

The Exercise of Personal Agency

by Mobile Phone Use

A Mixed Methods Study among Young People in Mumbai, India

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by

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DECLARATION

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ABSTRACT

The objective of this study is to explore if mobile phone users exercise a higher ability to accomplish goals in daily life than mobile phone non-users. The ability to accomplish goals in daily life is referred to as Personal Agency in this study. In a particular manner this study explores the exercise of Personal Agency in managing contingent situations and in maintaining regular relationships in the daily lives of individuals. This study also set out to explore the capabilities that mobile phone use promotes in individuals which assist them to exercise Personal Agency. This study addresses these objectives by using the Empirical model of Agency by Hitlin and Elder Jr..

This study was conducted using the Mixed Methods approach. In keeping with this approach, the Quantitative and Qualitative data was collected from young people between 16 and 19 years belonging to Middle Class families in Mumbai. The data was collected through a survey, semi-structured interviews and group discussions.

The Quantitative results of this study indicated that Personal Agency and Frequency of mobile phone use co-vary in relation to each other. The exercise of Personal Agency increases with the increase in Frequency of mobile phone use. It also indicated that the exercise of Personal Agency was higher among mobile phone users than mobile phone non-users. The Qualitative data demonstrated that Personal Agency was enhanced by the tri-capabilities of 'Contactability', 'Organizability' and 'De-restriction' which are facilitated by mobile phone use.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
APA	American Psychological Association
AT	Apparatgeist Theory
BEST	Brihanmumbai Electric Supply and Transport
CA	Capability Approach
CFA	Confirmatory Factor Analysis
DT	Domestication Theory
EFA	Exploratory Factor Analysis
IV	Independent Variable
JC	Junior College
KMO	Kaiser-Meyer-Olkin
<i>M</i>	Means
MPAPAQ	Mobile Phone Assisted Personal Assisted Questionnaire
MPNU	Mobile Phone Non-User
MPU	Mobile Phone User
NU	Non-Users
<i>p</i>	Statistical Significance
PAoMPNUQ	Personal Agency of Mobile Phone Non-User Questionnaire
PAoMPNUS	Personal Agency of Mobile Phone Non-User Scale
PAoMPUQ	Personal Agency of Mobile Phone User Questionnaire
PAoMPUS	Personal Agency of Mobile Phone User Scale
PCO	Public Call Office
PCT	Personal Communication Technology
SCOT	Social Construction of Technology
<i>SD</i>	Standard Deviation
SES	Social Economic Status
SIM	Subscriber Identity Module
SMS	Short Message Service
SPSS	Statistical Package for the Social Sciences
Std	Standard
TD	Technological Determinism

U Users
UG Undergraduate

Section I

Chapter 1

Chapter 2

Chapter 3

CHAPTER 1

Introducing the Study

1.1 Introduction

This chapter presents the concerns and questions of this research study. It also expounds the context within which this study is located and puts forward the research questions, operational definitions, scope, significance and structure of the dissertation.

1.2 Situating the study:

The world of technology took an astounding leap in 1876. It made real time interaction at a distance possible with the invention of the landline telephone (Katz and Aakhus 2002). However the landline telephone was still connected to the telephone network by a wire. The 21st century changed that. It marked the widespread uptake of wireless technologies; prominent among them was the mobile phone. For example, in 2005, calls from mobile phones surpassed those made from landline phones in the US (New Politics Institute 2006) and in 2006 the number of wireless subscribers surpassed the number of fixed line subscribers in India (Roy and Pachava 2009). As (Kalba 2008, p645) states:

Mobile phones have become the dominant mode of communication, surpassing the landline count by as much as eight or nine to one.

Their dominance is also seen in the familiarity with which people use them. Familiarity with mobile phone technology has reached a level where people do not notice its presence until it is absent (Katz and Aakhus 2002a). So much has it proliferated, that the tunes and beeps of the mobile phone have become part and parcel of the background noise of daily life. Plant (2000) in her expansive study on mobile phone states that even birds such as the starlings were seen impersonating mobile phone tones and melodies.

With such familiarity, mobile phones are now being used in surprising ways not thought of before even by their designers and creators (Bell 2006, Garcia-Montes et al. 2006).

Hence, this research study explores the exercise of Personal Agency—the ability to exert influence on one’s life within the constraints of the situation—by mobile phone use. In particular the study explores the ability of young people to manage contingent situations and maintain regular relationships in their daily lives through the use of mobile phones.

This objective becomes more meaningful when it is seen in the light of some of the cultural conditions which will now be laid out as a background to this study.

1.2.1 Clash with cultural conventions:

Firstly, in India it is expected that personal choices and initiatives are considered within the limits of familial conventions and cultural conventions. For example the couple who chooses to marry without parental consent or outside the clan, encounters enormous difficulties such as having to break family ties and sometimes even being ostracized by the community. Thus, speaking or acting on one’s own behalf without aligning with the opinion of elders (which often is considered as imperative) is viewed as an attitude of disrespect and as a challenge to the authority of the elders in the family especially the parents. Elders, in their turn, consider it their duty to speak or act on behalf of a younger person. This aspect of the Indian culture is cultivated from childhood and maintained throughout life. Young people are expected to be subservient to their parents even after they are married and begin their own family.

Mobile phones emerged in the western culture and thus reflect its values. Castells et al. (2007, p127) states:

Technologies are known to reflect the cultural values and social structures they emerge in.

Furthermore, the mobile phone reflects values of personal independence and privacy (Chavan 2007, Garcia-Montes et al. 2006). These attributes conflict with the core characteristics of Indian culture especially the principle of *dharma* (duty). The principle of *dharma*, one of the cornerstones of Indian social and moral philosophy, upholds the duty of young people to be obedient to elders, especially their parents, and to be subservient to the collective. In relation to this, adoption of mobile phones into Indian middle class families gives rise to a fear and freedom discourse among the different generations living within the same household. There is fear and moral panic among the elders, particularly the parents, as to whether the device will be put to a responsible use or not (Schwittay 2009), and there is a sense of freedom among young people who see it as a tool of independence. Parents in turn fear that their children may use the mobile phones irresponsibly and harm the family *izzat* (honour/reputation) which is considered a treasured value in the Indian culture. Consequently even though they provide their children with mobile phones they place restrictions on when, where, and for what the device should be used.

Thus the cell phone would seem to represent a whole gamut of contradictions for India. At one end it possesses an individualist design. At the other end it is pervasive in a fundamentally collectivist culture. For example, the huge popularity of students using headsets with their mobile phones or mp3 players is an expression of the desire for privacy, the wish to be able to have one's own space, outside the stranglehold of the collective culture. The culture strain in this case is the tension between a cultural ideal that does not value privacy and independence and the cultural practice today of people wanting to assert their individuality, even if in a subtle way (Chavan and Gorney 2008).

1.2.2 Lack of control over daily personal and social life aspirations:

Secondly, young people feel a loss of control over their daily life activities and aspirations. In the domestic space of the home they are required to adjust their wishes to the collective will of the family. In public space when they travel they have to be mentally prepared to share personal space with totally unknown strangers owing to

overcrowding on public transport. In employment they have to jostle against a large population who aspire for the same opportunity. In the social sphere, mixing with members of the opposite gender or hanging out with friends late evenings is considered inappropriate by social conventions and gossiped about (Hastings 2000). Thus they are required to relinquish control over their personal and social life activities and aspirations in their daily lives. However, they compensate for this by exchanging mobile phone numbers and “hanging out” with partners and friends in private unperturbed by cultural norms or social conventions.

1.2.3 Balancing dependence and negotiating boundaries:

Thirdly, the participants of the study were students between the ages 16 to 19 years of secondary schools and colleges. They were financially dependent on their parents. Rarely do Indian children pay for college themselves or pay for their own marriage (Gauri03 2010). Mostly it is parents who pay school or college fees for their children (Asher 2002). Furthermore, parents in middle class families in India rarely allow their children to take on a part-time job at the same time as their studies, partly because social convention in India considers it as detrimental to family *izzat* if parents are unable to provide for the child’s education. Also because as Stan4 (2010) points out parents are aware that young people who have to work during college often drop out and do not complete their studies compared to those who are supported fully by their parents. Young people grow up with the preconception that parents will fund their education and parents are in turn expected to do their duty of educating their children even upto higher education. However, this also legitimizes the maintenance of supervision and authority of parents over their children. Though children recognize parental authority, they are also seen to use the mobile phone to cross boundaries placed by parents, while at the same time making sure that they do not lose the goodwill of their parents.

The objectives of this study as stated earlier are to be seen in the light of these cultural conditions. However, it is also important to take cognizance of the theoretical approaches involved in this study before the research questions are stated.

1.3 Theoretical Approaches in the study:

This study basically uses the Mixed Methods Research approach as proposed by Creswell and Plano Clark (2007) and draws its insights from Hitlin and Elder Jr.'s (2007a) Empirical Model of Agency. The methodological perspective that this study uses is the Mixed Methods Research approach (Creswell and Plano Clark 2007) which provides various worldviews and research designs that can be used to investigate research questions. This study uses a pragmatic worldview and constructs a design combining the exploratory and convergence models of the Mixed Methods approach. Earlier studies have used this design (Tashiro 2002, Myers and Oetzel 2003, Mak and Marshall 2004) although for other objectives.

The Empirical Model of Agency (Hitlin and Elder Jr. 2007a) provides the theoretical framework for this study. Past studies dealt with a more abstract understanding of the concept of agency. Hitlin and Elder Jr.'s (2007a) empirical model offers components of agency from an empirical point of view. Other studies such as Bandura (1982, 1989, 2006) which dwelt extensively with self efficacy—the core component of agency—also shed light on the current research. For definition of key terms see Appendix L.

1.4 Research Questions:

To this end the research questions of this study are:

Quantitative:

- (i) Can the exercise of Personal Agency by the use of mobile phone be measured?
- (ii) What is the influence of demographic variables such as gender, academic qualifications, religion, socio-economic status, duration of possession of mobile phones, and frequency of mobile phone use, on the exercise of Personal Agency by the use of mobile phone?
- (iii) How do the demographic variables considered in the study interact to impact the exercise of Personal Agency by mobile phone use?

(iv) What is the relationship between the exercise of Personal Agency in mobile phone users and the boundaries encountered in mobile phone use?

(v) Is there a significant difference in the exercise of Personal Agency between mobile phone users and non-users?

Qualitative:

(vi) What are the capabilities that mobile phone use promotes in individuals, that assist them in exercising Personal Agency in the events that occur in their daily lives?

(vii) What are the contextual and socio-cultural factors that limit the use of mobile phone by young people?

Mixed:

(viii) To what extent do quantitative and qualitative data complement and validate each other with regard to the exercise of Personal Agency among mobile phone users and non-users?

These research questions were addressed in the context of Mumbai which, while being one of the vibrant business capitals of the world, also exhibits the evidence of economic liberalization, globalization, class restructuring and an unprecedented housing construction boom (Nijman 2006).

1.5 Mumbai:

Mumbai (formerly Bombay) is India's largest city and port, located on the western coast of India. It is the financial hub of India. Mumbai is divided into three parts: the main city, suburbs, and extended suburbs (Gupta et al. 2005). The schools and colleges as well as the participants in this study came from the main city. Mumbai also has an international airport and a well established public transportation system of local trains and buses which are crowded.

Mumbai is the capital city of the state of Maharashtra, India. It has a population of 12 million (eCensusIndia 2001). Mumbai is also known for a unique cultural mix of people belonging to different religions, economic classes and castes¹ coming to it from various states. However, in Mumbai, although the native language is Marathi, people from different communities speak a variety of Indian languages. The national language, Hindi, is commonly spoken by most people in public places. The city also has prominent places of worship for all religions. It has some of the finest modern architecture in India.

Mumbai is home to the Indian film industry, popularly known as Bollywood, as well as the top entertainment TV production houses. Western movies are first released in Mumbai before anywhere else in India. Films command high profits and are very popular. Therefore, major cultural and fashion trends originate in Mumbai.

Matanhelia (2010, p11) in a recent research study in Mumbai notes:

In Mumbai, a typical day in the life of college-going young adult involves leaving home early in the morning and reaching back home in late evening. Usually young people travel by local trains and buses across the city. Throughout the day, they either attend lectures or spend time with friends. Because Mumbai is large, it is difficult for parents to keep an eye on children and their activities throughout the day. Therefore, in Mumbai it is typically easier for young adults to engage in behaviour that may not be acceptable to their parents. Culturally too, it is considered quite acceptable for young adults to move in groups consisting of males and females. Therefore, it is easier to find them spending time together in groups at street-side fashion and food shops, cafes, multiplexes, malls, beaches or at nightclubs.

Mobile phone adoption is observed in Mumbai from the lowest income group such as street vendors selling their wares and services (Krishnan 2007) to the highest income

¹ A *Caste* is a social position or status conferred by a system based on Hindu ritual purity. It is acquired by heredity.

group such as business elites (Economic Times 2010). For example the man whom Forbes magazine predicts will be the richest person in the world in 2014 belongs to a business family that provides mobile phone services among others in India.

Mumbai was selected as the setting for this study for the following reasons:

- i. Mumbai has a large and vibrant middle class population. The middle class are connected with English or 'convent' education, white collared jobs, and ability to save money for leisure pursuits.
- ii. Mumbai's middle class is also characterized by a keen interest in electronic and consumer goods. A mobile phone is a prime sought-after technology by a young person belonging to a middle class home. Mobile phones have trickled down to the lowest income group e.g. daily wage earners and even slum dwellers. In this sense possessing a mobile phone is within seemingly easy economic reach. Hence not possessing a mobile phone is considered as a status lowering proposition. Mumbai is also well connected with other ICTs. However more middle class families can afford to give mobile phones to their children than computers. If they have a computer, it is reserved for common use of the family and is shared. Young people in middle class homes aspire to possess mobile phones and demand them from parents from the time of their primary education because of the spending capacity of the parents, and the status and novelty attached to it. In most cases, parents delay giving mobile phones to their children till they finish their primary education i.e. the first 10 years of schooling. However, in some cases, parents even refuse, or postpone providing children with mobile phones till they finish their secondary education i.e. the first twelve years of schooling. Mobile phones are rarely acquired for children earlier than the end of primary schooling.
- iii. At the same time, parents feel pressurized to provide their children with mobile phones because of the constant worry for children's safety and the constant threat of terrorism. Mumbai has seen many bomb blasts in the last decade. Mobile phones have proved to be a very useful source of connection with parents and

children during these times bringing ease to both by providing information regarding their location and wellbeing.

- iv. The use of mobile phones within the premises of educational institutions was even banned by government from the state of Maharashtra (Indian Express 2009) whose capital is Mumbai. However this does not deter young people from still bringing mobile phones with them and using it clandestinely in educational settings. Recently the neighbouring state of Gujarat has banned mobile phone in schools and colleges (Dholakia 2010).
- v. Finally, since I am a native of Mumbai and understand the pulse of a *Mumbaikar* (a native of Mumbai), I believed that this would assist me in understanding and connecting with the opinions and perceptions of the participants of the study.

1.6 Purpose of the Study:

The objective of the study was to explore the exercise of Personal Agency—the ability to exert influence on one’s life within the constraints of the situation—by mobile phone use. In practical terms the study explored the ability that young mobile phone users have to manage contingent situations and maintain relationships in their daily lives in comparison with young people who do not use mobile phones. Furthermore, the cultural and contextual constraints that young people experience in using mobile phones are also explored.

These objectives were explored among young people belonging to the middle class socio-economic status in Mumbai, India. Mumbai represents a unique mix of the traditional family structure and the aspirations for western lifestyle. The traditional family structure exposes young people to a considerable number of constraints and disapproves of agentic behaviour. At the same time such constraints and disapprovals are seen to be gradually eroding, and young people are seen to be becoming more adept and innovative with the use of Personal Communication Technologies (PCTs) especially Mobile Phones.

Studies conducted to date on the use of mobile phone in Mumbai (MACRO 2004, Lalji and Good 2008, Matanhelia 2010) are focussed mainly on examining the mobile phone technology from a commercial, medical, technological, and sociological perspective. However, the current study explores mobile phone use from the point of view of social psychology. Furthermore, hardly any research has been conducted into the use of mobile phone by young people from the perspective of Personal Agency in the Indian context. This study is attempting to address this deficit.

