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### **Student's Affinity towards Group Chats provoking NDL and NPTEL Registrations**

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#### **ABSTRACT**

Due to the invention of social media, people were able to easily share their text, image, audio and video files. This information sharing facilitation hub has introduced an app named "WhatsApp" which has got huge name recognition as trillions of people use this App per day. This paper speaks much about the use of Whats App for sharing information particularly about Digital Libraries and E-Learning course registration. The research model includes quantitative analysis as to identify the percentage of chat distribution that provokes student's registration. Finally out of 63 students, 52 got registered belonging to same study campus and age group within a day.

**KEYWORDS:** BI (Business Intelligence), WOM (Word-Of-Mouth), MOOC (Massive Open Online Course)

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## INTRODUCTION

Our globe is completely getting digital transformation. Due to this huge voluminous of data gets shared through internet, smart phone, social media and etc. New trend of technological innovations are forcoming in order to analyze and interpret the data shared among the public. Social media is prominently quoted as ‘an organism with a million tongues and twice as many eyes’, ‘democracy’s pipeline’, ‘an amplifier of unfiltered emotion’ and also as ‘a virtual megaphone with a global reach’ used globally for transmitting data as shown in figure1. Exclusively through WhatsApp exactly 34 billion texts are shared among approximately of 700 millions of people.



Figure1.Social Media

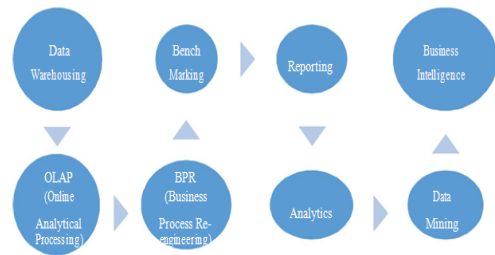


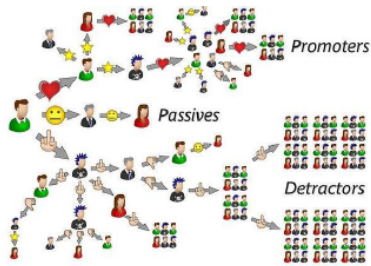
Figure2. BI Components

## EMERGENCE OF BI

One of the world's leading information technology research and advisory company- Gartner, predicted that vibrant and drastic revolution has happened in the way the vendor's respond to meet the client's need and they highly focus on standardizing the BI tools. This embracing technology includes various components as shown in figure2 mainly penetrates on social media like Twitter, Facebook, Blogs and online shopping sites like Flipkart, Amazon, Shopclues, Fabfurnish, Greendust and Pepperfryetc to fetch customer feedback on consumable products.

## WOM or eWOM

Currently, 7% of the products are sold due to the right handling of eWOM (electronic Word-Of-Mouth) or WOM (Word-Of-Mouth) strategy in the world market. Obviously, the traditional advertisements are getting replaced by eWOM strategy as shown in figure3. This strategy includes mainly focuses on maintaining social currency, triggering tactics, aiming at pushing emotions, public gathering, trying to attain practical values and in framing stories. All 4P's (People/Product/Policy/Process) are getting viral based on their WOM weight. And this WOM act as a vessel carrying the brand of the product/policy launched in the market.



**Figure3. Word-Of-Mouth Communication**

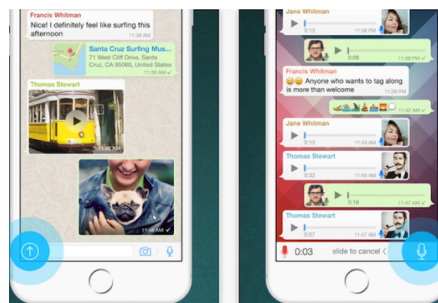


**Figure4. Marketing Tactics**

These short reviews once refined and analyzed can help us to get a crystal clear idea about the buyers' view and also predict they will have on the buying decision of the future customers as shown in figure4.

