user

Li(fe)brary at Home WhatsApp Forum Use the message endpoint to send messages containing short video, audio, images, or documents (Pdf/PPT/Word format) to the Library Users. Currently, there are two ways to send messages with the WhatsApp. Above the figure noticed 172 media messages sent by the super user (Librarian) followed by user87 sent 43 media messages in this forum. Only 10 messages sent by two users those are user21 and user142.

Who start the new session after long inactivity and short inactivity?
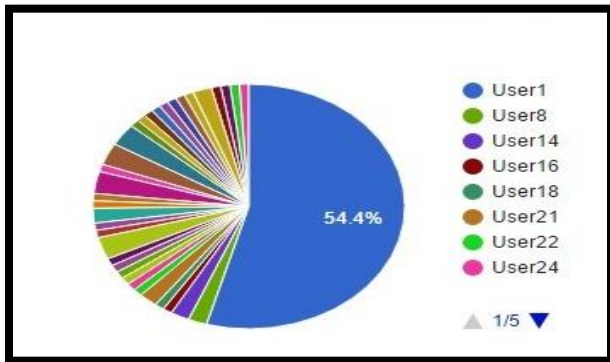

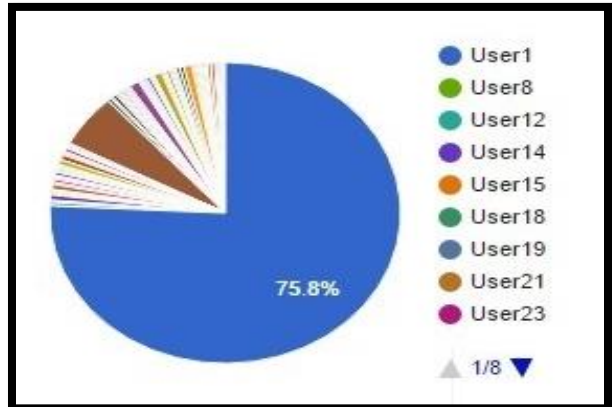*Figure 6 - Long Inactivity*   *Figure 7 - Short Inactivity*

Above two figures (6 & 7) are indicated about who start the new session long and short inactivity. With 54.4% messages librarian started new session long inactivity. The Figure shows two users are involved for start new session short inactivity more that with 35.7% super user and 17.7% second user of long-term course faculty.

Who sends the Most? & who replies to user most often?
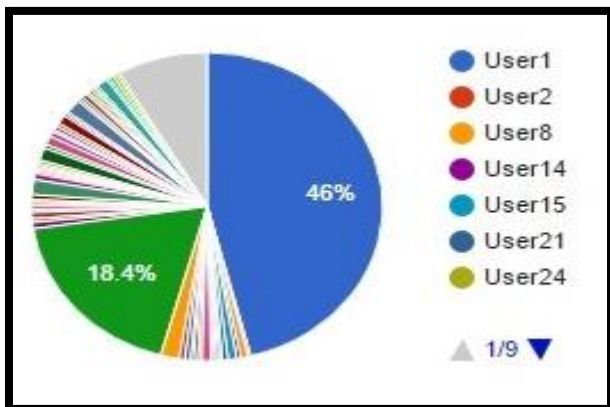
Figure 8 - Who sends the Most?   *Figure 9 - who replies to user most often?*

Above these twp figures are mentioned about who sent a number of messages and who replies to user most often. 46 percentage messages are sent by user1 (super user / librarian / admin) of this forum for the NIELIT library users. Followed by a faculty with 18.4 percentages. 75.8 percentages of the replies are by the librarian to satisfy the library users.
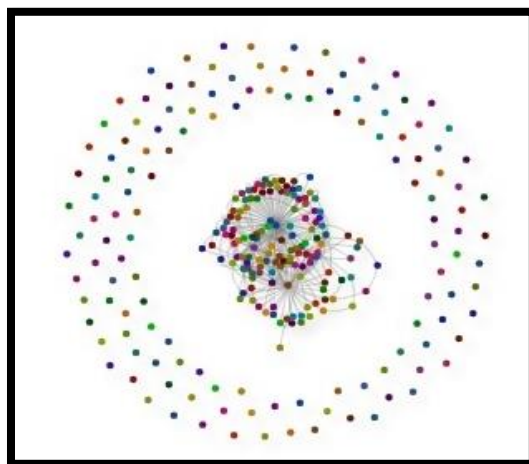
Communication Network

Figure 10 – Communication Network Visualization

Above the figure shows about communication network that is the pattern of directions in which information flows in the WhatsApp Forum. Many messages are not connected because of those information's are may be common notifications, announcements, users requested eBooks and links (media messages).