1.7 Scope:

Personal Agency and mobile phones have been studied before in relation to each other (Golden and Geisler 2007; Lloyd 2007). However, this study explores the characteristics of mobile phone use by young people in order to exercise Personal Agency. In particular two scenarios are chosen: namely the management of contingent situations and the maintenance of relationships in daily life.

Furthermore, some studies divide society into the mobile phone haves and have-nots (Leung and Wei 1999). Such research reveals that among those who have, the mobile phone is used for a variety of reasons. Many studies research the adoption and use of mobile phones for functional, instrumental and domestic purposes. Furthermore, young people, especially adolescents, face restrictions from different quarters and they have to negotiate with several forces. In this light, rarely is the mobile phone considered from the perspective of intra-personal empowerment. This study considers the objectives from the perspective of the development of young people's inner capabilities of innovativeness, creativity and reflection. However this study does not attempt to delve into an abstract discussion of Personal Agency but how it is practically exercised in daily life by mobile phone use. Hence it focuses on the external behaviour of young mobile phone users.

Furthermore, while this study deals with mobile phone users extensively it does not dwell on non-users to the same degree. It only views them as reference points at

pertinent stages in the dissertation. Again, considering that Mumbai is a city with a wide variety of cultures and creeds, it is important to note that all of these cultures and creeds may not be proportionately represented in the sample.

However, the emphasis in this research is on young people's mobile phone practices, their engagement with their independence, and their interactions with their parents, friends and mobile phone services. It constructs a picture regarding how young people use mobile phones to manoeuvre through daily life; how they use it creatively and innovatively to achieve their aims; and the struggles and contradictions they encounter as they go about living their daily lives. But this dissertation in no way deifies mobile phones or the mobile phone enthusiasts. Instead its findings and discussions raise important questions about the users and non-users of mobile phones, as well as the technologies themselves.

Traditionally, mobile phones have been considered as communication devices simply for making and receiving phone calls or sending and receiving texts. However, they are technologically converging into more than mere communication devices because they now feature digital cameras, video capture, music playback, and even web access. This dissertation does not describe the mobile phone in technological terms but is based more on socio-psychological and sociological concepts. Neither does the study get involved in describing technological features and processes. However, by using the Mixed Methods approach to explore the research objectives, this study attempts to explore the subject in as extensive manner as possible.

1.8 Significance

The importance of mobile phones today is undeniable, not only because it has become a cultural commodity, but also because of its practical use in the daily lives of individuals.

The research on mobile phones is constantly growing with mobile phone use being studied from various perspectives. This study contributes to the understanding of mobile

phone use from the perspective of social psychology, education, communication, sociology, philosophy and youth studies. It does this by providing conceptual as well as empirical evidence of the use of mobile phones in situations involving Personal Agency in the daily lives of young people in India. As such it delves into the use of the mobile phone in regular as well as contingent situations of daily life. It provides insights regarding the use of mobile phones by young people to express their individuality in a collectivist culture maintaining a delicate balance between the two.

Furthermore, even though the study highlights the practical level of mobile phone use, it constantly anchors itself within pertinent theoretical concepts. Moreover, this dissertation offers a deeper exploration of the subject through the lens of a very practical and ‘mundane’ technology. This research and the exploration of Personal Agency and mobile phones will not only be useful for the young people who use or do not use mobile phones but also to parents, educators, sociologists, social psychologists, and social workers. The researcher believes that this research can also be helpful to the development agencies and local community networks in their work in empowering local communities.

The Empirical Model of Agency provides clear and tested model on which to build. By applying the characteristics of Personal Agency by mobile phone use which will be elaborated later, the scope of the constituents of Personal Agency given by the Empirical Model of Agency is widened.

1.9 Thesis Outline:

The remainder of this chapter describes the overall structure of the dissertation as depicted in the figure 1.1. As the figure indicates the dissertation consists of nine chapters divided into five sections as follows.

The first section is an introductory section that situates the study. It consists of three chapters. Chapter one introduces the study by describing its context, and stating its

scope, significance and research questions. Chapter two provides the literature review drawing on theories from social psychology, communication studies, and Indian philosophy which particularly impinge on the themes of Personal Agency, mobile phones, young people, and Indian social practice. On presenting the theories and models it formulates a theoretical framework for this study. Chapter three dwells on the overall methodological framework of Mixed Methods research stating the worldview and the design that guides the study, justifying them in the light of the research question.

The second section describes the first phase of the research design. It is an exploratory phase that focuses on the quantitative data. It consists of two chapters (4 and 5) that present the exploration of the quantitative data. Chapter four describes the quantitative data collection procedures and the development and validation of the quantitative instrument. Chapter five describes the analysis of the quantitative data with reference to the quantitative research questions.

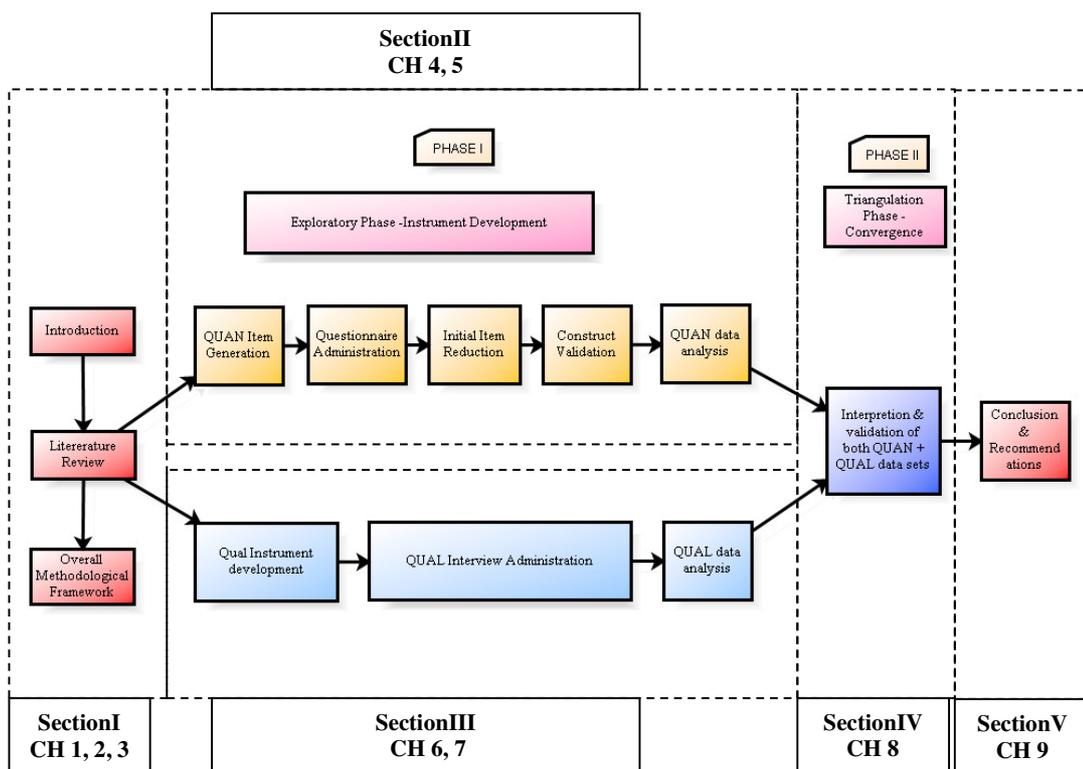


Figure 1.1 Overall structure of the dissertation

The third section continues the exploratory phase. However unlike the earlier section, it explores the qualitative data. It consists of two chapters (6 and 7) that present the exploration of the qualitative data. Chapter six presents the qualitative data collection procedures. Chapter seven presents the qualitative data analysis with reference to the qualitative research questions.

The fourth section describes the second phase of the research design which is a convergence phase. It focuses on the mixing and merging of the quantitative and qualitative results. It consists of one chapter (8) which merges the results of the quantitative data and the qualitative data analysis. This merging is presented in the form of a discussion.

The fifth section describes the concluding chapter (9) of the dissertation. It presents the summary of findings of the study, its limitations and makes recommendations for further study.

CHAPTER 2

Literature Review

2.1 Introduction:

This chapter provides an overview of the issues pertinent to the mobile phone and Personal Agency, particularly with reference to the Indian context. Interest in mobile phone research is quite new and is growing gradually whereas notions of Personal Agency has been studied extensively, although as an abstract concept. Hence this literature review selects works that are significant to this study in such a way that they will contribute to the understanding of the objectives of the study i.e. the exploration of the exercise of Personal Agency by mobile phone use. The aim is to show that young mobile phone users exercise a higher level of Personal Agency than non-users and that the mobile phone contributes to the exercise of Personal Agency. This review does not claim to be an exhaustive and in-depth examination of the theories and concepts considered in this study, but it creates a broad framework by which Personal Agency by mobile phone use can be assessed. Hence this chapter will first explore the understanding of mobile phones and Personal Agency and then situate these in the context of India and the New Middle Class in India, particularly in Mumbai.

2.2 The Proliferation of Mobile Phone Communication:

“Everywhere, people are cutting the cord,” remarked Gross² (2005), U.S Coordinator for International Communications and Information Policy, summarizing the dynamic growth of wireless technologies in the United States and other nations. The growth of wireless technologies is most evident in the boom of mobile phone adoption worldwide. For example, mobile phone subscriptions worldwide tripled those of landlines at the end of 2008, with the majority in the developing world (Resende 2008; ITU 2009) and the

² David Gross, was addressing the Technical Symposium and Business Expo in Washington, DC on June 28, 2005.

total number of SMSs sent globally tripled between 2007 and 2010, from an estimated 1.8 trillion to a staggering 6.1 trillion. In other words, close to 200,000 text messages are sent every second (ITU 2010). Such a proliferation undeniably indicates the speed and intensity of the ‘wireless revolution’ (Gross 2005) that occurred in the last decade (ITU 2009) especially in mobile phone communication.

On a general level, Plant (2000), in her expansive research on the effects of the mobile phone on social and individual life, noted that this simple and accessible technology alters the way in which individuals conduct their everyday lives. Others demonstrated the way in which this technology influences how they express their identities (Ling and Yttri 2002), their interaction with their families and friends (Cawley and Hynes 2006), and how they use their bodies (Rettie 2007).

Mobile phones have also become a tool of social mobilization (Ling 2000, Rheingold 2002), economic liberalization (LaFraniere 2005, Plude and Taske 2010), and conscientization,³ particularly for social issues affecting the local community. For instance, residents of the eastern part of Nigeria texted each other to mobilize themselves for a symbolic work boycott to protest the poor state of roads (Mudhai 2006). Furthermore, FOOD (2002) an inter-city marketing network for women micro-entrepreneurs which began in 2001 in Chennai, India, to help poor women in urban areas increase their income, multiplied from 100 to 300 women’s groups across the state of Tamil Nadu, India in the space of just one year by facilitating contact between production and marketing groups with cell phones.

This diffusion and influence of mobile communication in the last decade was nothing short of extraordinary. The key factor in the speed of diffusion was the embrace of the technology by the younger generation (Oksman 2010) especially in Japan and Northern and Western Europe (Wilska 2003; Green 2003; Srivastava 2005; Lim and Hellard 2008; Smith et al. 2006). The young people in their teens, twenties and early thirties

³ Conscientization is a process of empowering people to emerge out of helplessness and ‘silence’ by becoming conscious of the reality affecting them, becoming part of networks, dealing with it critically, by articulating it in a community. Its origin lies in Paulo Freire’s philosophy of problem posing method.

were the heaviest and largest proportion of mobile phone users (Richardson and Steethaler 2002 MACRO 2004; Castells et al. 2004). However the widespread diffusion among the younger population was not confined to a few countries only. Castells et al. (2007) notes the presence of a youth culture across different continents which found an adequate form of expression in mobile communication. He termed this form of culture as the 'Mobile Youth Culture'. Such a culture manifested itself in surprisingly innovative ways of mobile phone use. Some of the uses for mobile phone telephony invented by young people were not even foreseen by the initial designers of the technology e.g. the first text message was sent in 1993 by a Nokia engineering student and the companies thought it was not important (Agar 2003). Furthermore, some of the creative uses of mobile phones are introduced to adults by their children e.g. sending "missed calls"⁴ (Donner 2007). Young people also used mobile phone communication to form collective networks (Rheingold 2002), co-ordinate their movements (Ling and Yttri 2002), carry out business relationships (Puro 2002, p23), maintain romantic liaisons (Henderson et al. 2002; Wei 2007b), circumvent hierarchy (Williams and Williams 2005), and communicate despite space and time constraints (Bittman et al. 2009), or merely keep in constant touch (Agar 2003, Katz and Aakhus 2002, Axelsson 2010). In the present times, mobile phones have become so integral to the daily lives of young people that their absence seems almost unimaginable (Plant 2000). The Mobile phone has become an icon of the youth generation (Castells 2007), and has gained worldwide acceptance as a technology that promotes the ability of young people to confidently manage tasks (situations and relationships) that they face in their daily lives. Therefore this chapter undertakes a discussion regarding mobile phones, Personal Agency, India and its New Middle Class, thus constructing a theoretical framework for this study.

⁴ These are short signal calls not intended to be answered. They have no cost for the sender or the receiver. "Missed calling" is a practice of calling a number and hanging up before the mobile's owner can pick up the call. Most beeps are requests to call back immediately, but they can also send a pre-negotiated instrumental message such as "pick me up now" or a relational sign, such as "I'm thinking of you."

2.3 A Technology of Perpetual Contact-Ability:

Exploring the extent to which young people believe in their ability to exert influence on their daily lives on account of the use of mobile phone, would indicate that mobile phone shapes, in fact determines, the lives of individuals and society by its technological prowess (Abowd et al. 2005). However such judgments need to be evaluated.

2.3.1 Mobile Phone, a technology?

Four theories will be put forward that will assess the influence of mobile phone technology on people and formulate a perspective with which mobile phone will be viewed in this study. The theories are technological determinism (TD), Social Construction of Technology (SCOT), and Domestication Theory (DT). These theories were chosen because they attempt to address the relationship between technology and society and at the same time prompt questions about agency, autonomy and determinism which the researcher considered important for this research.

2.3.1.1 Technological Determinism:

According to the theory of technological determinism, human destiny is driven by an underlying logic associated with scientific laws and their manifestation in technology. As such, technology is perceived as an external factor that transforms institutions, interactions, as well as individuals (Negroponte 1995). However, according to Eldridge (2007), Raymond Williams criticises simplistic cause-effect determinism, and favours a modified notion of 'determination' that there exist variable possibilities and alternatives within the set of limits.

Mobile telephony is an appropriate example of how individuals feel determinative pressures to conform to a 'technological form of life'. For example, even an incoming call usually provokes a sense of expectation and urgency and one feels compelled to answer a ringing phone (Coates 2001, De Souza e Silva 2007). Furthermore, young

people live in ways that presume the availability of mobile telephony. In fact, without it they feel that a part of “themselves” is missing. However the researcher believed that the relationship between technology and society is not necessarily one of external force, such as mobile phone, forging and transforming social life and cultural patterns. For example, Bell (2006) points to young mothers for whom mobile phones were not ‘umbilical cords’ and that they could do without them. Hence, Ito (2004) remarks:

Though the mobile phone is an acclaimed piece of technology, nothing ‘inherent’ in the mobile handsets themselves is socially or culturally transformative.

In line with this, the researcher believed that technologies themselves are a result of social and cultural structures.

2.3.1.2 Social Construction of Technology (SCOT):

The theory of the social construction of technology holds that both the path of innovation and the consequences of technology for humans, are strongly shaped by society, through the influence of culture, politics, economic arrangements, and other such factors. Thus the Mobile phone cannot be isolated from the series of inventions that came before it, the imagination of designers and innovators, and public responses. Arnold (2003) explains how the mobile phone is embroiled in the commercial world of costs, profits and business plans; which connects through to actors in the technical world of signals, circuits and data bases; which connects through to the social world of teenagers, mothers and cultural mores. Seen in this way, technology is shaped by society and is subject to human control (Wei and Kolko 2005). Apart from the influences that lead to its creation, it relies on how humans adopt, domesticate and appropriate it in their daily lives.

