

A USE OF CELL PHONES AND MARKET SEGMENTATION IN CONSUMER OF DELHI

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ABSTRACT

Mobile phone usage patterns amongst Delhi Consumer. Mobile phones are one of the most common information access devices with almost 31% of the global population having access. This exploratory study investigated usage patterns of, and attitude about, cell phones among Delhi Consumer are a mature market and a rapidly growing new market (India) by surveying students in each country. Key findings from the study include similarities in the usage of phones to communicate with others and in the perception of mobile phone usage in public settings and differences in the use of text messaging and opinions regarding driving and mobile phone usage. Overall these results suggest consumer of Delhi use mobile phones differently from their counterparts. In a developing market like India, mobile phones may be the primary and only phone to which everyone has access.

INTRODUCTION

Mobile phones have an intrinsic social impact by the way the technologies emphasize portability and constant communication. The portable nature of this communication medium means that they are often used in public spaces. People may be involved in mobile communication as either users or participants in a public space with other users. Some mobile phone users may embrace a resultant redefining of their personal space. While other users may consider mobile phone communication a privileged personal space and so share their mobile phone numbers only with their close friends and family. Cooper (2002) states, "the use of the mobile in certain public spaces makes the relation of private and public slightly different" (p. 22). This leads to questions about the attitudes regarding the usage of mobile phones in a public setting. Mobile phones today go beyond just voice communication and provide a multitude of other features and services including text messaging (SMS), multimedia messaging (MMS), photo display and recording, video playback and recording, calendaring, etc. The paper will also seek out the usage patterns of mobile phones as an information access device with respect to these features.

Mobile phone technologies are now in the hands of almost 31% or 2 billion people (Motorola, 2006) of the 6.47 billion people on this planet ("Population Reference Bureau Statistics", 2006). The penetration of these technologies is increasing very rapidly with around 779 million ("Gartner Press Release", 2005) mobile phones sold every year and expected to reach over 1 billion units per year sold by 2009. These staggering numbers are indicator of the growth and reach of mobile phones. Asia is the fastest-growing region, accounted for one of every four phones sold in 2005, a pace that is projected to increase to one of three by 2009 ("Gartner Press Release", 2005). The latest data from March 2006 indicates that India is the fastest growing

mobile market in the world with over 5 million new users added per month bringing the total to over 90 million users (“Telecom Regulatory Authority of India press release”, 2006). However this represents only about 8% of India’s estimated total mid-2005 population (“Population Reference Bureau Statistics”, 2006). The corresponding US data from December 2005 shows that there are 207 million mobile users in the US (“CTIA Semi-Annual Wireless Industry Survey”, 2006).¹ This represents over 69.8% of the estimated total mid-2005 US population (“Population Reference Bureau Statistics”, 2006).

The cultural background can influence the way technology is perceived, adopted and used. Despite the global nature of the adoption of mobile technologies, there are only a few studies which have investigated the cross-cultural aspects. The study hopes to address a variety of questions revolving around two general areas of interest as identified by Aoki and Downes (2002)- the intrinsic motivations for the adoption of mobile phones and the behavioral characteristics of their usage. Aoki and Downes (2002) studied these areas of interest in the context of college students in the US. This study will extend the previous research to include a cross-cultural comparison of Delhi Consumer in the United States and India. Knowing the intrinsic motivation for adopting technology may help in gaining a better understanding of why a technology is used a certain way by a particular group of people. The behavioral characteristics include usage data such as length of cell phone usage, typical time of cell phone use, average number of calls received/sent, and typical location of cell phone use, use and number of text messages.

The study hopes to address a variety of questions: What are the most common uses of mobile phones amongst the Delhi Consumer in a mature versus a developing market? What patterns can be found across cultures and demographics? Are there any cross-cultural differences in the perception of phone usage in public places? What is the prevalence of non-traditional or non-voice applications of mobile phones in the studied sample?

LITERATURE REVIEW

Mobile phones may be categorized as common communication medium for almost 31% of the global population uses them (Motorola, 2006). Townsend (2002) mentions that the diffusion of the mobile phone was among the fastest of any technology in history. Such a rapidly evolving and wide spread communication technology and medium has important social contexts and implications.

Aoki and Downes (2004) noted that mobile phone usage in social contexts has been a less studied area when compared to the research on the engineering and policy aspects of mobile technologies. McGuigan (2005) pointed out that it is quite difficult to find critical research which looks into the cultural value and social purpose of mobile phones. Only recently, research has been published on how people use mobile phones in their daily life. However, a majority of these studies have focused on studying populations within a relatively homogeneous culture.