**WHATSAPP**

A Ukrainian American entrepreneur Jan Koum quoted "WhatsApp is like Oxygen". And thus it is initially started off as friendship or networking tool, but then has now evolved into potential weapons of social mobilization. This tool not only monitor users who are actively engaged themselves in group or private conversation but also add their unique insights to reflect the changing moods of the public as shown in figure5. WhatsApp Business app is earmark at small businesses looking for connecting with their customers. "Checkpoint Tipline" is a feature which helps people to check the authenticity of information received. It limits or stops forwarding same message to more than 5 members globally to avoid spreading of fake news. The biometric authentication allows users to lock the WhatsApp by using Face ID or Touch ID.



**Figure5. Chat Conversations**

Most of the business people make use of this fine-tuned WhatsApp, to identify their right clients and improve their business processes. To justify the strength and effectiveness of using WhatsApp for brand penetration, product promotion, market segmentation in South India – "ShanmugaPriya a Chennai-based entrepreneur has got 70,000 members today to resell the sarees through 10 WhatsApp groups. Addingly, she quoted WhatsApp- as a very niche market and compact brand promoting tool which helps her to earn 1.5lakhs/month from being in home. Thus slowly WhatsApp has started replacing the SMS Messaging. The text or knowledge extracted from such WhatsApp group can help to make right decisions and really act as a best emotion detection tool. This has led to ultimate evolution of Big Data management and analytics.

**NDL - NPTEL**

NDL (National Digital Library) of India' - a MHRD (Ministry of Human Resource Development)

programme that includes huge repository of books available at one end as web-portal. It is a single window platform to provide relevant resources as integrated including multiple domains like Technology, Science and Humanities as shown in figure6. NPTEL (National Programme on Technology Enhanced Learning) was built basically on engineering and core science subjects with 235 courses in 2003. It is a MOOC (Massive Open Online Courses) act as a platform to listen lectures, videos, share materials, do assignments and quiz online as shown in figure6. The learning process is validated by providing self assessments in regular intervals and their certificates are so valid nationwide.

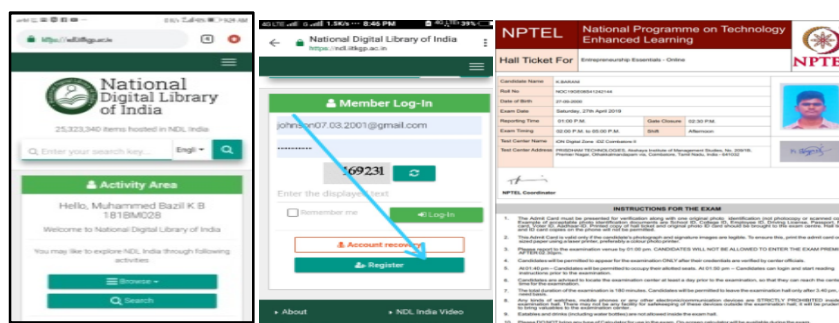


Figure6.NDL and NPTEL Registration

## REVIEW OF LITERATURE

Church, K. et al<sup>4</sup> compares SMS to MIM in order to highlight the reason for the success of WhatsApp. They also convey that ‘WhatsApp messages tend to be more social, informal, and conversational in nature, whereas SMS is seen as more privacy preserving, more formal, and generally more reliable’. Yeboah and Ewur<sup>8</sup> discovered that the use of WhatsApp has better improved the performance of students in Ghana by helping to have communication easier and faster. André Costa et al<sup>2</sup> proposed supervised regression algorithm to map factors that helps in employee communication to social media platforms. Sana Shahid<sup>7</sup> aimed to explore that WhatsApp helps in building interpersonal relationship and discovered that it is used more by Professionals for meeting business goals. He discovered and measured the frequency and composition of WhatsApp users along with the usage pattern and type of conversation they made. Ahmed et al<sup>1</sup> tried to measure the effects of mobile phones on the academic performance of students. The findings showed that themobilephones could beneficial for students to have in touch with each other and share useful information to some extent. Avi Rosenfeld et al<sup>3</sup> performed extensive statistical and numerical analysis of the data without analyzing the content to find the significant differences in WhatsApp usage across people of different genders and ages.

## OBJECTIVE

The main objective of this proposed work is,

- To analyze the frequency of messages shared in a particular day between student- student / student-class advisor.
- To observe or discover the messages shared in gender-wise.

- To calculate the number of messages shared in noon and night.
- To identify the frequency of media files shared by students related to registrations.

Under quantitative analysis, the main objective is to visualize the E-learning registration rate based on the parameters like reply time and distribution of messages.

### PROPOSED WORK

The chat conversations that are made on Group Chats are particularly about registering into NDL and NPTEL Courses. Those messages are then imported into G-Mail as shown in figure7. The conversation counts 592 messages out of which 46 are images and 6 are audios. Prior to that data cleaning is carried out to remove the unnecessary symbols, emoticon messages. Only the messages that discuss concretely on registration of course are filtered.

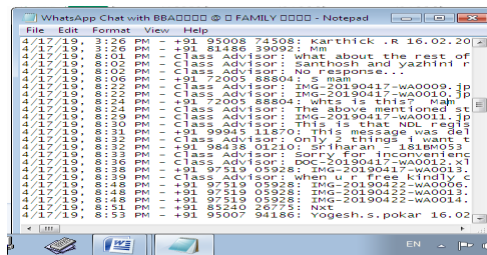


Figure7. WhatsApp Chats

**OBJECTIVE 1 (ANALYSIS)** Chat session starts exactly by 11.18 A.M on a non-working or vacation period and ends by 10.48 P.M. The Advisor is one who starts communicating about the NDL and NPTEL course registration needs and objective. Slowly the student started conversing about various domains and subject availability, date of registration, resource person, weeks and session details. Table-1 shows the number of messages shared between student/student is of high as 338 and student/Advisor is of 202.

Table1. Distribution of chat/reply in min

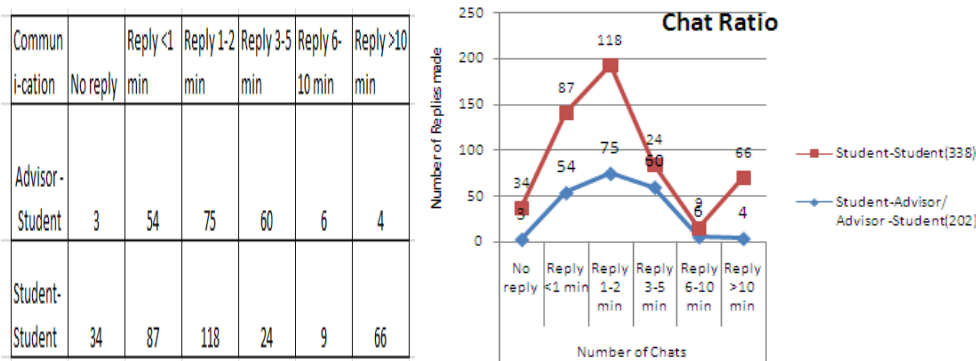


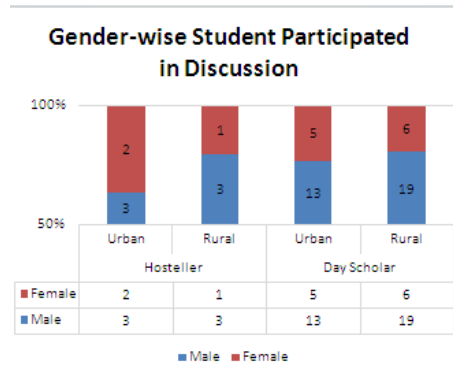
Figure8. Distribution of replies/min

### INTERPRETATION:

On observing the figure8, it is obviously clear that most of the discussions were made between students with the knowledge of Advisor, and it shows positive sign that the students are more interacting to each other concretely about the course details by viewing the online portals. The high curve that is reply

within 1 to 2 minutes between both student and advisor ratio reveals that the students are more interactive and about their interest to take part in such courses.

**OBJECTIVE 2 (ANALYSIS)**



**Figure9.Distribution of chats/gender**

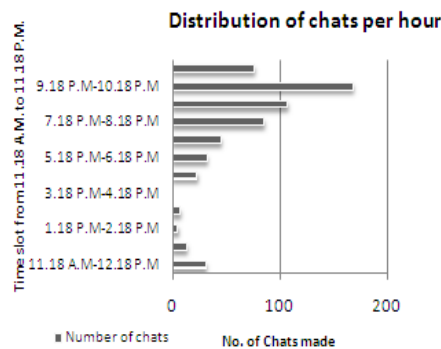
**INTERPRETATION:**

Out of 63 students,17 are female and 46 are male, figure9 shows that due to in availability of internet access and mobile accessibility only 14 female and 38 male had chat session from both rural and urban backgrounds

**OBJECTIVE 3 (ANALYSIS)**

**Table2.Distribution of chat/Time Slot**

Time Slot	Number of chats
11.18 A.M-12.18 P.M	31
12.18 P.M-1.18 P.M	13
1.18 P.M-2.18 P.M	5
2.18 P.M-3.18 P.M	7
3.18 P.M-4.18 P.M	0
4.18 P.M-5.18 P.M	23
5.18 P.M-6.18 P.M	32
6.18 P.M-7.18 P.M	45
7.18 P.M-8.18 P.M	85
8.18 P.M-9.18 P.M	107
9.18 P.M-10.18 P.M	168
10.18 P.M-11.18 P.M	76



**Figure10.Distribution of Chat/hr**

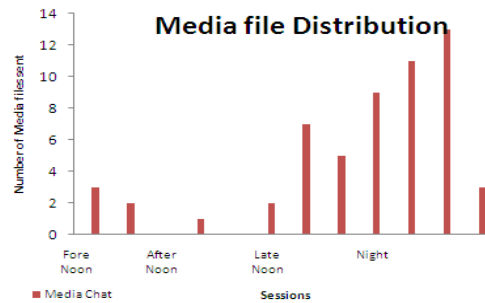
**INTERPRETATION:**

Table-2 shows that the time elapse between the messages is more particularly from 2:18 P.M. to 4:18 P.M. and is less from 9:18 P.M. to 10:18 P.M. Most of the students are habituated to use WhatsApp Chats in the bed time or night compared to study/working hours in the morning or noon as shown in figure10.

**OBJECTIVE 4 (ANALYSIS)**

**Table3.Distribution of Media files(Session-wise)**

Session	Media Chat	Text Chat	Number of chats
Fore Noon	3	28	31
	2	11	13
After Noon	0	5	5
	1	6	7
	0	0	0
Late Noon	2	21	23
	7	25	32
	5	40	45
Night	9	76	85
	11	96	107
	13	155	168
	3	73	76
<b>Total Chats</b>	<b>56</b>	<b>536</b>	<b>592</b>



**Figure11. Distribution of Media files/Session**

**INTERPRETATION:**

Table-3, shows that during forenoon and afternoon, only few students were discussing about the course, resource person, fee , exam date, duration and started to learn how to register. In between the chat session the students also got some doubt in registration procedure as to use whether NDL App directly or use their Google email account and that is shared as image file in the evening session. Once when they got finalized with particular course to join they started registering the course and most of those images are shared in the evening and night to advisor for final confirmation as shown in figure11.

**CONCLUSION**

Finally out of 63 students, 52 got registered (i.e., 82.53%) till last conversation made exactly by 10:48 P.M. The findings reveal that the mobile phones were playing vital role in E-Learning registrations during non-contact hours to some extent. They were able to communicate each other



through mobile phones and share important messages with their class mates and advisors.

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## **AUTHOR[S] BRIEF INTRODUCTION**

Nithya Ramachandran has completed her Ph.D in Computer Science in the year April 2018. She is pretty interested in undergoing research areas that focus mainly on analyzing and measuring emotion behind the conversations made in social media. She is also continuously focusing on various domains like machine learning, AI and Emotional Intelligence.