2.3.1.3 Domestication of Technology:

The Domestication of Technology theory, proposed by Silverstone and Haddon (1996), challenges determinist accounts of technology and demonstrates the integration of

personal technology into everyday domestic life and the individual and societal consequences that arise from this adoption.

It emphasized the active roles that users had in making choices. It also emphasized how users engage with technologies in keeping with their circumstances, personality traits, and needs (Baym et al. 2004). Furthermore, the difference in adoption patterns between young people (teens, adolescents) and other users has also been studied in domestication research on mobile phone (Ling 2001). A variety of explanations has been suggested for the widespread adoption of mobile services among young users. However these studies assist more in understanding the consequences of widespread adoption of mobile services and less in explaining individual user adoption (Peterson and Ling 2002).

The current study has a partial leaning towards this theory since it explores how young people domesticate the inherent possibilities of the mobile phone technology for exercising Personal Agency. As Katz and Aakhus (2002, p307) state:

Technology does not determine what an individual can do; rather, it serves as a constraint upon possibilities. Much as a cafeteria menu will not offer infinite meal choices, but rather presents a finite selection of meal choices, so too historically bound technology offers us a flexible menu of extensive, but not infinite, choices.

One such inherent possibility that is harnessed by young people is 'Contact'. Several scholars have studied various facets of the attribute of contact that the mobile phone makes possible. For example, while studying this attribute, Katz and Aakhus (2002) refer to it as 'Perpetual Contact', Agar (2003) refers to it as 'Constant Touch', and Licoppe (2004) as 'Connected' Presence. Specifically, Katz and Aakhus (2002) call the mobile phone an '*Apparatgeist*⁵', a sociologic that is rooted in the human being's innate

⁵ The neologism "*apparatgeist*" was coined by James Katz and Mark Aakhus (2002) where they identified several cross-cultural trends in the adoption, use, and conceptualization of mobile telephony. The term '*apparat*' refers to an apparatus, a gadget designated to accomplish a specific task, often a complicated one. The term also encompasses a social operation that can achieve some end, often in an efficient way. The term '*geist*' is used to denote a directive principle within historical entities that can be observed indirectly through the intellectual, moral and cultural climate of an era (folklore, poetry, popular myths and folk theories). This principle unfolds in historical time and expresses itself in the creations of the

desire for pure communication, for social connection, and for sharing his or her mind with another. Hence when people interact with the mobile phone technology, this tendency for continuous and incessant social connection, sharing, and contact, arises in people's minds consistently across cultures.

Furthermore, young people pursue the mobile phone technology in varied other ways. For example, a mobile phone is pursued as a technology that is 'shareable', a technology that facilitates de-restriction and a technology that promotes reflection.

2.3.2 The Mobile Phone is a 'Shareable' Technology:

The Mobile phone in India is used more as a collective communication instrument rather than the personal communication device observed in more developed markets (Castells 2007). For example, when one family phones calls another family, such as relatives or friends, each family member is expected to talk to each member of the other family. Sharing of mobile phone calls is also commonly observed among friends and colleagues to the extent that it is considered unfriendly to omit someone among friends or colleagues from sharing in the call.

However (Chavan 2007) demonstrates that though mobile phones are shared—between parents and children, between spouses, between technologically knowledgeable and technologically illiterate—the mobile phone can play a conflicting role because of the inherent attribute of the mobile phone of being an individual device. Ideally meant for use by one person, as is the norm in the western world, where it was originally designed, the mobile phone can be at odds with the largely collectivist culture of the Asian countries.

Sharing among teenagers occurs in various ways and plays a part in local social interactions when they meet together. When they receive phone calls or SMS messages

citizens of the society. The term *geist* also encompasses a sense of movement and a sense of becoming, rather than a sense of being.

on such occasions they render private information displayed on a very small screen accessible to others in various ways. For example, they either display the content to others without actually giving the handset to others, or they read the message aloud or sometimes they even borrow and lend each other's phones (Weilenmann and Larsson 2001).

Another form of mobile phone sharing occurs through camera phone activity such as 'on phone' display, sending images by MMS or email, or saving messages to a PC. In relation to this, a user survey by Lyra Research of 525 camera phone users in the United States, conducted in April/May 2006 indicated that 72 per cent of users share images 'on phone', 28 per cent use MMS to send images, 31 per cent send images using e-mail, and 33 per cent save images to their PC (Nightingale 2007). These camera phone activities have become part of the pattern of exchange that forms the fabric of everyday life (Ito et al. 2005, Ling, 2004).

Furthermore, Graham et al. (2007) tell about people generating 'digital documents of life' via moblogs. Moblogs compel people to think about, write about and take pictures of aspects of their daily lives such as places visited which they normally take for granted. Moblog affords such reflection and mobile phones indeed become a form of "personal scanner" of everyday life.

Finally Castells (2007) provides examples of mobile phone sharing as observed in Ghana that happens between friends. In this sharing a person can remove the SIM card from his or her mobile phone (for example, if the battery is running low or the handset is faulty), place it in a friend's mobile phone, make a call, and then remove the SIM card. In this way, the cost of the call goes to the owner of the SIM card used, as if they had made a call from their own handset. Furthermore, in rural areas where electricity is a scarce commodity, the mobile phones are collected together and taken to be charged and returned fully charged once a week.

2.3.3 Mobile Phone is a technology facilitating de-restriction:

One of the first consequences of mobile phone use is the increase in independence on the part of the users, where space, time and, to some extent, cultural and social rules is concerned.

Considering the de-restriction of space and time, it can be noted that the theme of the transformation of space and time is often used not only in social research but also in marketing mobile phones. Advertising presents mobile technologies as devices to transcend the “limitations” of distance or location. Green (2008) demonstrates this by noting a television advertisement in the United Kingdom in which a mother working in a European city tells her son a bedtime story by using her mobile phone. Another example worth noting is about a group of young men coordinating attendance at a football game via mobile phone while in the same house. In these two examples, she presents mobile phones as devices to engage simultaneously in work and leisure without being restricted by distance or location. The promise of ‘anytime anywhere’ connectivity’ is often used by mobile phone service providers to attract more customers toward their service.

Furthermore, this de-restriction of space and time is also seen clearly with regard to the modern metropolis which requires new forms of proximity and coordination, and the technologies to manage these. In the metropolis, individuals are dislocated from the local and the collective presence of each other. In this situation technologies such as mobile phones play a central role in supporting social communication at a distance and, by their ability to collapse distance, make ‘presence-availability’: the organization of presence, proximity, availability, and the degree of co-present activities, possible (ibid.).

De-restriction is also seen in the fact that the mobile phone has made it possible to perform multiple roles within a same time span. Traditionally, roles were confined to specific times and places. However with the mobile phone that restriction has been lifted. For example, one can perform the role of a teacher and a mother at the same time because the mobile phone makes it possible to be available to one’s students as well as

to one's children at the same time. However it is also likely that mobile phone users will experience conflicts between roles. For example, young people may desire to respond to calls from their friends during the time demarcated by their parents for their studies at home. This brings about a conflict in the individual between academic and personal roles, as a student and a friend. Their effectiveness in managing their roles is attributed to skilled use of technologies, particularly the mobile phone. For example, interruption of a family meal at home by a peer on a cell phone may require decisions such as whether to answer the call, how long to talk, and what to say; such decisions become contingent on location as well as the situation and the time when the event occurs (Cousins and Robey 2005). Thus mobile phones support de-restriction of roles from considerations of space and time.

De-restriction is also seen in the detraditionalisation facilitated by the mobile phone. Detraditionalization does not mean a society without traditions. Rather, the concept refers to a social order in which the relationship between parent and child is marked with fluidity. Williams and Williams (2005), examine how the mobile phone accelerates the process of detraditionalisation within the family by increasing the possibilities for negotiation between parents and children. This is often seen in the lives of young people jostling with parental authority especially when parents inquire about their whereabouts. Negotiation in this context is considered as a conflict driven arena as the mobile phone has become quickly integrated into family practices. With such integration, parents become more open with children as they attempt to become "friends" as well as parents. Mobile phones enhance young people's sense of independence from the family by allowing them to distance themselves from parents and move closer to friends (Castells 2007). Mobile phones also 'empowered' young people by enabling them to screen out calls (Henderson et al. 2002). Thus intra family relationships experience substantive democratisation. While it makes a positive contribution to parenting styles, it also causes friction with regard to the cultural issues where obedience is considered a primary value in Indian families.

However this ability is not necessarily to be considered as young people neglecting their ties with their family. They still operate within the framework of parental rules which set boundaries for how these devices are used such as in terms of cost and keeping in touch. The mobile communication creates an extended umbilical cord between youth and their parents, fostering better parent/child relationships such as increased trust, quick feedback, and ability to deal with issues on the spot, through instantaneous communication links they enable.

Another form of derestriction enabled by mobile phone is the flexibility of commitments regarding punctuality. Garcia-Montes et al. (2006, p75) states:

People appear to be in a kind of perpetual state of preparation, planning appointments that are subsequently transferred to another date, and then to another, to finally not take place at all. Thus, commitments planned for the future are either shifted around or never come to pass. What our society demands, as regards commitments, is flexibility, though it is important to underline that this does not mean laxity or unreliability. The appointment can be changed... up to the last minute, but once it has been fixed, it must be adhered to.

Furthermore, Puro (2002) speaks of the dilution of boundaries between work and leisure in Finland by use of the mobile phone.

Thus arguments about presence-availability, roles, negotiations and flexibility might suggest that widespread social and cultural change in the practice and understanding of spatial and temporal dimensions of daily living is occurring. Mobile phones enable management of presence-availability, multiple roles, negotiation, flexibility, and mobilization of one's social network as common strategies for juggling responsibilities and coping with unforeseen contingencies (Schwanen and Kwan 2008). Seen in this way, young people domesticate the inherent possibilities of the mobile phone, and its logic of perpetual contact and de-restriction. In doing so, young people experience a sense of Personal Agency and also exercise it.

2.3.4 Technology that supports reflection:

As technology is seen as the preserve of young people, generally but not exclusively, the mobile phone is often considered to foster light hearted, short and unreflective communication. In fact, its involvement in enhancing the capabilities of the individual to think, reflect and effectively address situations, on a practical level and on the abstract level, have hardly been extolled (Nyiri 2005). At the outset the mobile phone is carried with the view that in the event of boredom or any contingencies the individual will not be stranded without recourse to one's network irrespective of where he or she is and what time it is. Furthermore since the mobile phone is ubiquitous, it becomes important for users to be attentive and alert to the messages they exchange, lest in a moment of distraction, boredom or stress they may send messages that they may regret later. Hence individuals are required to exhibit foresight not only by carrying the mobile phone with them with the view of engaging in communication if at all they require in the course of the day but also when they send messages or engage in voice calls to ensure that the content of the messages do not have an adverse effect on themselves. This requires some amount of reflective thinking.

Also, it is seen that people suffer from telephobias such that people procrastinate making a call because of a feeling that it is not the best time, or often times, callers worry about whether to identify themselves at the outset or to begin by guessing who answered the phone or who is calling. Virtually everybody exhibits a pet hate about speaking on telephone (Hopper 1992). Hence the ring of the phone initiates an internal dialogue, a conscious presence with self (Wulff et al. 2001, Atkins and Murphy 1993). It shapes and re-shapes one's internal landscape, alters the frame through which one views experience and comes to know the world.

Furthermore, Schon (1991 cited in Atkins and Murphy 1993) identifies two types of reflection: reflection-in-action and reflection-on-action. Reflection-in-action occurs while the individual is actually engaged in an action and it influences one's engagement. On the other hand, reflection-on-action occurs after the action has already been enacted.

Both reflection-in-action and reflection-on-action occur in a mobile phone call. The individual undertakes short moments of reflection as he or she is speaking on phone or formulating an SMS message. Furthermore, the content of the conversation one has engaged in or the SMS message one has received or sent, generally leaves a trail of thought about what was communicated, at least for a short while, after the call is completed or the message has been sent or received.

Three of the most popular mobile phone applications, voice, text and image, engage the individual in thinking and reflection.

2.3.4.1 Texting:

2.3.4.1.1 Writing renders clarity to one's thought:

Silent reading was almost unknown in ancient Greece and Rome (Nyiri 2005). With the spread of Guttenberg's invention, silent reading became the rule. Words appearing on the printed pages reflected the clarity of the writer's ideas and made the writer's inner life capable of being observed. Hence people surround computers with an array of printouts if they want to understand long texts and compose decent documents. Similarly people prefer writing text messages instead of speaking on the phone, apart from the fact that texting is cheaper.

2.3.4.1.2 Writing provides delay for thinking:

Between conceptualization of an idea and its vocalization there is less time to reflect on alternative and extensive word choices in comparison with writing or texting and hence there is shorter opportunity for reflection. Text production in its various forms whether with pen, on a chalkboard or a keyboard or keypad is actually considerably slower. This sluggish production process means a longer time to think about alternative words (Nyiri 2005). On the mobile phone instead, with 160 characters to deliver one's thought in a narrow writing requires that one has to concentrate on the writing instrument as well as

the writing (Ling 2005). Therefore Nyiri (2005, p6), referring to Wittgenstein's theory of extended mind, writes:

thinking is essentially the activity of operating with signs. This activity is preformed by the hand when we think by writing; by the mouth and larynx, when we think by speaking.

2.3.4.2 Image:

Thought is made visible not only by writing but also through images. As alphabetical literacy became dominant and written texts became more widely copied, the technology reproducing pictures severely lagged behind. Visible thinking became, for many centuries, merely thinking in words. But with the invention of the printed image, the rise of photography, and then dramatically with the emergence of computer graphics and then the mobile phone, the situation changed dramatically (Nyiri 2005).

According to Okabe and Ito (2006 in Gye 2007) photo sharing assists in creating and maintaining social relationships. However, photos taken with mobile phone cameras reinforce the user's individuality rather than their ties to other people. The social function of camera phones differs from the social function of the camera. When photos from the camera phone and the traditional camera are compared, it is seen that, whereas the traditional camera is carried occasionally to record noteworthy moments, the camera phone is ubiquitous and is used to record a more personal and less objective viewpoint, and for sharing. Camera phone images more frequently serve as an archive of a personal journey or viewpoint on the world, or a collection of reflective fragments of everyday life. Thus Daniel Palmer (2005 in Gye 2007) argues that the 'Nokia moment' is far more intimate than the 'Kodak moment'.

Further, Gye 2007) points to other studies that indicate a distinction between camera phone images that are affective and those that are functional. She argues that affective images enhance a mutual experience or share an affective experience with someone who

is absent, either in the moment or later. Affective images can also be taken to be used for personal reflection, rather than for sharing with others. Interestingly, almost half of the photos taken by the participants in the study of Okabe and Ito (2006 in Gye 2007) fell into the category of affective images, something which supports Okabe and Ito's assertion that the camera phone is primarily a personal reflection imaging device.

2.3.4.3 Voice:

Another way that mobile phone supports thinking and reflection is seen in the way gestures are used in mobile phone communication. When phone and face to face conversations are compared, it is observed that the mobile phone communication is limited to sound and is split from the rest of the action (Hopper 1992). For example, the caller or receiver does not see the non-verbal gestures accompanying the mobile phone conversation. Hence mobile phone communication engages the imagination, listening, attention to the sequence of messages, retention, evaluation and verbal response.

Secondly the non-verbal gestures with which mobile phone communication is accompanied show vividly as if there was someone in front of the individual who is speaking on the mobile phone. Hence when they smile, gesture, nod their heads, fling their hands about, and seem completely involved in the conversation (Wei 2006; Katz and Aakhus 2002), there is a rich layer of nonverbal communication that is surrounding mobile phones conversation that the person on the other end of the line cannot see.

Moreover, according to Wei (2006), people may be "wired" to use gestures in their speech, for their own benefit. Gestures in conversation are linked to its cognitive benefits for the speaker. Referring to various experiments with visually challenged and normal sighted people, she notes that gestures offer cognitive assistance for the speaker especially when performing a challenging task. In this way, gestures aid the communication process, helping the speaker think through a complicated task, and explaining complex relationship, and finding substitutes for missing vocabulary. Thus

mobile phone users engage in non-verbal behaviour which offers cognitive assistance to complete challenging tasks.

2.3.5 The mobile phone, not mere, but more than technological object:

Hence, the researcher, by exploring the theories related to technology's impact on society, and the characteristics of the mobile phone relevant to this study situated the mobile phone not merely as a technological object, but as a sociologic of 'Contact' with multifaceted inherent possibilities. They are "not just objects and technology; but also a system of ideas" (Yanuar 2002) that can be harnessed for the human progress. The researcher aligned himself with Hegel (1977 cited in Katz and Aakhus 2002 p306) in that:

there were certain latent urges of each historical period that culminated in its idealized expression and manifestation; metaphorically speaking, much like a tree in autumn that sheds its leaves and revitalizes in the spring, the historical momentum, decays, rebuilds and manifests itself in another time.

The mobile phone is such a manifestation for the present times. It is an innovation offering individualized and mass messages, personal and group communication, and synchronous and asynchronous contact in the form of voice and text. It is also offering de-restriction and involving human beings in moments of reflection. In this way, it is strengthening the aspirations of young people to perceive themselves as agents, independent as well as connected, exercising influence on their own lives and surroundings. Thus its technological, social and cultural abilities, and most of all its inherent logic of 'Contactability', makes the mobile phone the *signum temporis* (the sign of the times) (Goban-Klas 2002).

Having situated the mobile phone in a broader outline, the researcher proceeds to demonstrate its fit to the concept of Personal Agency.

2.4 Agency:

Haste (2008) designates agency as one of the five key competencies needed for the 21st century citizens. The concept of ‘agency’ is known to be influenced by Western conceptions of the actor where individuals are the locus of social action in traditions focused on individual freedom (Meyer and Jepperson 2000 cited in Hitlin and Elder Jr. 2007b). However, agency is not the same as individualism. Individualism is a belief in the primary importance of the individual and in the virtues of self-reliance and personal independence. It reflects the distinctiveness of the self especially in two dimensions namely: self-assertion, displaying one’s own point of view and taking responsibility for communicating it clearly; and separateness, expressing the distinctiveness of oneself from others (Grotevant 1998).

While constructing the definition of agency, theorists either tend to identify simplistic notions of it or enter into the “timeless realm of the abstract” (Nisbet 1969 cited in Hitlin and Elder Jr. 2007a). Hence agency is interpreted diversely, ranging from being considered as ‘moments of freedom’ and ‘effort’ (Alexander 1992, 1993 cited in Hitlin and Elder Jr. 2007a), to the “ability to initiate self-change” (Thoits 2003 cited in Hitlin and Elder Jr. 2007a). These definitions do not lend themselves to empirical verification. Hence Hitlin and Elder Jr. (2007a) moved the theoretical discussion on agency towards an empirically verifiable model which demonstrates its dimensions (Self-Efficacy, optimism, planfulness, social support and autonomy), anchors it within a social psychological understanding of the individual, and renders it measurable.

Moving on to formulate the definition of agency, Ahearn (2001 cited in Hitlin and Elder Jr. 2007b, p172) defines it as “the socioculturally mediated capacity to act.” Even though it is a broad definition, it is helpful in that, it highlights the primary theme, namely the capability of people, which runs through a variety of definitions of the concept. Hence agency, in this study as considered in social psychology, is referred to as a capability. It is defined as:

The ability to exert influence on one's life (Shanahan and Mortimer 2003 cited in Hitlin and Elder Jr. 2007a, p38) through actions one takes within the opportunities and constraints of social circumstances. (Elder and Johnson 2002 cited in Hitlin and Elder Jr. 2005, p7).

Hence, based on this definition, agency in this study is understood as follows: agency is a *capability*; agency is *action*; agency is *task oriented* and agency is *self-reflective*.

2.4.1 Agency is a *capability*.

Agency for this study is primarily referred to as the capability of a person to exert influence. For example, Meeus (2002) refers to a group of Personal Agency studies on adolescents, focusing primarily on the area of school and occupation in which adolescents were seen to be concerned with variables such as ability, adaptive personality, Self-Efficacy, problem solving and cognitive strategies, in order to assess success and to protect oneself against failure. These Personal Agency variables bespeak a certain belief in the capability of individuals to shape their own career in school and occupation.

Hence in this study:

[a]gency refers not to the intentions people have in doing things but to their capability of doing those things (Giddens 1984, p9).

It should be noted that the capacity for action differs, from the perception of that capacity, which is known as Self-Efficacy. Some scholars view Self-Efficacy as the core of human agency, a belief in one's capabilities i.e. without belief in one's capability, one will refrain from using one's capabilities for performing tasks (Hitlin and Elder Jr. 2007a). Therefore, the researcher advocates that agency, firstly and foremost, is a capability of any action required in a situation, and Self-Efficacy is belief in one's effectiveness in performing specific tasks and actions.

In viewing agency as a capability, the researcher aligned himself with economist and philosopher, Amartya Sen's 'Capability Approach' (CA) which focuses on the capabilities of people. It posits that the wellbeing and development of people should be evaluated in terms of "the expansion of the capabilities of people to lead the kind of lives they value—and have reason to value" (Sen 1999 cited in Evans 2002, p54) rather than on income, expenditure and consumption. CA is enhanced by an associational life or networking (Evans 2002) and safeguarded by collective action (Sen 1999 cited in Evans 2002) indicating the significance of proxy and collective agency.

Bandura (1999) demonstrates three modes of agency namely, Personal Agency, proxy agency, and collective agency. Personal Agency is exercised individually with people directing themselves and their environment to manage their lives. Proxy agency is the way an individual enables or relies on another person, people or service to act as agents to achieve desired goals in situations where they do not have direct control over factors that affect their lives, and thereby involves the mediation of others who have the expertise or influence to help attain the desired outcome. Collective agency refers to "people's shared beliefs in their collective power to produce desired results" (Bandura, 2000, p75). In this study, Personal Agency is examined. However Personal Agency also works in tandem with proxy agency, and collective agency (Bandura 1999).

2.4.2. Agency is *action*:

Agency is defined in this study as exerting influence through actions that one takes. It is the ability to manoeuvre through contingent situations and facilitate regular relationships through the use of mobile phones. Agency influences the courses of action individuals choose to pursue.

Adopting the Aristotelian thought that human beings, by their very nature, live in communities and in association with each other, Dufresne (2005) offers five types of actions they engage in. *Liberating actions* are those actions that remove obstacles, for

example, advising peers who desperately call during emergencies. *Inhibiting actions* are those that avoid or stop certain behaviours, for example, avoiding excessive dependence on mobile phone in view of studies which indicate the ills of excessive texting⁶ among teens. Such studies linked excessive texting to a higher occurrence of behaviours such as smoking, drinking, fighting and sexual relationships (NHS Knowledge Service 2010). *Catalytic actions* are actions that offer "the right dose at the right time" and may trigger a breakthrough in how people and communities view themselves, for example, participating in collective action for human causes as seen in smart Mobs (Rheingold 2002) or text protests. *Inspiring actions* connect people to the meaning of life. They remind individuals that there is something larger than oneself, for example, using images, voice and text to inspire and aid reflection on life. Finally, *Nurturing actions* nurture people and communities to remain intrinsically at their best, for example, by being present and available to people even when they are not geographically present in each other's physical presence. Such actions involve knowledge, skills and competencies that enable people to succeed in daily life situations, and by which people contribute positively to themselves and their communities" (Marat et al. 2008).

Actions can also be differentiated according to the time they require:

A *habitual action* is an action that an individual does regularly, such as, parents or children or spouses call each other regularly to keep each other informed of their wellbeing. Another example is of friends who call on a more regular basis to tell you their day's mundane news. In a similar manner, lovers engage in extensive mobile email exchanges in public transportation and regularly send long text messages (100 characters or more) to each other. Thus the vacant time in public transportation is regularly made useful (Okabe and Ito 2005).

An *immediate action* is a swift action that is performed without allowing much time lag such as calling the support network when the individual is in an emergency situation.

⁶ Excessive texting is dubbed "hyper-texting" by researchers and defined as texting more than 120 messages per school day.

However mobile phone users also use strategies to avoid immediate action. For example, when a person is expecting an urgent call while attending a meeting, only those calls that are important are accepted, while the rest are routed to the voice mail (Sens 2002).

An *impulsive action* is an action predisposed toward rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individual or to others (Moeller et al. 2001). The mobile phone is seen as an antidote to be free of the feeling of disappointment of having missed an 'urgent' call.

A *compulsive action* which is seen in the need to experiment and extend the parameters of identity is reflected in the compulsive desire to obtain the latest model, the current fascia, up-to-date ring tones, downloadable games, covers and holders (Rippin 2005). For example, mobile phone users over a period of time, develop a sense of urgency to the incoming call or wait in expectation for a call. Compulsive behaviour in the handling of mobile phones can be observed as a result. Coates (2001) says "One of my friends is a compulsive text messenger, who is constantly texting whilst in the pub. This has an isolating effect; I feel that she would rather be somewhere else than be there with us."

An *urgent action* is when the logic of action is dominated by cost effectiveness and utilitarianism. The notion of urgency is the fruit of a desire that is present, to varying degrees, in every mobile phone user: the desire to be everywhere at the same time, to save time, to multiply opportunities (Jaureguiberry 2000).

A *restricted action* is one which is not permitted in some contexts and the individual is prevented from performing those actions. For example, an existing friend may be permitted to execute the privileged actions of reading and sending private messages, initiating a private chat session, forwarding messages via email or SMS, or adding content to the user profile. This is out of bounds to others. As such, in a friendship relation the privacy-intruding access is restricted to a set of friends (Preibusch and Beresford 2009).

2.4.3. Agency is *task oriented*:

Agency refers to one's capability to originate and direct actions for given purposes. In relation to that the objective in this study was to explore how mobile phone users perceived themselves as capable of performing required tasks such as management of contingent situations encountered in daily lives and the maintenance of roles and relationships due to the availability of the mobile phone. It also explored the exercise of that capability in performing these tasks.

According to Social cognitive theory (Bandura, 1989, 1997) Self-Efficacy is closely related to the performance of specific tasks. Because Self-Efficacy is a belief in one's capability to perform chosen tasks, this belief influences one's choice of activities, the degree of effort expended, and the persistence of effort (Bandura, 2006). Theoretical and empirical evidence suggests that Self-Efficacy may serve as a powerful construct for predicting task performance (Yin and Boyd 2000 cited in Chiou and Wan 2007)

In one study, Pustay (2007) observes representations of telephony in film, examining the shifts occurring in such representations since the advent of mobile telephony. He argues that the most important change between past images of landline telephony and new images of mobile telephony is the shift from impotence to agency. Where once the landline telephone caused narrative impotence in which a character was unable to affect the outcome of events occurring on the other end of their telephonic connection, new representations of mobile telephony provide agency for the user to accomplish this and other tasks.

2.4.4. Agency is *self-reflective*.

Reflection and regulation are interrelated mechanisms in social cognitive theory (Bandura 1999). They are important characteristics of agency because in any action one needs to consider the implications they may have for future difficulties or opportunities (Olsen 2007).

Regulation is an important dimension of moral agency. The term “moral agency” refers to the processes of moral decision making and conduct (Bandura 2006). People behave according to the personal standards they develop in their process of socialization and internalization of values. The personal standards encompass the self as an organizing, proactive, reflective and regulatory mechanism (Bandura 1999). The regulatory dimension of the self observes and judges the values and likely consequences of the action the individual intends to take and decides which of them the individual should engage in.

Bandura’s work on moral agency also provides a framework to examine the influence that personal responsibility has regarding avoiding actions that are inconsistent with moral standards. If personal responsibility fails, society imposes actions to prevent individuals from harming others. At the foundation is the belief that intentionally causing harm to others is wrong.

Individuals use self-regulatory mechanisms to guide their mobile phone behaviour and use. Most people feel that technologies such as mobile phones should be regulated in some way. They regularly raise relevant issues about the moral aspects of mobile telephony. However they struggle regarding what those regulations should be (O’Leary and Wolitski 2009; Ling and Yttri 2002).

People, especially parents in India, perceive adolescents’ relations to mobile phones as cause for moral panic (Boethius, 1995 cited in Oksman 2010) because it influences financial expenditure, the academic life of young people, and family and cultural values. Hence the construction of norms is an effort to achieve stabilization. Thus from the perspective of a moral economy as developed by E. P. Thomas (1971 cited in Arnold 2001), non-economic features such as social norms and obligations as preconditions of proper behaviours are also considered important to explain actions and agency.

Mobile phones in India were initially a luxury, mainly for the wealthy, but gradually they have come to be the most important means of contact for all. The issue of luxury versus utility is waning now because mobile phones are owned even by India’s very

poor due to the availability of cheaper handsets and economically suitable offers by service providers. However, new issues have emerged such as inappropriate use (regarding pornography, bullying, use in the class room). From the point of view of Domestication of Technology, as domestication occurs, mobile phone use has to be continually complemented with moral training of appropriate use. Another cause of moral panic among the parents is their being unable to exert adequate authority over children, in order to regulate their use of mobile phones in order to maintain boundaries regarding its use (Oksman 2010). Furthermore, the mobile camera phone's MMS application and its clandestine use by students in the classroom is causing grave concern among educational institutions especially after a spate of inappropriate MMS clips with pornographic content (Thomas and Jha 2009) was uploaded on the internet by college students (Soronen and Tuomisto 2002 cited in Oksman 2010).

Moving further, in the subject of agency it is important to situate it within a larger framework of social structures.

2.5 Agency vs Structure:

There are various models illustrating about the interplay between agency and structure. Some models focus on how apparently free actions lead individuals to unconsciously reproduce social structures (Giddens 1984; Layder 1997 cited in Hitlin and Elder Jr. 2007a). Among those models, Giddens' (1984) conception of agency as 'structuration' stands out. However in these models, individual-level differences in capacity, skill, and forethought are ignored.

In contrast to these, there are other models that disentangle individual agency from social structure, determining that individuals are socialized into certain beliefs about their abilities and opportunities, but are far from passive recipients of socializing influences (Lutfey and Mortimer 2003 cited in Hitlin and Elder Jr. 2004). They assert that human beings actively shape their environments, even as environments shape them (Hitlin and Elder Jr. 2004).

The researcher deemed that individuals are influenced, but also are influences in their own right. Within the structural boundaries that they operate, they innovatively and creatively use the alternatives available within the boundaries to influence their daily lives. As indicated earlier, young people discovered uses of mobile phones which were not even imagined by their designers. However the researcher agrees that there are boundaries to agency which individuals have to negotiate.

2.6 Bounded Agency:

According to Elder (1995 cited in Evans 2007), agency is socially situated i.e. an individual depends on his past, imagines his future, is attentive of subjective perception of the structure he has to negotiate, and shapes the present action. In support of this view, Hays (1994 cited in Hitlin and Elder Jr. 2007a) contends that agency is not individualism, absolute freedom, and subjectivity, but embraces social choices within structurally defined limits. Sewell (1992 cited in Hitlin and Elder 2007a) also articulates the intertwined nature of agency and social structure. This alludes to the fact that one's struggles are bounded by wider social and institutional environments.

Recognizing this, Evans (2002) posited that there exists an interfusion of agency and structural influences. She demonstrated that there are a number of boundaries or barriers that circumscribe and sometimes prevent the expression of agency. Thus, within socially structured environments, the individual's experiences are shaped by the experiences of the past, the options present in the current moment and the perceptions of possible futures. This is the concept of Bounded Agency.

However even though socio-structural influences impose constraints, they also provide resources and opportunities. Socio-structural influences are created by human beings themselves and not by some external impersonal forces. They are products of human activities (Bandura 2006). Hence, in the face of being limited by environmental and social influences, there are things within such influences that also help to manifest Personal Agency. For example, converting social and cultural inheritance into action

where parents' ability to secure their children's prospects helps children to plan for their future by utilising their influence in their social and cultural network. Another example is the collective expression of agency, where peer groups or collectives pool their strength as seen in smart mobs (Rheingold (2002) or political protests (Rafael 2003). In fact, Bounded Agency means that roles and social relations may be needed as part of young people's strategy to 'take control of their lives' (Evans 2002).

Thus the concept of 'Bounded Agency' demonstrates that young people do manifest agentic beliefs, but encounter frustration in expressing them or acting on them because of the constraints in the social and cultural landscape that are difficult to remove or circumvent (ibid.). In the current study, the boundaries considered were: personal (decisions regarding ethical principles one adheres to regarding not engaging in inappropriate behaviour such as mobile bullying or mobile pornography), institutional (bans and restrictions for mobile phone use in educational institutions), technical (shortage of battery charge, lack of network signal), medical (fear of long term mobile phone use causing health problems), social (curb over mobile phone use during family times), and cultural boundaries (panics over the erosion of values due to mobile phone use). These were operationalized as items in the quantitative questionnaire that was created for this study.

On forming a broad framework for agency, the researcher moved to presenting specific models that will bring light on this study. In view of this it was noted that agency in this work has been studied from two points of view: from the perspective of social psychology, Hitlin and Elder Jr. (2007a) constructed an empirical model of agency in which they delineate its constituents. They also explored agency from the sociological point of view and proposed a model to demonstrate an individual's control over his or her temporal orientation to the situations they encounter (Hitlin and Elder Jr. 2007b). Each point of view will be presented separately.

2.7 Empirical model of agency:

Drawing from previous empirical treatments that were oriented around two approaches, one focused on Self-Efficacy (Bandura, 2001; Gecas, 2003) and the other on “planful competence” (Clausen 1993 cited in Hitlin and Elder Jr. 2007a), and Empirical Model of Agency that drew on social psychological insights was developed. It is depicted in figure 2.1. This model measured the constituents of agency at the level of the individual.

Self-Efficacy research often deals with beliefs about an individual’s capability to handle particular tasks, whereas Clausen’s concept of “planfulness” is less an indicator of agency and more a personality-level attribute. Neither of them properly situates the social actor as a self-reflexive agent, making decisions about the situations they encounter, within the framework of constrained choices. For Hitlin and Elder Jr. (2007a), agency is the perception, the sense, of the capacity for meaningful and successful action, irrespective of whether one has or does not have the opportunities or independence to exercise such capacities. In their model, they empirically demonstrate the components of agency and verify the construct by extending it to the educational domain of young people.

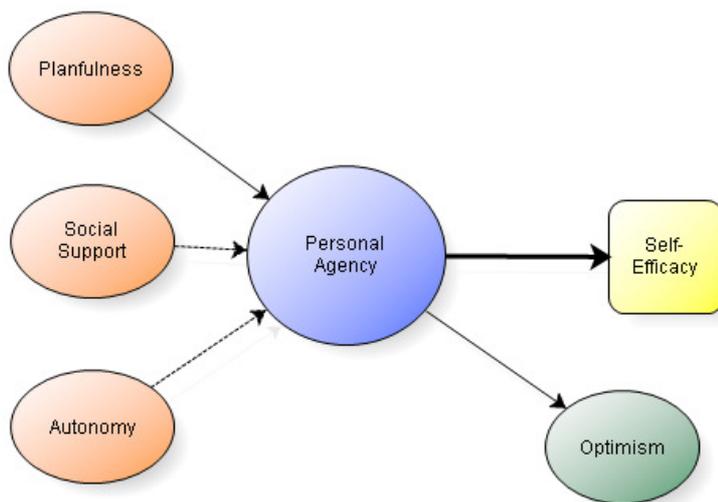


Figure 2.1 Empirical Model of Agency (adapted from Hitlin and Elder Jr. 2007a)

In this study the researcher used these components of agency to explore and measure quantitatively the extent to which they are facilitated by mobile phone use. These components are conceived as follows.

2.7.1 Self-Efficacy:

According to Bandura (1982), Self-Efficacy is the belief an individual has about his/her capabilities to execute courses of action required to deal with prospective situations that affect daily life. According to Zimmerman and Cleary (2006, p47) Self-Efficacy refers to:

subjective judgments of one's capabilities to organize and execute courses of action to attain designated goals.

Self-Efficacy beliefs are the key factor of agency (Bandura (1997), contending that, if people believe they have no power to produce results, they will not attempt to make things happen.

Self-Efficacy is characterized in three ways. Firstly, Self-Efficacy mechanism is central in human agency. Causal tests revealed that the higher the level of Self-Efficacy, the higher was the performance (Bandura 1982). Secondly, Self-Efficacy requires integrated courses of action to complete a purpose. Efficacy in dealing with one's environment is not simply a matter of knowing what to do. Rather it involves a capability in which cognitive, social and behavioural skill must be organized into integrated courses of action to complete a purpose (ibid.). Thirdly, Self-Efficacy is motivational (Baumeister 1999). It motivates in two ways. It motivates by enhancing our global sense of self-esteem, which is based in large part on our abilities to engage in efficacious actions (Gecas 1986 cited in Hitlin and Elder Jr. 2004). Fourthly, it taps into the aspect in individuals that seeks to master and control its environment. Hence hands-on experiences or direct experiences of being efficacious are the most motivational in the individual's life. They enhance the individual's self-understanding of being efficacious.

In this way, they perceive themselves as causal agents having some control over their circumstances, and being capable of carrying out actions to produce intended effects. This motivates them to think of themselves as competent, effective, and able. Those with low Self-Efficacy are more likely to see themselves, as powerless, helpless, and fatalistic (Gecas 2003).

2.7.1.1 Development of Self-Efficacy:

Self-Efficacy develops primarily out of the interactions between the individual and environment. Specifically, it is the environment's responsiveness to the individual's actions that is critical to the development of Self-Efficacy (Mead, 1934 cited in Hitlin and Elder Jr. 2007a). Among the earliest and most important lessons that the infant learns is that events are causally related (e.g. shaking a rattle produces a sound⁷) and that the infant can produce that effect. Causing things to happen is the means by which the infant begins to understand causality and to exercise some control over its environment (Gecas 2003).

2.7.1.2 Mobile phone and Self-Efficacy:

The mobile phone responds to human action. A mobile phone is never out of reach of people (Patel et al. 2006). For example, a hand is always presented as a typical operating situation of a mobile phone which it referred to as handset (Kivekas et al. 2004). Furthermore, the physical responses when the mobile phone is operated include the lighting up, the appearance of personalized desktop themes, and the production of sounds that are preset or one's own. Moreover, mobile phones can be used as an educative technology (Thornton and Houser 2004), communication technology, entertainment technology, navigational technology with the mere press of the button.

⁷ Watson's (1977 cited in Gecas 2003) experiment with mobiles over infants' cribs supported this proposition. He found that mobile that responded (i.e. made sounds and motions) to the infant's actions, such as touching or kicking, accelerated the development of agency (and other cognitive abilities) in infants, whereas the automatic (wind-up) mobiles did not. The intentional production of effects and the recognition that they produced it creates the initial, rudimentary sense of Personal Agency in infants, even before the emergence of "self" (Gecas 2003, p372).

Most significantly, it is able to facilitate communication and interaction with the social world at one's will. The user can coordinate events without being confined to particular places and can respond to the environment by recording photos, videos and sounds. In recording (seen as controlling the world from various angles of the camera on the mobile phone), the user can control his or her view of it. Such and other operations are important for the user's sense of agency and an indication to the self of being able to have an influence in daily life activities.

Reporting on the results of 19 new mobile phone users, Palen et al. (2000) demonstrate that as the duration of possession and use of mobile phone increases, the use to which the mobile phone is put, changes a great deal from what users initially started with. As their use of it increases in frequency they recognize the influence they bear on their studies, relationships and activities of their daily lives. For example, the abbreviated language of text messaging is a new kind of shorthand, which has had an impact on language generally. Levinson notes that the pervasive use of texting helps to preserve literacy, which Brereton (2005) considers a contentious claim to make. The researcher of this study, being an educator, saw the use of such abbreviated language used by young people in their exam answer transcripts. Furthermore adolescents even move on to using mobile phones for circumventing boundaries placed on them (Williams and Williams 2005). Furthermore, the ubiquitous adoption of the mobile phone has rendered it invisible so much so that young people have made their own SMS language often to the dislike of educators and bewilderment of parents (Gram-Hanssen 2005).

Moving forward to the second component of Agency as depicted in the Empirical Model of Agency it can be said that human wellbeing and task attainment require an optimistic sense of efficacy.

2.7.2 Optimism:

As seen in figure 2.1, Agency comprises two components, Self-Efficacy and optimism. According to Hitlin and Elder Jr. (2007a), Self-Efficacy is constitutive of Agency.

However taking Self-Efficacy in exclusivity obscures its forward-looking aspect. This forward looking aspect, embedded within time, is reflected in measures of optimism. Optimism was conceived by Hitlin and Elder Jr. (2007a) as a temporal orientation. Individuals carry a sense of their ability to act successfully in the future. They are optimistic for little things (e.g. finding a good restaurant) or for big things (e.g. developing a satisfying career path), and they may differ in their sense of optimism about their futures due to social (e.g. structural advantages) and psychological (e.g. mental illness) reasons. Thus, the more optimistic people are, the more they feel they will have efficacious and positive influences on their lives and in their choices.

In this study the optimism that is generated by the possession and use of mobile phone will be explored.

2.7.3 Planfulness:

Clausen (1993 cited in Hitlin and Elder Jr 2007a) developed the concept of “planfulness” or “planful competence”, an ability to make and maintain successful plans that guide agentic action. Hitlin and Elder Jr. (2007a) assume that planfulness is an individual-level trait that influences agency, but it is not itself a component of the concept (Hitlin and Elder Jr. 2004).

Agency, viewed as planful competence, dictates a person’s ability for making (and sticking to) advantageous plans (Shanahan et al. 2003 cited in Hitlin and Elder Jr. 2007a). Therefore it involves awareness of a person’s own intellectual abilities, social skills, and emotional responses to others (Hitlin and Long 2009). However planfulness was conceived with reference to the life-course research. Hence it refers to deliberate behaviour over many years and not simply the ability to make plans in the short term (Shanahan et al. 2003 cited in Hitlin and Elder Jr. 2007a). Nevertheless, in this study, mobile phone users’ ability and competence for making and influencing short-term plans, coordination of their daily activities, and management of their time and schedule on account of possessing and using the mobile phone, is deemed as planfulness. The

researcher believed that individuals who exhibit high degree planfulness are also highly agentic and possess high amounts of Self-Efficacy.

In positing a relationship among constructs, the Empirical model of Agency (Hitlin and Elder Jr. 2007a) deems planfulness to be a component of Agency, per se. However, it considers planfulness as less an indicator of Agency and more a personality level attribute that affects the level of Agency. It is depicted in figure 2.1. This ability can be restricted by events that constrain choices and thereby render individual levels of Agency irrelevant. Moreover planful adolescents make better choices (Shanahan and Elder 2002 cited in Hitlin and Elder Jr. 2007a), and people higher in this capability demonstrate rational decision making and the ability to re-evaluate life decisions (Clausen 1993 cited in Hitlin and Elder 2007a).

Studies such as those which have been done on the ‘microcoordination’ (Ling 2004) and ‘hypercoordination’ (Ling and Yttri 2002) of activities, and those that explore the relationships between aspects of planning of everyday activities (Hjorthol 2008) denote the influence of the mobile phone on planfulness. For example, Koshy et al. (2008) talk of the non-attendance for hospital outpatient appointments as a significant problem in many countries. The use of Short Message Service (SMS) appointment reminders offers a cost-effective and time-efficient strategy to decrease non-attendance and so improve the efficiency of outpatient healthcare delivery. It ensures that while the outpatient department is able to plan its healthcare delivery, the patients are able to organise themselves so as to keep their appointment time.

Furthermore, the Mobile phone assists in organizing everyday life, in planning meetings, and in contacting people. This assists in developing maturity and autonomy, the two adult features of utmost importance (Lorente 2002). The ability to organize themselves that the mobile phone accords to users will be explored in this study from the point of view of its influence on their Personal Agency.

2.7.4 Social Support:

Hitlin and Elder Jr. (2007a) also demonstrated in their empirical model that social support is a positive influence on a person's sense of agency. The more that one feels connected to social networks, both inside and outside the family, the more agency individuals are likely to experience. The continuous connection to such a network on which an individual can lean, facilitates the development of a sense of personal efficacy. Guidance from such networks especially when one is physically not close to them, leads to a sense of efficacy.

Social support is also seen when the significant others offer emotional support, safety, or even assist in completion of tasks. The researcher will explore how the mobile phone facilitates social support from the social network of family members, especially parents and their peers, wherever they are and whenever they require it. It will also study the ability of mobile phone users to make and maintain relationships due to the possession of mobile phones.

2.7.5 Autonomy:

Some writings on agency, such as Giddens (1984), focus on the needs to achieve autonomy and are applicable to people of younger ages (Everingham 2003). However Hitlin and Elder Jr. (2007a) distinguish between agency and autonomy. Even though autonomy is considered important for the healthy development of the individual, to be autonomous does not necessarily mean that one possesses a sense of agency. People may feel they have the freedom to act but may lack a belief in their capacity to act successfully. Alternatively, somebody who occupies a disadvantaged position in a social system may feel strongly agentic as to their capacities for action without feeling that their opportunities for such actions are facing constraint. Hence agency refers to the sense of having the capacity for successful action and not to whether or not one has the opportunity to exercise this capacity.

In *Personal, Portable, Pedestrian*, Ito (2004) turns to a constellation of characteristics of the mobile phone expounding its relation to autonomy. It is a personal device in that it is a constant, lightweight, and mundane presence in everyday life. Such physical properties are motivational. But the motivation is drawn more from its non-physical properties such as its portability, ubiquity, mobility, its ability to assist in micro to macro co-ordination or just act as an assistant (Kumar and Thomas 2006). It is also related to non-physical qualities like self-esteem which is seen to be why young people seek to personalize it with wallpaper themes, ring tones, personal covers and accessories (Lorente 2002). The extent to which the mobile phone facilitates autonomy in mobile phone users will be explored in this study.

Exploring further, the researcher considered the concept of Agency as a temporally embedded process in terms of an individual's control over his or her temporal orientation in response to the situations they encounter (Hitlin and Elder Jr. 2007b).

2.8. Temporal Orientation Model of Agency:

The concept of agency is considered important in sociology also. When the concept of agency is built on its temporal orientation, it becomes less mysterious and abstract. Temporal orientation is an intrapersonal perception of what Hitlin and Elder Jr. (2007b.) terms a "time horizon." Depending on the individual's prominent time horizon i.e. a kind of attentional focus in a given situation, he/she exhibits the corresponding agentic behaviour. One's temporal orientations are shaped by the exigencies of the situation. Some situations require intensive focus i.e. immediate attention on the present, and others require an extended focus i.e. attention to a situation over a long period of time. An individual addresses a situation or exhibits different forms of agentic behaviour, according to the kind of temporal orientation a situation demands. In this way, humans are capable of controlling their temporal experience.

The notion that it is situation that dictates one's temporal orientation or attentional focus forms the basis for "existential" agency, which underlies agency's other three variants, pragmatism, identity, and life course.

This study will focus on pragmatic and identity agency. The mobile phone is spoken of in literature as most useful in emergencies (when the situation demands pragmatic agency) and in maintaining one's role and habitual connection with one's social support system (which demands identity agency when one's role is merely maintained).

2.8.1 Pragmatic Agency:

Certain situations in our immediate surrounding sometimes require heightened attention and concentration. Thus, referring to Mead's idea about the "knife's edge" of the present moment i.e. problematic situations which call for fundamental immediacy and urgent concentration to one's surroundings, Flaherty (1999 in Hitlin and Elder Jr. 2007b) contends that in such times, individuals focus their attention most strongly on that moment when the problematic situation is being encountered. 'Pragmatic' agency highlights the individual's pragmatic insights into the contingent nature of human action (ibid.). The mobile phone is often utilised in contingency situations when the users lean for support on people or services to extricate themselves from the "knife-edge" situation. It is also used to circumvent a difficult situation or to address the situation squarely.

Much of our action involves habit, as individuals rely on pre-established routines to guide their daily interactions. However if habits fail, individuals are required to make choices. In these situations the self begins to be instructive. According to Wei and Lo (2006) the role of the mobile phone is often understood as a technology that assists individuals for 'making purposeful choices under constraints'. Thus the possession of the mobile phone provides additional assistance and options to the user compared to those who do not possess it. It enables users to be more creative and more intuitive in "knife edge" situations when they are predisposed to act in novel, non-routine situations

(Hitlin and Elder Jr. 2007b) e.g. in emergency situations like the September 11 attacks in the USA (Wei and Lo 2006).

2.8.2 Identity Agency:

According to Hitlin and Elder Jr. (2007b), Identity Agency involves following established ways of enacting roles and identities in the individual's daily life. Generally, one's social behaviour gets patterned into habitual behaviour. The individual's habitual behaviour is guided by social norms according to which individuals maintain their social identity. But they do not follow social dictates blindly. They intentionally internalize and live according to those norms and thus assume an identity e.g. the identity of a teacher or a professional (ibid.).

Mobile phone users maintain their roles as children, parents, students, professionals acting according to the role proper to their relationship. The role enactment and relationship management is played out often on the mobile phone. For example, parents ask children to keep in touch with them. TNS (2004 cited in Castells 2004) indicated that young people use the mobile phone mostly to call friends (60%) and family (59%). Professionals offer mobile phone number to their clients to be available anytime to them.

At this level, agency is about reaching the desired goals as per the individual's identities. In the normal enacting of identities, individuals become less concerned about solving some "knife edge" problems and more about enjoying a successful interaction. The successful management of an identity or role takes effort and defines individuals as agents. Both pragmatic and identity agency overlap and are present within interactions.

2.9 Situating Personal Agency in the Indian setting:

Agency is enacted in specific situation and contexts. In this study the exercise of agency is situated in the context of the traditional society of India.

2.9.1 India:

India is an ancient civilization dating back to 6500 B.C. and its traditions are preserved in a vast body of Sanskrit verses called the *Vedas* which are studied and practiced with remarkable integrity to this day despite several invasions by the Mongols, the Muslims, the French, the Portuguese, and the British. It is the world's largest democracy and its 1.13 billion people form a complex mosaic of diverse castes, creeds and colours. Yet it is integrated into one nation of Hindus, Muslims, Sikhs, Christians, Buddhists, Jains, Jews and other forms of worshippers. Despite the wide range of cultures and creeds, Hindu values are most pervasive and tend to inform many of the traditional customs and structures of community and family life (Prathikanti 1997).

However, some cultural and contextual issues such as the minimization of self-differentiation, the restriction of choice, and the discrimination in relation to gender, often constrain the ability of young people to make personal choices in their lives.

2.9.1.1 The Minimization of self-differentiation:

The values of cohesiveness and harmony are accorded a prime place in the Indian culture. The Indian family does not usually connote a dyad of parents with their biological offspring, but a large, flexible, entity encompassing several households. Such households, sometimes more than 20 people that may be scattered over different geographical regions, think of themselves as one. Thus members of any given household tend to see themselves as part of a much larger kinship network that assists with educational, financial, or interpersonal decisions throughout the lifespan of the various members (ibid.). Hence, the aspirations for self-differentiation and autonomy are restricted, because performing one's *dharma* (duty) consists of minimizing the importance of oneself and maintaining the family and collective honour (Huang 2000). In relation to performing one's duty, the mobile phone is considered a distraction from the burden of studying and performing well in academic life. Academic achievement is

considered an important duty to be fulfilled by the young person at his/her stage of life as a student.

Thus the concept of adolescent maturity which has often been defined in terms of qualities such as autonomy, independence, individual initiative and personal choice cause friction in Indian culture. Moreover, the mobile phone is often viewed as being used by young people for independence and privacy (Palen et al. 2000; Geser 2004; Matanhelia 2010). Thus it is also viewed as inculcating in the adolescents those very qualities that are opposed to the collective character of the Indian culture.

2.9.1.2 Restriction of Choice:

Dharma is a sociomoral principle consisting of righteous action and adherence to a natural and moral order. The basic rule of *dharma* is to perform the duties that pertain to one's station in life (Prathikanti 1997). *Dharma* refers to what one should do and why one should do it. Within Indian philosophy and culture, a person is born into a system of duties and relationships. The person's primary duties are to the extended family by which he or she shows deference, loyalty and subordination to superiors, and in turn, one expects nurturance, concern, care, and responsibility from superiors. For example, a father is regarded as hierarchically superior to his children but will always be subordinate to his own father throughout life.

Furthermore, sacrifice of individual wishes and desires is expected when these conflict with one's *dharma* within the family. Failure to make the appropriate sacrifice is viewed as bringing significant hardship - as well as shame and possible social ostracization - to the entire family. Hence, family members collectively use guilt, shame, and a sense of moral obligation to bring the truant individual back to the *dharma* he or she may have transiently abandoned (ibid.). Hence students who fail to meet their parents' expectations may experience significant strain in their relationships with their parents (Noack and Puschner 1999 in PHAC 2004). The concept of *dharma*, therefore, serves as a binding force, a mental orientation that keeps choices of young people in compliance with those

of the elders.

By living a dharmic life (according to one's demarcated duties), an individual ideally contributes to the smooth functioning of family and community; each person carries out a valued role and is interdependent on others to maintain the integrity of the societal unit as a whole.

What this means for young people is that personal choices of daily living such as with whom, where and when you socialize, and even about careers and marriage have to be weighed and chosen in conjunction with parental wishes and family *dharma*. For example, interactions with members of the households out of one's family, call for approval from elders especially with respect to romantic relationships. In India, dating is discouraged and 90 per cent of all marriages are still arranged (Toledo 2009) by elders. In fact, the physical "launching" of Asian children may not occur until they are in their 30s (Tseng and Hsu 1991 cited in Wong and Mock 1997). In contrast, Williams and Williams (2005), although dealing with a different culture, demonstrate young people negotiating with their parents when they ask questions such as: 'Where are you? With whom are you? and When will you be back?' Young people see the mobile phone as an important link in entering into such negotiation. Negotiation is also seen as an attempt to gain autonomy and build their identity. Adolescence is a time marked by the renegotiation of parent-child relationships, at least in part because of the newly emerging cognitive abilities of adolescents. In India, adolescents are coerced into making decisions in favour of family cohesion, whereas young people tend to resist this especially and when they are out and about and with their peers. This negotiation is often played out on mobile communication between young people and their parents in their daily lives (Grotevant 1998).

In contrast, it is observed that the child's sense of agency and efficacy is facilitated by parents who encourage problem solving, experimentation, exploratory behaviour, questioning, and, in short, an environment that is engaging, stimulating, and responsive to the child.

2.9.1.3 Inequality of Gender:

Since families are highly patriarchal in nature, the eldest son is generally expected to carry on as the head of the family in the absence of his father. Hence young Indian men often face increased pressure to succeed academically and to major in those areas considered to be most respectable and financially rewarding for the family. In contrast, Indian parents often convey to their daughters that marrying into a good family and having children are the primary tasks of young adulthood. Therefore, Indian parents may not emphasize higher education and establishing a professional identity for their daughters (Wong and Mock 2000).

In India the male is accorded more favour regarding mobility, choice making, career, and obedience to family *dharma*. Henderson et al. (2002) shows how the mobile phone mediates the different boundaries dictated by gender considerations, which are set respectively for young men and young women. The male is permitted by parents to use the mobile phone when and where he wishes, in contrast to the female who is restricted regarding using it in public places or talking on the phone for a longer duration. In one way, this is due to a tightly knit social network; the local gossip network in India is likely to be 'suspicious' at seeing a girl talk on the mobile phone for long duration in public places. It would also raise the suspicion that she is having a romantic liaison when long time is spent on phone at home. In this way, the community affirms the existing gender related order each time the gossip network questions the conduct of an individual especially when that individual is a girl (Hastings 2000).

According to Wei and Lo (2006), media technologies are experienced differently by different people in the social structure. For example, past studies have shown women talking longer and using the phone for social purposes. While access was a 'stumbling block' for women in the 1990s, the situation today is different with women in the urban areas of India, who are found on the internet, e-mail, chat rooms and mobile phones, participating more actively in online opportunities.

Having elaborated on the three issues of conflict in living out the Indian culture namely minimization of self-differentiation, restriction of choice, and inequality of gender, it is necessary to point out that these conventional beliefs and constraints pervade every socio-economic class of India and find a legitimized position in the psyche of every family and individual of the Indian society. However, these inequalities are particularly adhered to in a very systematic way, as well as a source of conflict, among the middle classes of India.

The practice of firmly holding on to Indian traditions, the thirst for gadgets such as mobile phones, and the willingness to exert influence has a home in the Indian New Middle Class.

2.10 History and growth of the Middle Class in India:

The roots of the Indian middle class lie in the British colonial educational policy developed by Thomas Macaulay. This policy was deemed to create a class, “Indian in blood and colour, but English in tastes, in opinions, in morals and intellect” (Fernandes 2006, p1). The policy, designed to create a social group that would aid in colonial administration, in fact led to the rise of a middle class. The effects of the British educational policy concentrated on presidency town such as Bombay (now called Mumbai) where the strength of the middle class was intensified. Especially after independence, by the 1960s and 1970’s, the middle class accumulated substantial wealth. At the same time it was still ostensibly embracing the Gandhian ideals of austerity as the majority of the people were still poor. Hence their public lifestyle was very low key and non-exhibitionist, recognising a sense of guilt that in a poor nation a vulgar exhibition of wealth remains contradictory to Indian values. However during the regime of Rajiv Gandhi (1944-1991), the former prime minister of India, the first signs of economic liberalization emerged. This expanded through the 1990s and along with it also expanded India’s economic prosperity (Fernandes 2006).

India's economic liberalization was made visible in the changing trends in consumption practices, lifestyle and aspirations centered on the proliferation of commodities such as mobile phones, washing machines, and colour TVs. The desire to spend increasing amounts of income on fulfilling aspirations for a holiday home, or accessories like the mobile phone, become a lifestyle. In public discourse, practices of consumption and the depictions of associated lifestyle changes, clearly distinguish the 'New Indian Middle Class' from the older traditional middle class which held back on consumption (ibid.).

While there is no official definition of the middle class, the number is estimated to range from 30 million to approximately 300 million people. Even using the most generous estimates of the group's size, the middle class comprises less than 30 percent of the population (Saxena 2010). Furthermore, the middle class is not only categorised as an income group, but also as a political and social class and a consumer market.

The middle class is bracketed on either side by an upper level and a lower level. The upper level comprises big land owners, members of exclusive clubs, vacationers in foreign lands, and include industrialists and top executives. The lower level comprises the poorer classes who are at the bottom of the economic scale. Traditionally the middle class, who reside between these two groups, has been made up of farmers, trades people, artisans, and workers. However the 'new middle class' which has recently emerged tend to work in IT and service industries and are defined more by their consumption patterns rather than their trade, profession or income. Hence in the questionnaire constructed for this study, the demographics of the participants are drawn from a consumption scale generated for this study. The information about income is not sought but it is complemented with information about education and occupation of parents and ownership of property, consumer goods and household articles.

2.10.1 The New Middle Class:

The Literature on the New Middle Class in India has defined the "new" aspects of the Middle Class in the following ways. First, in contrast to the Brahmanical landed gentry,

the power of the New Middle Class is derived not from land but from education and cultural capital. Second, the focus of the New Middle Class shifts from a preoccupation with state-led development to the market and, significantly shifting from playing a secondary role in these markets, to becoming market leaders. Third, with the emergence of a consumer-based identity the new Indian middle class emphasizes the rights of the consumer citizen rather than the rights of the worker (Sarkar 2008).

However there are other characteristics which create a vivid picture of the New Middle Class. Firstly, the New Middle Class in India are by all accounts security seeking and traditional. The implications of these changes have been that the new middle class are security seeking people. Even though they are receptive to new ideas, they do not very readily take on new ventures. They seek social and economic security and are not willing to do anything that is likely to upset their emotional ties. A strong sense of traditionalism runs through the middle class household. They possess strong family ties and are home loving. Secondly, the New Middle Class have materialistic aspirations. They generally live on a fixed income and on a rigid budget. The household would have furnishings, modern cooking gadgets and generally a motorbike of their own. They aspire for the well-to-do lifestyle seen on television. So their purchases are generally materialistic in nature. Hence they like to make large purchases and pay for them through the different credit facilities that are made available to them by the banks and other financial institutions. Thirdly, the New Middle Class are prestige conscious. The Middle Class Indians have many of their possessions, largely because they are "status conscious" or "prestige conscious". These possessions act as status symbols. Fourthly, the New Middle Class are increasingly mobile. In the context of post-liberalization India, the new middle-class identity has been increasingly tied to globalization with regards to the creation of mobile personal and professional identities and discursive transnational spaces (Sarkar 2008). The Indian Middle Class are marked by their generally urban origins and with global aspirations of economic and cultural achievements. Being compared to a westernized global aristocracy, the image of the New Middle Class has begun to represent an idealized national standard of living that other social groups can aspire to and potentially achieve, through practices of

consumption (Fernandes 2006). Fifthly, the New Middle Class is linked with private sector employment. The expansion of the service sector of the economy and of professional, white-collar private-sector employment has been fundamentally linked with the rise of the new Indian middle class. An INDIA TODAY-ORG-MARG poll showed that the majority of middle class families want their children to work in the services sector (Saran 2001 cited in Fernandes 2006). One of the most prominent sections of the New Middle Class are the professionals employed in the growing Information Technology industry and the rise of the New Middle Class is associated with the spread of Information and Communication technologies (Sarkar 2008).

Verma (2004, p80) shows the causes of conflict in the Indian Middle Class families:

The educated urban elite are at the crossroads as along with familial values such as obedience to parents, conformity, self-denial, and fulfilment of parental expectations, western values such as having a meaningful and creative life space, quest for more knowledge, achievement and no complacency are also imbibed. Their problem lies in their desire to lead their own life and at the same time retain a sense of emotional continuity through the observance of rituals and role obligations.

Verma (2004, p80) also observes that:

The Indian family is passing through a transitional phase and is unable to provide either stable values to the growing child or clear-cut norms, practices and experiences of the nuclear family of the west.

Verma (2004, p80) further notes that:

The socialisation of children in South Asian families in traditional settings tended to focus on sociocultural continuity rather than change. However the

concept of cultural continuity is gradually giving way to respect for initiativeness.

2.10.2 The New Middle Class Young people:

The urban middle class young people are more adventurous than their elders and they covertly care less for tradition and religion. They seek novelties and are quick to adopt new fashions that emerge. They believe more in spending money in the pursuit of pleasure than saving for the future.

At another level, in our modern society, the lives of young people have become inseparable from wireless technologies especially the mobile phone. Without it, young people feel incomplete as if some body part is missing (Garcia-Montes et al. 2006). Those who do not possess it have even been known to experience a lowering in their self image (Ito and Okabe 2005).

2.10.3 Mobile Phones in India:

The growth of mobile phone subscription in India took place in the midst of wider telecom reform when a more liberalized structure was set up to replace the traditional monopoly of the Department of Telecommunication in the 1990s (Castells 2007). Thus mobile phones were introduced in India in the early 1990's and a number of private players like Bharati Enterprises, Hutchinson, BPL Mobile, the Tatas and Reliance Infocomm ventured into this sector. At that time barely one in ten homes possessed a landline (MACRO 2004).

The New Telecom Policy dropped the per minute costs for mobile telephony by about 90 percent. The cost of mobile handsets also fell to less than one-tenth of the mid 1990 prices. Teledensity rose rapidly from 1.28 in March 1996 (DoT 2003-4 cited in Castells 2007) to 8.24 in November 2004, largely as a result of the rapid growth in adoption of mobile phones. The most concentrated growth in mobile diffusion was in the four major

cities – Delhi, Mumbai, Chennai, and Kolkata – which accounted almost two fifths of the wireless subscribers in the country in December 2001. In Delhi and Mumbai, mobile subscription grew over fixed-line users (Castells 2007). The younger generation who were under 25s were most mobile savvy (MACRO 2004). A youth market for the mobile phones was further heightened by companies creating youth and entertainment oriented content for cool ringtones, games, screensavers and e-mail alerts making the under 30's more interested in them. The free incoming calls further increased the subscriber base. Nearly 54% of the population was below 24 years in 2003.

In this research, the city of Mumbai is focussed on for all the reasons cited earlier.

2.10.4 Mumbai:

Mumbai is India's largest city and port, located on the western coast of India and India's economic powerhouse. It can best be described as a cosmopolitan city with multiplexes and malls, numerous flyovers, high rises, and western style restaurants and coffee houses. The researcher has offered a detailed consideration of Mumbai in the introductory chapter of this study.

2.11. Framework of this study:

Young people hold beliefs about their capabilities to take actions to successfully manage their lives: family life, academic life, social life (Bandura 2006). Their actions are affected by personal factors, socio-cultural factors (technological innovation, political changes, military conflicts, economic depression), situational factors (biological changes or normative events such as age, status, and educational, familial and occupational roles), and unpredictable occurrences (career change, accidents, migration and illness). Today, youth live in an electronic era of rapid social and technological change which affects how they communicate, work, educate, relate, conduct business and conduct daily affairs. At the same time it presents opportunities that people personally take advantage of and enable them to direct their lives at a particular time and place. In this sense a person is an agent who intentionally influences his/her functioning and life

circumstances. The widespread proliferation of mobile phones has seen young people using them to influence their functioning and life circumstances to a remarkable degree in various facets of daily life especially when they have to manage contingent situations and maintain relationships and roles they enter into. This is referred to as agency. Thus people are not merely products of life's circumstances (ibid.). The Indian culture offers the opportunity of collective support to the young people but also serves as a constraint where mobile phone use is concerned and when the exercise of agency is concerned. In this context and situation, the mobile phone use indicates the level and kind of Personal Agency that young mobile phone users exercise in remarkable ways. The Empirical Model and the Temporal Orientation Model of agency serve as anchors to examine the level and nature of Personal Agency of a mobile phone user in relation to the non-user. In the light of such a framework, this study sets out to explore how by using the capabilities that the mobile phone use promotes, the users are able to effectively manage tasks such as managing contingent situations and maintaining regular roles and relationships. This is termed as 'the exercise of Personal Agency by Mobile Phone use' in this study.

2.12 Conclusion

This chapter has presented a review of literature situation the mobile phone, Personal Agency, the New Indian Middle Class and developed a broad framework for this study. The next chapter will identify the methodological framework for this study.

CHAPTER 3

Methodological Framework

3.1 Introduction:

In this chapter the researcher describes the methodological framework of this study. It consists of formulating an understanding of the Mixed Methods research approach, examining preliminary considerations such as identifying the researcher's worldview to be applied in this study, determining the fit of the research questions stated earlier with the Mixed Methods research approach, and outlining a Mixed Methods design suitable to investigate the research objectives of this study.

3.2. Understanding the Mixed Methods research approach:

Researchers for many years have collected both quantitative and qualitative data in the same study. However putting both forms of data together as a distinct research design is a feature that has emerged recently (Creswell et al. 2004). In this study, the researcher adopted the designs and procedures of mixed method research proposed by Creswell and Plano Clark (2007) in 'Designing and Conducting Mixed Methods Research'. However, these procedures and designs should not be considered as a linear process but as a general framework that is useful in conducting Mixed Methods research.

3.2.1 Definitions:

Some Mixed Methods writers consider Mixed Methods research as a methodology, and focus on philosophical assumptions (Tashakkori and Teddlie 1998). However, all research approaches have underlying philosophical assumptions that guide the researcher, and as such, Mixed Methods research also assumes a position. Other writers emphasize the techniques or methods of collecting and analyzing data (Greene et al. 1989).

In this study, Mixed Methods research was considered to be:

...a research design with philosophical assumptions as well as methods of inquiry (Creswell and Plano Clark 2007, p5).

As a methodology, it focuses on philosophical assumptions that guide the direction of the collection and analysis of data, and the mixture of qualitative and quantitative data. As a method it focuses on the techniques of collecting, analyzing and mixing both quantitative and qualitative data in a single study or series of studies.

Two specific characteristics of Mixed Methods research emerge from this definition: that the data are mixed, and that it involves single or multiple studies.

The mixing of data is a unique aspect of the definition. In Mixed Methods research, Quantitative and Qualitative data collection is insufficient until they are 'mixed' in some way, so that together they form a more complete picture of the problem than they do when standing alone. In the current study the researcher merged the quantitative and qualitative data by bringing them together in a discussion as will be seen later in chapter 8.

The definition also suggests that a Mixed Methods research approach involves collecting and analyzing qualitative and quantitative data within a single study or within multiple studies. This study is a single study conducted in two phases, the exploration phase and triangulation phase. Each phase uses a different design to appropriately address the research questions as will be seen from chapters 4 to 8.

The central premise of the definition, that the combination of quantitative and qualitative approaches provides a better understanding of research problems, than either approach alone, is acceptable for several reasons. As Creswell and Plano Clark (2007) indicate, people tend to solve problems using numbers and words, inductive and deductive thinking, skills in observing people as well as recording behaviour. Hence it is natural

for people to employ Mixed Methods research as a preferred mode of understanding the world. It provides more comprehensive evidence for studying a research problem than either approach. Furthermore, it offers the possibility of employing multiple worldviews rather than the typical association of certain worldviews for quantitative researchers and others for qualitative researchers. It also encourages the researcher to think about a worldview that encompasses both quantitative and qualitative research, such as pragmatism. In this sense, it is 'practical', releasing the researcher to use all methods possible to address a research problem.

However, Mixed Methods research is not easy. It takes time and resources to collect and analyze both quantitative and qualitative data. It requires clear presentation for the reader to easily comprehend the research. Further, it requires the researcher to be trained in understanding both forms of data. The researcher addressed these issues as they presented themselves. For example, during the analysis stage, the researcher utilized the assistance of experts from qualitative as well as quantitative methods to devise techniques in order to analyze results pertaining to each type of data.

3.2.2 Importance of Mixed Methods research

The Mixed Methods research approach is considered important because a combination of words and numbers can provide the most complete analysis of problems. Hence writers have come to consider it a legitimate form of inquiry in social and human sciences (Denizen and Lincoln 2005). In recent years many authors have begun to advocate Mixed Methods research calling it the "third methodological movement" (Creswell and Plano Clark 2007, p13). According to Bazley (2004) Mixed Methods research is becoming "trendy".

3.3 Preliminary considerations:

On presenting a general picture of the Mixed Methods research approach, the researcher will now focus on identifying the particular worldview suitable for this study, determine

its fit for the research questions of the study, and outline the Mixed Methods research design to investigate the research questions.

3.3.1 Identifying the worldview stance to be applied in this study

All studies include a Worldview i.e. a set of beliefs or assumptions about the world which inform and guide one's inquiries (Guba and Lincoln 2005). Researchers need to be aware of the implicit worldviews they bring to their studies because these influence how they conduct and report their inquiries. Pragmatism is typically associated with Mixed Methods research, and it was the general philosophical position assumed by the researcher in this study. According to the Free Dictionary (2010), Pragmatism is a doctrine that the meaning of an idea or a proposition lies in its observable practical consequences. Hence the focus, for pragmatists, is on the primary importance of the question asked rather than the methods. It uses diverse approaches, and valuing both objective and subjective knowledge. Pragmatism was articulated by prominent historical figures, such as John Dewey (1859-1952), William James (1842-1910), and Charles Sanders Pierce (1839-1914), to contemporaries, such as Cherryholmes (1992), and Murphy (1990), and Rorty (1990). Mixed Methods writers have identified Pragmatism to be the "best" worldview to provide a foundation for Mixed Methods research (Creswell and Plano Clark 2007; Tashakkori and Teddlie 2003).

The first stance that the Mixed Methods literature discusses is that, researchers should use the approach or mixture of approaches that works best in a real world situation. The multiple methods of data collection inform the problems under study. It is oriented toward "what works" and practice. For pragmatists, knowledge claims arise out of actions, situations, and consequences rather than antecedent conditions as in post positivism. The researcher considered pragmatism as most suitable for this study keeping in view the nature of the research question posed in this study. The research question had the objective of exploring how Personal Agency was exercised practically in daily life of young people through mobile phone use.

The second stance that Mixed Methods literature discusses is that researchers can use multiple worldviews in their Mixed Methods study. However, they must be explicit in their use. Since pragmatists look to the “what” and “how” to research based on its intended consequences—where they want to go with it—they are “free” to choose the methods, techniques, and procedures to collect and analyze data rather than subscribe to only one way. This opens the door for Mixed Methods researchers (Khumwong 2004). However, Greene and Caracelli (1997) and Bazeley (2004) recognize that different worldviews give rise to contradictory ideas and contested arguments due to different ways of knowing and valuing the social world, but they are to be honoured, even though they cannot be reconciled. In view of this, the researcher adhered to the compatibility thesis. The compatibility thesis is the idea that quantitative and qualitative methods are compatible, that is, they can both be used in a single research study. It supports the view that combining quantitative and qualitative methods is a good thing and denies that such a wedding of methods is epistemologically incoherent (Howe 1988).

3.3.2 Determining the research questions and their fit with Mixed Methods research approach:

On identifying a worldview for this study the researcher reflected on the suitability of Mixed Methods research approach to answer the research questions of this study. The research questions were as follows:

Quantitative:

- (i) Can the exercise of Personal Agency by the use of mobile phone be measured?
- (ii) What is the influence of demographic variables such as gender, academic qualifications, religion, socio-economic status, duration of possession of mobile phones, and frequency of mobile phone use, on the exercise of Personal Agency by the use of mobile phone?
- (iii) How do the demographic variables considered in the study interact to impact the exercise of Personal Agency by mobile phone use?

(iv) What is the relationship between the exercise of Personal Agency in mobile phone users and the boundaries encountered in mobile phone use?

(v) Is there a significant difference in the exercise of Personal Agency between mobile phone users and non-users?

Qualitative:

(vi) What are the capabilities that mobile phone use promotes in individuals, that assist them in exercising Personal Agency in the events that occur in their daily lives?

(vii) What are the contextual and socio-cultural factors that limit the use of mobile phone by young people?

Mixed:

(viii) To what extent do quantitative and qualitative data complement and validate each other with regard to the exercise of Personal Agency among mobile phone users and non-users?

The researcher's overall objective was to explore the exercise of Personal Agency by mobile phone use. The researcher believed that this objective would be inadequately addressed by either the quantitative or qualitative method. A combination of quantitative and qualitative methods would provide a more complete picture by noting generalizations as well as in-depth knowledge of participants' perspectives (Creswell and Plano Clark 2007). For example, the interview data was collected at different levels such as young people, parents and teacher, and triangulated with the questionnaire data. By combining them the researcher merged and complemented the data, and cross-validated the results. Together they provided a snap shot of mobile phone use of the perception of the exercise of Personal Agency as well as its description in the natural settings of daily life. Other considerations that played a part in judging the fit between the research question and the research approach was the research problem, and the personal experiences of the researcher. The research problem consisted of quantitative, qualitative and mixed elements; and the personal experience and conviction of the researcher's extensive involvement in grassroots youth work and education indicated to

him that youth and family issues require a combined effort of varied methodologies and worldviews.

3.3.3 Outlining a Mixed Methods design suitable to investigate the research problem of this study:

On identifying the worldview to be applied in the study and determining the research questions and their fit with the Mixed Methods research approach, a Mixed Methods research design was outlined in a way that was suitable to the objectives of the research. Research designs are procedures for collecting, analyzing, interpreting, and reporting data. In this study, a two-phase Mixed Methods research design was constructed. It was adapted from the four major types of Mixed Methods research designs provided by Creswell and Plano Clark (2007). The first phase was the exploratory phase and second, the triangulation phase.

3.3.3.1 The Exploratory Phase

The exploratory phase was based on the premise that measures or instruments were not available (Creswell et al. 2004; Creswell and Plano Clark 2007) or the variables are not known. Hence the intent of this phase was to develop an instrument, administer and validate it.

In this phase, the researcher developed a quantitative instrument, a questionnaire, by exploring the research topic from literature and a few willing participants. These qualitative findings then guided the development of items and scales for a quantitative survey instrument.

Principally the researcher identified the variables of Personal Agency from the empirical model of agency provided by Hitlin and Elder Jr. (2007a) in their study: ‘Agency – An empirical model of an abstract concept’. This model was used as a guiding framework.

However, first, the researcher adapted the model to relate it to the concept of Personal Agency by mobile phone use, and adapted it to the Asian Indian context.

With the twin aims of developing a questionnaire to measure the exercise of Personal Agency by mobile phone use, and to address the research questions of the study, the researcher explored the phenomena and developed items based on a review of literature and some informal semi-structured interviews with a few respondents. The items were generated from the quotes of individual, themes drawn from the literature, and hunches developed by the researcher. Such an elaborate process required considerable exploration of the phenomenon. Therefore a variant of the exploratory design was chosen. The final instrument, called the Personal Agency of Mobile Phone Users Questionnaire (PAoMPUQ) and Personal Agency of Mobile Phone Non-User Questionnaire (PAoMPNUQ) was developed after it was subjected to content validity and Exploratory Factor Analysis (EFA). Content Validity and EFA was conducted on the survey data collected from 311 participants. These final questionnaires, PAoMPUQ and PAoMPNUQ, were subjected to rigorous steps of instrument and scale development given by Hinkin (1998) in 'A brief tutorial on the development of measure for use in survey questionnaire'.

The PAoMPUQ and PAoMPNUQ, along with the literature review and the informal interviews, also assisted in formulating interview guides (Appendix F for users, Appendix G for non-users, Appendix H for Teachers and Appendix I for Parents) to assist the researcher while conducting the semi-structured individual interviews and group discussions. With the help of these interview guides, qualitative data was collected from young people, parents and educators.

The second phase of the design was the Triangulation phase. The data gathered with the questionnaire was subsequently analyzed in the first phase of the design. Also the qualitative data were analyzed. The results of both, Quantitative and Qualitative datasets were then merged and interpreted in the second phase.

3.3.3.1.1 Time Frame of the exploratory design:

The exploratory design was straightforward to describe, implement and report but required considerable time to implement. A diagram of the time frame of this phase as it unfolded is depicted in figure 3.1.

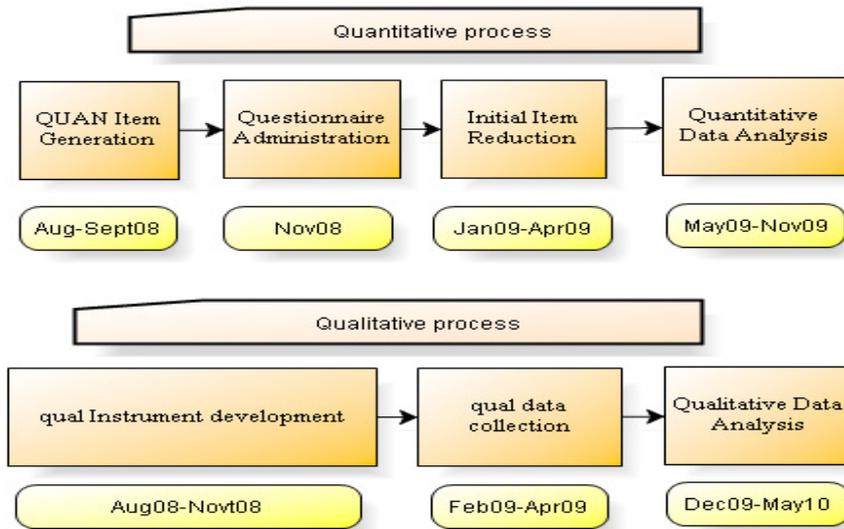


Figure 3.1 Time frame for implementation of the Exploratory phase

3.3.3.2 The Triangulation Phase

Triangulation design is the most common and well-known approach to mixing methods research (Creswell and Plano Clark 2007). Triangulation facilitates the acquisition of different but complementary data on the same topic. It is a design in which the quantitative and qualitative data are merged with equal weight as indicated in figure 3.2. The results are then merged into one overall discussion in which the quantitative results and qualitative findings are related to each other.

Of the four variants that the Triangulation Design proposes, this study implemented the convergence model. The convergence model represents the traditional model of a Mixed Methods triangulation design (Creswell and Plano Clark 2007). The researcher used this

model in order to compare results, validate, and corroborate quantitative results and qualitative findings with each other. The purpose was to end up with valid and well-substantiated conclusions about mobile phone use for Personal Agency and to provide richness to the whole study.

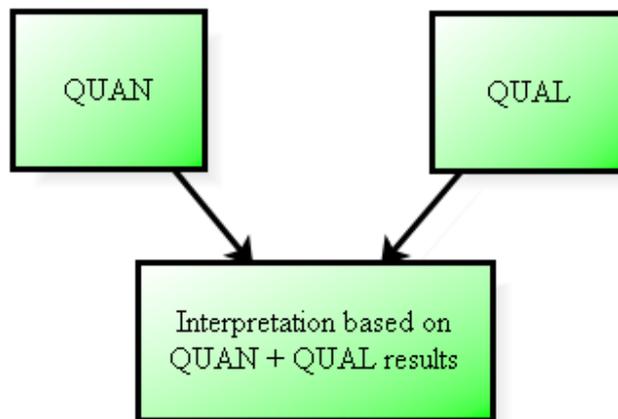


Figure 3.2 Triangulation design (Creswell and Plano Clark 2007, Table 4.1a)

This design was also used because it brought together the differing strengths and overlaps the weaknesses of quantitative methods (large sample size, trends, generalization) with those of qualitative methods (small N, details, in depth) (Patton 1990 in Creswell and Plano Clark 2007). It enabled the researcher to collect both types of data during one phase of the research at roughly the same time. Further, each type of data was analyzed separately and independently, using the techniques traditionally associated with each data type. Hence assistance from experts of quantitative and qualitative research could be utilized. However it required much effort and expertise particularly because of the concurrent data collection and the fact that equal weight was accorded to each data.

The researcher considered the consequences of having different samples and different sample sizes when merging the two data sets. Different sample sizes are inherent in the design because quantitative and qualitative data are usually collected for different purposes. However in order to converge and integrate two sets of very different data and

their results in a meaningful way, the researcher designed this study so that the quantitative and qualitative data address the same concepts. This strategy facilitated merging the data (Creswell 2007). With respect to different sizes, the researcher noted that, while the quantitative data (questionnaire) were used to identify factors associated with Personal Agency by mobile phone use, the qualitative data (interviews and focus group discussions with parents and students) allowed for a more detailed description of their behaviours. The choice of sample size was “an important compromise in the overall study design” (Creswell et al. 2008, p74).

Another problem that the researcher encountered was to decide whether the same individuals would serve as participants in both the qualitative and quantitative data collection. For this, guidance was drawn from a study by Whitlemore (2000 cited in Creswell et al. 2008). In his study data was collected from 10 peer advisors who were not subjects in an experimental study but were individuals providing the intervention during the trial. In this study participants involved in the quantitative and qualitative data collection were different. It contributed to the fuller depiction of the phenomena. For this study the researcher used different samples.

3.3.3.2.1 Time Frame of the second phase:

The time frame for the implementation of the second phase is graphically presented in figure 3.3.

The researcher organized the structure of this thesis in different sections, as elaborated in the introduction of this study, making it straightforward to write, and providing a clear delineation for readers. The design required a lengthy amount of time for implementing the two phases.

According to Creswell and Plano Clark (2007) the choice of the research design relates to three decisions, namely: the timing of the use of collected data (i.e. the order in which the data are used in the study), the relative weight of the quantitative and qualitative

approaches (i.e. the emphasis given to each), and the approach to mixing the two datasets (i.e. how the two datasets will be related or connected).

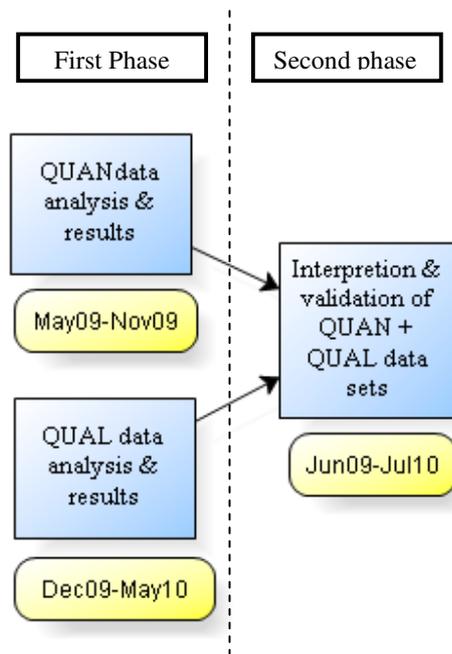


Figure 3.3 Time frame for implementation of the Triangulation phase

Timing refers to the temporal relationship between the quantitative and qualitative components within a study (Greene et al. 1989). Timing in this study referred to the time when the data were collected, analyzed and interpreted. The length of time available for these procedures was also considered. The data collection took place in Mumbai where the researcher had just over 3 months. In this circumstance the triangulation design was of help without compromising the study. The qualitative and quantitative data were gathered concurrently. The two data sets were also analyzed and interpreted in the same phase.

The researcher also considered the relative weighting (or emphasis) of the two data sets in the study. Weighting referred to the relative importance of the quantitative and qualitative methods to answer the study's question. In the first phase, quantitative and qualitative data were of prime importance since the aim of the quantitative data was to

develop a questionnaire, and aim of the qualitative interviews was to address the research questions. In the second phase, an equal weight was placed on the convergence of both types of data. Both data were considered to play an important role in addressing the research problem.

The worldview also determined its weighting. A pragmatic worldview called for practical considerations like resources, the researcher's relative experience with the two methods, and availability of the participants (during the time of the year when the participants were either in their exams or were out for their summer vacations).

Furthermore consideration was given to how the quantitative and qualitative methods were mixed. Mixing refers to explicitly relating the two data sets. In this study, the qualitative and quantitative data sets were explicitly merged during the interpretation

3.4 Summarizing the Mixed Methods research design in this study

The Mixed Methods design used in this study consisted of two distinct phases as indicated in figure 3.4. The first phase was the Exploratory phase which implemented the Instrument Development Model. It involved the development and validation of the quantitative instrument, the questionnaire. It also collected quantitative data and analysed the data to answer the quantitative research questions. Furthermore, this phase also involved the development of the interview guides and the collection of the qualitative data through interviews and focus group discussions. This data was analyzed by using the NVVIVO software for analysis of qualitative data. The second phase was the Triangulation phase which implemented the Convergence Model. This phase merged the quantitative and qualitative data results. Both types of data were given equal emphasis. The merged results were presented in the form of a discussion. The rationale of merging the data was that when converged, both data sets add depth to each other and are able to address the research question more adequately and comprehensively than each approach would individually do (Tashakkori and Teddlie 1998; Creswell and Plano

Clark 2007). The objective of both phases was to explore how Personal Agency is exercised by mobile phone use in daily life situations.

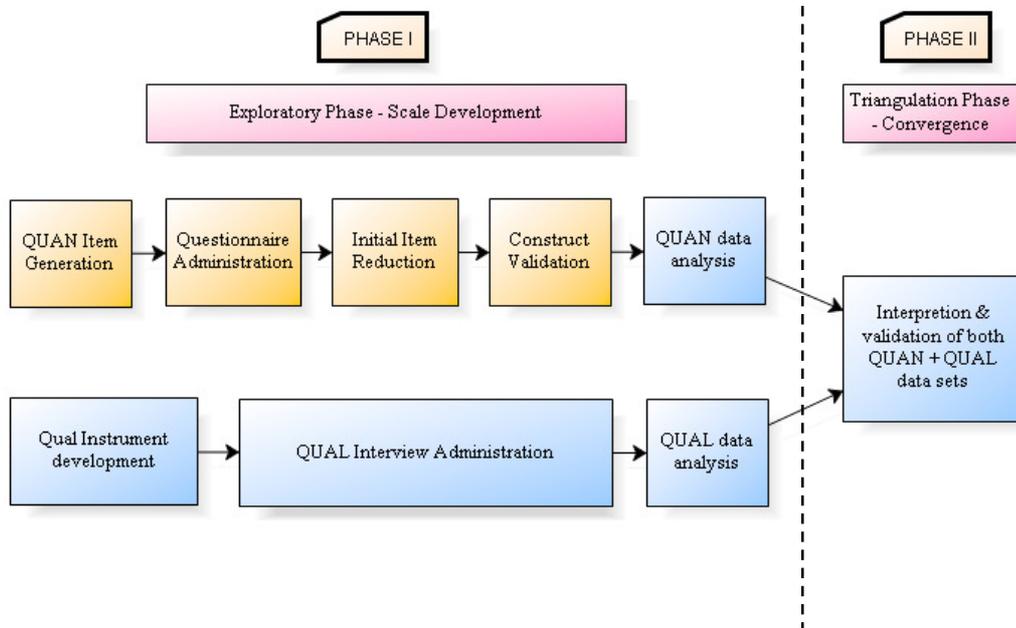


Figure 3.4 Overall Mixed Methods Design used in this study

Section I consisted of three chapters. The first chapter situated the context of this study and stated the objectives and research questions. It also offered the cultural conditions, scope and significance of this study. The second chapter undertook the review of literature sharpening the concepts which will be used in the study namely, mobile phone, Personal Agency, India and its New Middle Class. A broad framework was developed within which the objectives and research questions could be viewed. The third chapter laid out the Mixed Methods research framework that deemed a pragmatic worldview and a combination of Exploratory and Triangulation design to address the research questions of the study. The next section will present the development and validation of the quantitative instruments and the analysis of the data gathered with it.

Section II

Chapter 4

Chapter 5

CHAPTER 4

Phase I – Exploratory Phase: The Quantitative Instrument Development And Data Collection

4.1 Introduction:

This chapter is part of the exploratory phase where the quantitative instrument, namely the questionnaire, was developed and validated. The researcher's overall objective was to explore the exercise of Personal Agency by mobile phone use.

The quantitative research questions that will be addressed in this section are as follows:

- (i) Can the exercise of Personal Agency by the use of mobile phone be measured?
- (ii) What is the influence of demographic variables such as gender, academic qualifications, religion, socio-economic status, duration of possession of mobile phones, and frequency of mobile phone use, on the exercise of Personal Agency by the use of mobile phone?
- (iii) How do the demographic variables considered in the study interact to impact the exercise of Personal Agency by mobile phone use?
- (iv) What is the relationship between the exercise of Personal Agency in mobile phone users and the boundaries encountered in mobile phone use?
- (v) Is there a significant difference in the exercise of Personal Agency of mobile phone users and non-users?

This chapter will address the first research question: can the exercise of Personal Agency by mobile phone use be measured?

4.2 The Instrument development process

To address this research question, the researcher, first, entered a process of developing a quantitative instrument to measure Personal Agency by mobile phone use.

4.2.1 The need of a new instrument:

As seen earlier, a review of literature on Personal Agency, mobile phone, youth, India and Mixed Methods research, revealed that the concept of the exercise of Personal Agency by mobile phone use was not operationalized in earlier studies. The researcher found that studies conducted earlier related to dimensions of Personal Agency such as social cognition and web authoring (Noh 1998; Harrison 2005). However, these studies did not define the concept of Personal Agency in relation to mobile phone use. Furthermore, studies related to youth and technologies were hardly extended to adolescents (Campling 2006; Helve and Bynner 2008). Also, whenever studies had been undertaken in India with regard to information technologies (Sarkar 2008; Singh 2005), the focus on Personal Agency of young mobile phone users was lacking. A number of studies have researched mobile phones with a business or technological angle (Macro 2004; Blixt 2005; Chakraborty 2006; Kumar and Thomas 2006; Parikh 2006). This deficiency makes it relevant to develop a measure that would serve objectives stated earlier in the study.

Recognizing the absence of an instrument to investigate the perception of Personal Agency due to mobile phone use, the researcher decided to develop such an instrument with the aim of measuring the difference in the exercise of Personal Agency between young people who use and do not use mobile phones. If researchers determine that no measure exists with which to assess a particular phenomenon and decide to develop a new measure, then “the construction of the measuring devices is perhaps the most important segment of any study” (Schoenfeldt 1984 cited in Hinkin 1998, p104).

4.2.2 Stages of Instrument development:

In order to develop such an instrument, the researcher followed the basic steps for instrument development process proposed by Hinkin (1998) in 'A brief tutorial on the development of measures for use in survey questionnaires'. The steps in this process are depicted in figure 4.1

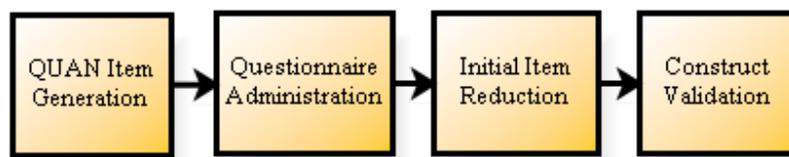


Figure 4.1 Instrument development process

The process proposed by Hinkin (1998) is often used for scale development (Fornaciari et al. 2005; Chen et al 2008). It involved item generation, questionnaire administration, initial item reduction, and construct validation. If the construct is to be replicated in other contexts and situations then it is necessary to conduct a confirmatory factor analysis on the construct. The scope of this study was exploratory in nature. Hence this study will validate the construct that will be developed by exploratory factor analysis (EFA) and reliability tests. This will be adequate to address the objectives of this study.

Furthermore these steps undertaken to develop the questionnaire also provide evidence of the construct validity – the extent to which the scale measures what it is expected to measure (Huck 2004 cited in Hinkin 1998). Having closely examined 277 scale development practices in 75 studies, Hinkin (1995) argued that measures generally lack content validity in the item development stage and do not have strong and clear linkages with their theoretical domains. Hence this study addresses these two concerns by building content validity into the measure through the processes of domain identification, item generation, and content expert validation (DeVellis 1991; Germain

2006). The attempt was to take a rigorous approach for developing an instrument which leaves its validity uncontested (Guyatt et al. 1986).

4.2.2.1 Step 1: Item Generation

The first stage of scale development was to generate items to assess the construct under examination. The generation of items is the most important element of establishing sound measures (Hinkin 1995 cited in Germain 2006). To generate all the possible items that might address the construct, which was intended to reflect the exercise of Personal Agency by young people's mobile phone use, the researcher identified three standard approaches: using deductive method to generate items, pre-testing the instrument on a willing sample, and acquiring feedback from experts and peers.

4.2.2.1.1 Deductive Method to generate items:

To identify the relevant items for the instrument in question, the researcher adopted a deductive method because the researcher determined that the key to successful item generation was the development of a well-articulated theoretical foundation. The theoretical foundation provided sufficient information to generate the initial set of items. The deductive approach also assured content validity in the final scales (Hinkin 1998).

4.2.2.1.2 Choosing the Construct:

The deductive method required a thorough review of literature to understand the phenomenon under study, and in this way, to develop the theoretical definitions of the construct under examination. The researcher undertook a review of published literature on the various aspects of this study namely, Personal Agency, mobile phone, youth, and the Indian middle class. The researcher decided to use the 'Empirical model of Agency' developed by Hitlin and Elder Jr. (2007a). The same study had also statistically demonstrated the robustness of agency and its dimensions. Hence the researcher decided to use this model and its constituents as a guiding framework. In generating the items,

the researcher bore in mind that the items on survey instruments should adequately represent the construct under examination, especially when questionnaires were used as an important means of data collection (Stone 1978 cited in Hinkin 1998).

4.2.2.1.3 Formulating Operational definitions:

Another reason for reviewing literature was the formulation of operational definitions. The American Psychological Association (APA 1995 cited in Hinkin 1998) states that appropriate operational definitions of the construct a measure purports to represent are highly recommended when content validity and internal consistency is to be demonstrated in an instrument. Together these provide evidence of construct validity – the extent to which the scale measures what it is purported to measure. Hence the literature was also reviewed in order to provide operational definitions of the dimension of the construct which the measurement was expected to measure in this study. These operational definitions were used as guides for the development of items as well as reference points for experts to judge the appropriateness of the items (Schwab 1980 cited in Hinkin 1998). These operational definitions were stated earlier in this study.

4.2.2.1.4 Drawing items

The Empirical model of Agency (Hitlin and Elder Jr. 2007a), used in this study, offered five key themes around which the quantitative instrument was structured namely, Self-Efficacy, optimism, planfulness, and social support. The researcher added another dimension, namely, autonomy and extended the construct to another domain of Bounded Agency. The researcher searched for appropriate and statistically sound measurements with regard to these key themes in databases such as ACM Digital Library, Academic Search Premier, Wiley InterScience, EBSCO, