

Communication Divide: Understanding the adoption & usage patterns of CMC platforms in emerging markets

Dinoop Dayanand
National Institute of Design
Bangalore
dinoop.d@gmail.com

Vimal Sharma
Human Factors International
Bangalore
vimal.s@humanfactors.com

Praphul Chandra
HP labs, India
Bangalore
praphul.chandra@hp.com

ABSTRACT

Communication is the integral part of daily life. Different forms of communication have evolved for various needs. As more and more people use computing for communicating, the behavioral and societal effects of computer-mediated communication (CMC) are becoming critical research topics [3]. A key advantage of CMC is that it tends to make geographical distance irrelevant thus helping us bring friends, distant contacts etc. closer. However, it is widely recognized that in CMC, often the richness of communicating Face to Face (F2F) is lost. Various attempts in CMC continue to be explored to enrich these experiences for e.g. conveying emotions with emoticons [6]. This paper aims to understand the rich world of human communication: how people talk to different groups of people, their patterns, their behaviors while conversing face to face vs. CMC platforms, and to find out the differences if there are any, that can help us design the next generation computer mediated platform which will not only understand and support these different social communication nuances and also addressing it with an intuitive and immersive UX as close as the real world interaction. Our study was conducted in an urban metropolis and a small city India thus giving us an opportunity to compare the adoption, function & social effects of various CMC platforms. As far as we are aware, this is the first study to focus on CMC in emerging markets across urban & rural sectors.

General Terms

Design, Human Factors

Keywords

Computer mediate communication, Face to face (F2F) communication, User research, social networks, emerging markets, CMC Platforms.

1. INTRODUCTION

F2F can be considered to be the richest form of communication. At the same time, it has become a truism that computer-mediated communication (CMC) systems, as compared with previous communication technologies, are cheap, fast, and democratic; as such, their popularity continues to grow [2]. Every year new types of CMC enter the scene and a few become popular too. For instance, Facebook announced that it touched the 500 million-user mark on July 21, 2010 [7]. The current usage of CMC is on an all time high – across market & population segments. A recent

report notes that in a country like India, far more Indians have access to cell phones than to toilets and basic sanitation [5].

The increasing demands for effective communication have given rise to many opportunities for exploring and finding answers to questions such as - ‘What are people’s expectations from CMC?’, ‘What are the key elements that would enhance the way we communicate online’. The functions and impact of computer-mediated communication continue to being explored. Critical information (such as who uses it for what purposes) is lacking, and the social psychological significance is controversial [4].

2. DESIGN OF STUDY

The aim of the study was to get an understanding of the Communication ecosystem of the people of different age groups in both Urban and a Rural areas, how they communicate and with whom, if there are any preferred mediums in CMC, etc. also parallel to it we wanted to look into real world interaction F2F, how people interact, what are the particular things that creates the richness and are missing in the current CMC. The focus of the study was for India from an emerging markets perspective, for what insights we could gather that can help us in designing a CMC platform for the emerging markets where still a lot of mediums of CMC are fairly unknown to the population in small cities (Tier 3), towns and villages.

2.1 Approach

The approach we took was an ethnographic observation and a detailed interview method. The interview comprised of a specific questionnaire followed by an interactive exploratory interview asking about “a day in life”. This “day in life” was analyzed for “social interaction” activity. This also covered on observing the places where people meet up and talk to friends/relatives. All the interviews with the participants were video recorded, transcribed and translated for later analysis.

The first study primarily draws on interviews of 31 people conducted in May 2010 included a diverse groups including college students, young professionals, housewives, senior professionals and small businessmen. The study was conducted in Bengaluru a Metro (1st tier city) and Davangere, which is a small city (Tier 3), in a rural belt of Karnataka, India. The selection of the cities was done to find out the differences in the pattern of communication in a metro city and a rural city which did not have an influence of a metro city.

The second study was to do a comparative analysis on CMC vs. F2F and to find the drives and blocks in them. The aim of the study was to understand how people behave and communicate to others in an environment. This would in turn help to gather

insights and patterns that would help us make online communication as rich as F2F.