Weilenmann, A., & Larsson, C. (2001) conducted field studies of public use of mobile phones among teenagers in Sweden. Their study shed light on how the mobile phone has come to be

used as a tool for local social interaction, rather than merely as a device for communication with dislocated others. Their observations pointed towards the collaborative nature of mobile phone use. The researchers examined how phones were shared and how their field data could be of use when designing new mobile technology and services for the youth.

Katz (1997) explored the possible effects of wireless communication on people's lives. He identified several levels of effects of such a technology. The first-order effects are direct effects that are immediately perceived by users, they include uncertainty reduction, personal security, and personal efficiency. The second-order effects are indirect effects which represent the experiences or feelings that people have or may observe in others, they include tighter coupling of domestic production, information immediacy, and contact ability. The third-order effects are the least direct effects that are observed not by users of the technology but by outside observers who study the effects of the technology on the society in general, they include social interaction, social control, and innovative uses or unanticipated usage.

Mobile phones are redefining and blurring the line between public and private spaces. Cooper (2002) mentioned that people in public space may be unexpectedly exposed to one side of a two-party private interaction, which can be frustrating with speculations about the missing side of the interaction. Fortunati (2002) noted that mobile phones favored the progressive encroachment of intimacy in the public sphere.

Palen, Salzman and Youngs (2000) have looked into this issue and the perception of mobile phone usage in the public. They studied the behavior of new mobile users over a period of six weeks after acquisition of phones. Using interviews and voice-mail, their study noted that patterns of mobile phone usage varied over time and there was significant deviation between the user-predicted usages to their actual usage. The researchers also studied how the perception of mobile phone usage in public contexts varied over the duration of the study. Initially, the perception was overwhelmingly negative. However, they noted that new users over a period of time became more accepting of the use of mobile phones in public places. Their study found people initially adopted cell phones for safety/security and business or job-related reasons instead of social reasons. However, nearly all subjects in their study reported the use of their cell phones for social interactions had grown over a period of time. These interactions may not even be the traditional voice based interaction. Puro (2002) noted that Finland has one of highest mobile phone densities in the world, reaching over 90% of the people under 30 years of age. Taylor and Harper (2001) noted that young people use text messaging on mobile phones as forms of gifts to cement social relationships.

Aoki and Downes (2004) focused on the behavioral and psychological aspects of cell phone usage among college students. They tried to find the reasons behind why a technology is adopted in a particular way. They identified several attitudinal factors based on the exploratory study including, necessity in modern times, cost efficiency when compared to landline phone, safety or security, and dependency. The study also endeavored to look at the motivational and behavioral characteristics of mobile phone usage. The authors tried to combine their results and

the result of previous research to find the trends in usage by the youth, “why college students in the US use the cell phone, what they think of the technology, and how they use it” (p. 352). The motivational themes identified by the study include personal safety, financial incentive, information access, social interaction, parental contacts, time management/coordination, dependency, image, and privacy management. The results of the focus group interviews indicated five distinct user groups in terms of their attitudes toward their cell phone usage and in terms of the levels of integrating cell phones into their lives.

Aoki and Downes (2002) enumerate the groups as the cost-conscious group, safety/security conscious, dependent, sophisticated, and practical users. The cost-conscious users believe that a mobile phone helps them save money. The safety/security conscious users are cognizant of their own security and having a cell phone gives them a feeling of security. The dependent user is a person who is reliant on his/her phone and feels disconnected to the world without one. The sophisticated users have had their phones for the longest time and feel it is absolutely a necessity for functioning in the world. The practical user believes a mobile phone gives cost saving, safety benefits, and time efficiency. This study serves as a valuable guideline on how questionnaires focusing on mobile phone use may be designed by using focus interviews.

The global nature of mobile technologies makes the cross-cultural study of the behavioral characteristics of mobile phone usage a topic of current interest. Venkatesh (1995) noted that consumer behaviors are primarily socio-cultural phenomena that must, therefore, be discussed in socio-cultural terms. He emphasized cross-cultural studies should include at least two different cultures as part of the same field study, although it is possible to conduct a comparative study using a single cultural setting and make comparisons with other cultures using textual information rather than field data. He also explained that cross-cultural studies may incorporate cross-national comparisons which studies variables that are objective measures that need no cross-cultural translation.

Studies in the realm of mobile phone technologies are only recently starting to appear. Issac, Nickerson, and Tarasewich (2004) studied cell phone usage in social settings in two developed countries – United States and France. Their research focused on the cell phones used in social settings, the perception of the acceptable use of mobile phones in social settings. They studied whether the use and attitudes related to the use of cell phones vary by country. Their survey indicated significant differences between users in United States and France when it came to using phones in public streets or while driving an automobile. French users had a significantly negative view of using mobile phones while driving, this may be attributed to the fact that it is illegal in France to drive and talk on a phone simultaneously. Variances were also observed in the use of and attitudes toward the use of mobile phones for both voice calls and text messaging. French users were more likely to use text messaging in all the scenarios studied except while driving. The researchers explained that, some of the differences may be attributed to cultural and legal differences between these countries, other factors such as age or the length of time that someone has used a cell phone may be important.

Carlson, Kahn, and Rowe (1999) studied the organizational behavior aspect by observing the impact of mobile phones on decision making in sales forces within organizations in United

States and France. They compared the differences in sales force behavior. Correlations were conducted to determine whether the country, length of time the technology has been used, or their interactions were the major effect. Their study showed that new technology adoption was responsible for a shortening of decision making time in both countries. On the other hand, differences in standardization, formalization and decision making time were identified. The results of the study indicated that cultural differences between countries accounted for most of the differences.

Hofvenschiold (2003) studied the affect of cultural background and occupational status on the way people interact and perceive technology. She surveyed Delhi Consumer and young professionals from Germany and the United Kingdom to study the attitude to and use of cell phones. Differences in attitudes were measurable when emotional and motivational aspects of mobile phone use were explored.

Castells, Mireia, Qiu, and Sey (2004) produced a detailed compilation of existing research evidence of the social aspects of wireless communication technologies including mobile phones. They indicated cultural differences in communication style preferences had an impact on the adoption rates of wireless technologies. The researchers intended to elicit general patterns for the social differentiation of wireless diffusion in different societies of Europe, America, and the Asia Pacific regions. They cite numerous studies indicating that text messaging is more prevalent among the youth across countries. Other findings include the high incidence of phone-borrowing in parts of Europe; impact on trip planning in travelers and mobile workers; popularity of mobile Internet in Japan; mobile phone as extension of personal identity in Japan; and usage of phones for communication and as status symbols by migrant workers in China. Castells, Mireia, Qiu, and Sey (2004) extensively looked into the rise of the mobile youth in a cross-cultural perspective. Their stated hypothesis was that “there is a youth culture that finds immobile communication an adequate form of expression and reinforcement.” They indicate that much of the research into this youth culture has focused on Europe. The researchers cite evidence for the emergence of collective identity resulting from peer-grouping based on networked sociability. They examine evidence in the United States where owning a mobile phone for a teenager has become a rite of passage. This compilation brings up a wide variety of unique culture attributes for each of the countries or regions studied. However, there is little by the way of direct cross-cultural comparison for specific demographic segments.

The literature review shows that the usage of mobile phone technology has a significant societal influence. The ubiquitous and always-connected nature of the technology is shaping attitudinal changes regarding public and private space of mobile phone users. The importance of this area and the study of the behavioral characteristics involved are being just realized. However relatively few studies are available which look at this issue from a cross-cultural perspective, especially the youth segment of the mobile phone user market. Most of the previous studies were conducted in European countries and the United States. A cross-cultural study between users in India and United States will enable a comparative perspective into a mature and developing market.

RESEARCH METHOD

This research is intended to be a questionnaire-based exploratory study to investigate the cross-cultural usage patterns of mobile phones. The study collected basic demographic, motivational and behavioral characteristics from the respondents. Motivational questions in the questionnaire were based on findings of focus group interviews conducted by Aoki and Downes (2004). The behavioral questions were based on the sections suggested in the report of Bautsch et al., (2001). The three behavioral sections defined were usage, safety issues, public perception of mobile phones and socially acceptable usage guidelines or etiquette.

Participants for the study included consumer of Delhi. The age of 18 to 60 years Consumer were included in the study. Responses were accepted regardless of full-time or part-time, consumer status. Subjects were presumed to have basic knowledge of the English language. This was a reasonable assumption since English is the medium of instruction at mobile and metro people. Basic reading, writing and web browsing skills were the only pre-requisites for participating in the study.

OBJECTIVES OF THE STUDY

Main objective

The main objective of this study is to gain primary information regarding the use of mobile phones by consumer of State Delhi.

Secondary objectives

- The following secondary objectives were identified, namely to determine
- The demographics of Consumer of Delhi specially youth.
- The perceptions of youth consumer regarding the competitive situation in the mobile phone market
- The mobile phone brand awareness of Youth
- Further areas of study in this dynamic youth market

SCOPE OF STUDY

This study investigated motivations of usage, common usage scenarios and the attitude towards mobile phones in public settings among Delhi Consumer in a mature market (United States) and a rapidly growing new market (India). The scholar believes that the study will contribute valuable learnings about the field of mobile communication to the broader academic knowledge-base. This research may serve as useful input to telecommunication companies, researchers (information science, social communication, etc) and media futurists. This study may help information architects in designing interfaces to meet the unique needs of the particular market. The advantages of this study are that this will contribute previously unavailable data to the field. To the best of the author's knowledge, no study has compared the mobile phone usage between a developed mature market and a rapidly developing market. This study is easy to replicate and scale up, to retrieve similar data from other regions of the world.

CONCLUSION

This study was conducted in order to increase the understanding of the mobile phone usage of Youth consumers. The main objectives of the study indicate the following. First of all, the primary research objective was to gain information regarding the use of mobile phones by Youth consumers in the city of Delhi. The information relating to this question is contained in Section C and certain questions in Section B of the questionnaire in which mobile phone usage patterns were discussed. The main results of the study indicate the following.

Youth mobile phone usage

Mobile phone ownership figures among Youth in the city of Delhi revealed the following facts. Consumers owning a mobile phone at the time the survey was conducted were screened. Youth respondents were reported to have owned a mobile phone for three to five years with a majority of them owning a Nokia mobile phone, followed by Samsung, Motorola, Sony Ericsson and Samsung. Most Youth respondents were on prepaid packages and did not spend excessive amounts of airtime with the average mobile phone bill amounting to between R100-R200 per month. The teenager segment (17-19 years old) and the young adult segment (20-23 years old) reported different behaviours regarding their mobile phone usage. The teenagers were more likely to be prepaid users whereas a large proportion of young adults were contract users due to higher incidence of employment. Thus, the older and youth respondents, the more likely he/she will be to be personally responsible for his/her mobile phone bill. Furthermore youth respondents reported making less than five calls a day. Usage patterns are divided into calls made and calls received, with young people receiving as many calls as they make (less than five). There were no significant differences between the teenager and young adult segment regarding the number of mobile phone calls made per day. However, younger Youth respondents received significantly more calls than the young adults.

According to over half of the respondents, the average length of a mobile phone call is between five and fifteen minutes. Furthermore, the average length of a mobile phone call tended to be longer the older the respondent. The Youth respondents send on average five to ten SMS's a day, with the younger adults using SMS's more than the teenager segment due- once again this fact is attributable a higher incidence of employment. This indicates a preference for SMS's which can be ascribed to reasons such as convenience and cost. Unlike voice communications SMS's may be sent anywhere, anytime and anyplace. Cost is the other important criteria for sending SMS's. While a voice mobile phone call costs around R2.50, an SMS costs no more than 70 cents during peak times (See Chapter 2, section on tariffs).

Close personal friends, family members, casual friends, boy/girl friends and work colleagues are all people contacted by mobile phone in order of preference as indicated by young generation. Peer relationships are highly regarded by this generation and therefore it comes as no surprise that Youth contact their close personal friends mostly on their mobile phones. Most respondents indicated that they use their mobile phones during off-peak hours (after 8pm); this is the period during which calls and SMS's are cheaper, and also during which free minutes apply if the callers are on contracts- This reveals the cost-conscious nature of the generation.

SMS" s were the most frequently used feature after voice calls, indicating the popularity of the SMS as an important way in which respondents communicate.

Youth respondents do on occasions use their mobile phone calls to manage personal information, play games, and receive and send pictures from a digital camera. Accessing the Internet (WAP) and sending and receiving email were not as popular, indicating the slow uptake of such a feature by young generation. New technologies such as WAP will be adopted by consumers only once tariffs for this service are in line with their budgets and needs. Youth has thus refrained from excessive use of advanced 3G technologies as a result of cost.

SCOPE OF FUTURE STUDY

The following possibilities for future research emerge from this study:

- Consumer attitudes keep changing and these findings may not be applicable in all cases. Surveys should thus be undertaken periodically in order to gauge changing consumer mobile phone usage patterns and perceptions over time. These surveys should be carried out annually and this will, in turn, help academics, network providers and handset manufacturers alike to acquire useful information and to target users more effectively.
- The findings of this study are based entirely upon the research conducted in the Delhi limited area and hence may not be applicable to other areas on accounts of contextual and cultural factors. This survey should be carried out on a wider scale (nation-wide) so as to include youth consumers from other areas. In future work the researcher encourages the replication of this study in other regional areas in which cross-regional similarities and differences could be studied. Moreover, the population could also be extended to include teens (7 to 12 year olds) and teens (13 to 17 year olds), as the use of mobile phones by children has increased significantly over the last years.
- The size of the sample in this study is relatively small. The results will thus vary with those from a larger universe. A larger sample size would yield more accurate results.
- More research is needed to analyse the differences between teenagers and young adults, as well as to examine cross-gender differences. Differences between males and females in this study are significant in certain cases but not always to the extent one may have expected.
- Additional research exploring the way in which mobile phones influence the communication patterns between young people and their parents and amongst themselves should be undertaken. The preservation of relationships as a result of the mobile phone was a central theme and should be further explored.
- Each of the sub-topics covered in the literature review, for example, the determinants influencing consumer behaviour (Chapter 3, Section 3.4), should be analysed in greater depth.

Future research into the topics discussed above will not only contribute to the existing literature on the mobile phone usage of youth generation, but, more significantly, to an improvement in our understanding of youth generation future consumer behaviour.

A better understanding of this market will hopefully improve the marketing efforts of mobile phone groups and result in better mobile products and services being delivered to the market.

REFERENCES

- 1) Davies, Jennifer. .Games Afoot as Qualcomm Brews up Fun on Mobile phones. The San Diego Union. Tribune. March 18, 2002. Pg. A1.
- 2) Schmidt, Sarah. .Youths Hooked on Mobile phones: Landline Passe. The Gazette (Montreal, Quebec). CanWest News Service. May 14, 2003. p. B2.
- 3) Davies, Jennifer. .Cutting the Wire; For Growing Numbers, Mobile phone is the Main Phone. The San Diego Union. Tribune. March 17, 2003.
- 4) Ibid.
- 5) Davies, Jennifer. Rockhold, John. Davies, Jennifer. .Cutting the Wire; For Growing Numbers, Mobile phone is the Main Phone. The San Diego Union. Tribune. March 17, 2003.
- 6) Why I'm Hooked on Virgin Mobile., November 11, 2003. Business Week Online. http://www.businessweek.com/technology/content/nov2003/tc20031111_5013_tc135.htm (accessed January 22, 2004).
- 7) htm (accessed January 22, 2004).
- 8) Rockhold, John.
- 9) Adoption of SMS doubled among college-age users in US. Cellular Online. January 15, 2003. Link: http://www.cellular.co.za/news_2003/011503_adoption_of_sms_doubled_among_co.htm.
- 10) http://www.cellular.co.za/news_2003/011503_adoption_of_sms_doubled_among_co.htm.
- 11) Ibid.
- 12) Schmidt, Sarah. .Face to Face Bullying Yield to Cruelty by Technology. The Gazette (Montreal, Quebec)CanWest News Service, February 24, 2003. p. A1.
- 13) Youth Mobile Products Market Analysis, Data & Figures., Global Information, Inc. May 7, 2003. http://www.gii.co.jp/press/w2f1333_en.shtml (last accessed February 9, 2004).
- 14) http://www.gii.co.jp/press/w2f1333_en.shtml (last accessed February 9, 2004).
- 15) Carpenter, Mackenzie.
- 16) Ibid.
- 17) Youth Mobile Products Market Analysis, Data & Figures., Global Information, Inc. May 7, 2003. http://www.gii.co.jp/press/w2f1333_en.shtml (last accessed February 9, 2004).
- 18) Ibid.
- 19) Semenak, Susan. .We.re Gonna Snap: Camera-equipped Mobile phones are the next .Must Have. Toy for Those Who Want to Stay in Touch . and in the Picture 24/7.. The Gazette (Montreal, Quebec). November 8, 2003, pg. G3.
- 20) Sidener, Jonathan. .Say Hello, Say Cheese: Camera phones have become a hot item, but they also raise concerns.. The San Diego Tribune, December 4, 2003.
- 21) Global mobile games market valued at EUR 1.65 bln in 2006.. Cellular Online. January