Satisfaction about WhatsApp Forum/Librarian Service during Lockdown

S.N	Opinion	Frequency	Percentage
1	Forum Activity felt like library at Home	181	93.8
2	Shared Resources are very useful	123	63.7
3	Forum Encouraged e learning activity	132	68.4
4	Known Many new resources/links/lab virtually	109	56.8
5	Satisfaction For Librarian / Faculty Reply to students query	134	69.4
6	Webinar Information's alert are useful to participate and update subject information especially in Information Communication Technology	127	65.8
7	Librarian shared required information/sources timely	142	73.6

Table 2 - Satisfaction about WhatsApp Forum/Librarian Service during Lockdown

Respondent's opinion and suggests are requested to finish this study via a short Google form. All 193 respondents are responded within two days for this satisfaction analysis. 93.8 percentages of Nielit Library Users in this Li(fe)brary at Home stated for Forum activity like library at home. Followed by 73.6 percentage of the forum members are shared their opinion for Librarian shared required information/sources timely, 69.4 percentages of the respondents Satisfied For Librarian / Faculty reply to students query. 68.4 percentages replied for Forum

Encouraged e learning activity, Webinar Information's alert is useful to participate and update subject information, especially in Information Communication Technology and 63.7 percentage of Nielit Library users opted for Shared Resources are very useful. Only 56.8 percentages of the library users mentioned for Known Many new resources/links/lab virtually.

Findings and Suggestions

The most common day to send a message is Saturday with 195 messages and the least popular day to interact is Friday with 124. Active time of texting message in this forum evening 20 – 22 Hrs and For Files sharing active time is thorough the day especially morning 8am to evening 9pm. The most messages library sources (ebook, links, article, exam information) are shared by the super user as a librarian. Admin of this Forum librarian shared 195 messages in this forum. Followed by user 87, a faculty of Nielit long term course shared 60 messages. This study found 172 media messages sent by the super user (Librarian) followed by user87 sent 43 media messages in this forum. Only 10 messages sent by two users those are user21 and user142. Two super active users are performed well through this result. This study indicated who start the new session long and short inactivity. With 54.4% messages librarian started new session long inactivity. Two users are involved for who start the new session short inactivity more that with 35.7% super user and 17.7% second user of long-term course faculty. Data revealed that who sent a number of messages and who replies to user most often. 46 percentage messages are sent by user1 (super user / librarian / admin) of this forum for NIELIT library users. Followed by a faculty with 18.4 percentages. 75.8 percentages of the replies are by the librarian to satisfy the library users. All 193 respondents are responded within two days for this satisfaction analysis. 93.8 percentages of Nielit Library Users in this Li(fe)brary at Home stated for Forum activity like library at home. Followed by 73.6 percentage of the forum members are sharing their opinion for Librarian shared required information/sources timely, 69.4 percentages of the respondents Satisfied for Librarian / Faculty Reply to students query.

Information communication technology playing a major role in transmitting idea, thought and information between one to another. Social networking websites are a good example of communication network and it is a social structure that lets the user interact and work collaboratively with other users. WhatsApp is a free instant messenger application that allows users to send text messages and multimedia files. WhatsApp is an MIM application which can be used in libraries for delivering various services. It has many features like, multimedia sharing, instant message delivery, real-time audio recording conversation and group messaging. The application of WhatsApp can change the nature of library services and its user friendly also. Libraries/Librarians can provide a wide array of services to interested users on WhatsApp like Current Awareness Service (CAS), Selective Dissemination of Information (SDI), Reference service Ask Librarian, User Discussion Forum, Document Reservation, Abstract Service, Acquisition Feedback, Reminders and notifications, Library Instruction, Library News, E-book searching etc.

Conclusion

Today in rapidly moving world, anyone can see the change in every moment. Therefore life is getting complicated in every phase, but the technology has made life very convenient. It is evolving in the world at a very fast pace and affecting people from various ways. WhatsApp is an amazing application, and with the help of it Library can connect library users to the institute and the whole world. It is an effective medium for the flow of information and ideas. This application is advantageous for librarians from many ways which occupies a major part of library day-to-day life. And WhatsApp is one of the medium of such technology. That is the reason behind the researcher created the group and managed /served without any difficulties to the library users and maximum try for delivered library services at their home during covid-19 lockdown days. The study revealed that WhatsApp is a medium of making communication easier and faster, thereby by enhancing the effective flow of information, idea sharing and connecting people easier. Examining it empirically, it is found that WhatsApp has also a profound positive impact on library services among the library users of their education during the Covid -19 lockdown period in India.

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