2.2 Methodology

The study was planned in two phases; first phase was to understand the preferences and the mediums in use for CMC: the patterns and ecosystem related to a user's profile. The second phase was to do a comparative analysis of CMC vs F2F and to find the drives and blocks in them. The method adopted for the first phase was shadowing and depth interviews. The study participants varied in age groups between 18-65. Most of the interviews conducted in Davangere were in the local language (Kannada) with a help of a translator, whereas the interviews in Bengaluru were in English. We studied both Internet users and non-Internet users, for the same reasons and to find usage patterns, if any, between different segments. The users consisted of 21 Males, 11 Females from both the cities. We did in-depth interview with the users who fit in the requirement. The users which did not fit in were mainly due to a repetition of the people from the same age group having similar routine from the studies done earlier.

The aim of the interview was to know the user profile, understand communication ecosystem and understand users' expectations. All the interviews with the participants were video recorded, transcribed and translated for later analysis. The interview then went on by asking them about a day in their life. The hourly details were plotted in a circle. This also provided an understanding about that person, their daily activity and the usage of media. The communication ecosystem of the person was plotted simultaneously, which gave an idea of how a person makes use of a media and tried to understand why it was a preferred medium of communication.

A second phase of the study was accomplished to understand how people behave and communicate to others in an environment. This would in turn help to gather insights and patterns that lacks in current CMC. After few dry runs, we deduced that the best way to get a lot of people together was a school/college reunion. Cameras played an integral part at the reunion, unlike the usual meet up and a lot of pictures were taken. As everyone knew each other, everyone was delighted and comfortable to talk to people around. This worked out perfectly and helped to capture the way people communicate with each other, without gathering their attention. Through both the studies we found many interesting patterns and insights, few of them are discussed in the following section.

3. RESULTS

Out of the 32 interviews done in the first phase and the group exercise we did in the second phase, we found many interesting insights, observations and patterns that are discussed below. For better understanding of the research six different profile clusters were outlined for the analysis based on the occupation:

1. Students: Late teen (aged 17-29)
2. Housewives (aged 30-60)
3. Small business: Teachers, Shopkeepers (aged 30- 60)
4. Professionals: MD, CEO (aged 30-40)

The data was summarized with the intent to extract useful information and to develop conclusions for helping in the design decisions when designing the new CMC platform. The analysis results are broadly categorized into two brackets 'observations' and 'Insights'. Observations here talk about the general patterns we found that are quite interesting for anyone who is interested in this space, whereas insights talk about the novel patterns, and insights that we discovered from this study.

For both 'Observations' and 'Insight' category, we have called out explicitly wherever we think there's a unique patterns between the cities based on the urban and rural influence. For other points where the distinction is not made, it generally applies to both urban and rural context.

3.1 Observations

3.1.1 Choice of medium

After analyzing the interview transcripts, it was evident (table 1) that the most commonly used medium of communication were Face to face and Mobile communication throughout all age groups, in both Rural and Urban areas. Although SMS is a common phenomenon throughout but we found it is mostly being used by students and youth in both urban and rural context, chat was seen mostly as an urban youth phenomena only.



Table 1. Shows the usage of media that is used towards different relations

3.1.2 Use of SMS and Language

The major chunk of SMS's sent by students are forwarded messages (Good morning and Good night messages). The main reason for forwarding messages is "keeping in touch" or "reminding others of oneself" although the two users may not interact on a regular basis. In the tier 3 cities although the students send SMS, the English lexis is limited. Most of them know only Basic English.

We also found an interesting pattern in a Tier 3 city, when it comes to sending a message/ SMS based on the length of the message. It can be summed up in three variants:

- a. **Short messages:** mainly written in English language with common vocabulary terms E.g. Where are you?
- b. **Moderate length, 2-3 sentences:** mainly written in English with the usage of few regional language (Kannada) words typed in English. Eg. Come near *maidana* (playground)
- c. **Long messages:** are avoided as it's tough to compose in mixed language and would rather call instead.

3.1.3 The Need to Be Always Connected

The trends found in youngsters were that of wanting to be always connected and active in their networks, be it via social networking, mobile, chats or face to face. Even when there is a power cut, we found many of the youngsters switching to messaging in Davangere and Bangalore and those who have internet enabled on the phone, in Bangalore - log on to the social networking sites to make their "presence felt" in their social community.

3.1.4 CMC Helps in Breaking the Social Barrier

Chatting helps break the gender barrier as youth (in the late teens) prefer talking to other gender over a chat or social networking site than in person. It also helps in self-projection since it allows the user to project a certain image of themselves e.g. : Matrimonial site. The online social networking is, therefore, seen as a platform to get introduced to a stranger and build up new connections.

3.1.5. Rich interaction F2F

The first phase of the study gave us a clear understanding of the CMC whereas the second phase of the study helped us understand the nuances of F2F. Here we discuss the few patterns that we found are interesting when looking at CMC

- a. The posture: Leaning forward to talk and listen also indicates the keen interest of the person in the conversation
- b. Usage of hands while talking: The people were using their hands and drawing in the air while talking.
- c. Listening and thinking at the same time: With F2F being verbal to a person sitting in front of you. The listener can be in deep thoughts even though he/she is listening and not reacting.
- d. Privacy: the person tends to move out from a group to have some space of their but not on missing out on the action that is happening in that space.
- e. Move around: The people are seen to move around and go talk to the person/group which he/she intends to be a part of.
- f. Meet up: A location is always set for different relations. So, in this case cafe was the most convenient place for everyone to catch-up.

3.2 Insights

3.2.1 Relations vs. Space

Relations define the environment they want to be in and vis-à-vis. We found patterns that were defined by the individuals and the space they are embedded in e.g. a hangout joint vs. temple. For Each space people have dedicated relations associated to it, e.g. in a student's hangout joint, the student expects only his friends and strangers and not anyone from his family group; similarly at home

he expects family group and relatives. When there is a clash between the relationship in the environment (CMC or F2F), there is a need to have a personal space e.g. At home if parents are around, the individual moves away in a want of a separate space with friends, although its closely related to privacy issue but we believe there's a strong relationship between the two.

3.2.2 Emoticons help to convey emotions only to an extent

Emoticons help to convey the emotions to the other person, but it fails to tell the exact emotion most of the time, that being the primary reason why F2F is the richest form of communication.

E.g.: A laugh could vary from a giggle to laughing out from stomach. There is always a loss of vocabulary. In relation to same and with the current trends in web 2.0 and the restrictions in the existing platforms, it has allowed the users to be more expressive and invent new methods of communicating. E.g. Actions being conveyed by putting them within the asterisks communicates and brings richness to the existing CMC... E.g. I just came from a shower *shivering*. Even missed calls are used innovatively as an effective tool to communicate and express emotions which has been previously discussed and documented by Donner [1].

3.2.3. Passive use of Social Networking Sites

We found in Tier 3 city, the social events of their distant relatives and family friends were the triggers for parents to know about the social networking sites (photo sharing mainly). Although a few of the parents did have an email id, they were not an active member nor do they remember the credentials. Children help them achieve this by logging in through their account while the parent happens to be just the viewer.

3.2.4 Grouping People online

Grouping people from the contact list were seen as a common phenomena among the youngsters (18- 21) who messaged a lot across both selected cities. The common group names were School friends, College friends, Close friends and family.

We found out participants telling us about the multiple identities e.g. when they are with their families at home they act one way; when they go to work they act another way; and when they meet with their friends at a party they act in a third way. Managing identity online is a difficult task, as groups can easily overlap. We found people have workaround to manage this issue, including multiple email accounts, multiple Facebook accounts, and by using and restricting specific mediums/ tools with specific audiences e.g. one of the participant said "I keep msn for my old friends and Gmail for general chat."

3.2.5 Talking over Phone vs. Meeting Up

People talk over the phone if an agenda is already in mind e.g. you want to wish someone, you want to know something, or you want to just take the knowhow of the person and the conversation generally would go on for 10-15 minutes whereas conversation after meeting up face to face would go on for hours. The news of the past and sensitive issues tends to be discussed more freely in face to face conversations than CMC.

It was observed that because of the lifestyle in the metros being much busier than Tier 3 cities. The people in Bengaluru call up and checks with the other person if he/she is free to visit, whereas in Davangere (Rural Tier 3 city) the calls are made only if the host stays beyond a certain distance.

3.2.6. F2F is about Paying Respect

In India, face-to-face is the most appropriate medium of communication in official context when meeting bureaucrats and politicians, by dedicating time and resources for meeting, the person shows due respect to the superior. Once initiated the follow up can happen through email or other medium.

3.2.7 Perception of speech and tone in a CMC.

We found an interesting insight where the person writing an email or the chat has a clear idea in his mind of the tone of the message he is writing, in close relation to the real life but contrary on the other end it's often missed out completely. We found Sarcasm is often missed out in a message by the recipients, whereas the sender is always sure about the tone of the message he is sending out. E.g. "His class is the best", but users on the other end takes the literal meaning, we also found user augmenting it by adding "you know what I mean" to bring out the sarcasm.

3.2.8 Platform translates to behavior...

Speaking to a friend differs from speaking to a boss. Although we found there are mediums defined to different relations (Table 1). e.g. email is often considered to be formal and will be used only for formal purpose whereas chat was always considered to be a casual medium and most used among friends, the table 2 maps the perception of the medium vis-à-vis to it being a casual or a formal platform.

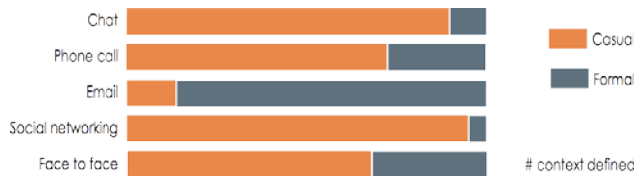


Table 2. Perception of platform being casual or formal.

4. CONCLUSION

CMC plays an important role in their daily life. The observations from this study indicate that people are finding news ways to use CMC irrespective to the pitfalls which exist in the current system. The main problems that needed to be solved were to bring the comfort of a personal and social space that are shared with a closed group of people. Another important point was on sharing information within a group. In Indian scenario, provide a limited view while sharing content with relatives/family where nuclear family system existed on a larger scale.

5. ACKNOWLEDGEMENT

We are extremely grateful for the forbearance of all the participants of Project "Vartha" conducted by HP Labs India. Thanks also to Sriganesh Madhvanath and Geetha Manjunath from HP Labs, for their constant support and help to take the project 'Vartha' forward.

6. REFERENCES

- [1]Donner, J. (2007). *The rules of beeping: Exchanging messages via intentional "missed calls" on mobile phones.* Journal of Computer-Mediated Communication, 13(1), article 1. <http://jcmc.indiana.edu/vol13/issue1/donner.html>
- [2] Herring, SC (2004) *Slouching toward the ordinary: current trends in computer-mediated communication* Journal of New media & society ISSN: 1461-4448, volume:6, Page:26
- [3] Kiesler S., Siegel J., McGuire T.W. (1984) *Social psychological aspects of computer-mediated communication.* American Psychologist, 39 (10), pp. 1123-1134.
- [4] Turof, M. (1982). *Interface design in computerized conferencing systems.* In NYU Symposium on User Interfaces. New York: New York University, Graduate School of Business Administration, Computer Applications and Information Systems.
- [5]UN News Centre (2010-04-14) <http://www.un.org/apps/news/story.asp?NewsID=34369&Cr=mdg&Cr1>
- [6] Walther, J. B., D'Addario, K. P. (2001) *The Impacts of Emoticons on Message Interpretation in Computer-Mediated Communication.* Social Science Computer Review Fall 2001 19: 324-347,
- [7] Zuckerberg, Mark (2010-07-21), <http://blog.facebook.com/blog.php?post=409753352130>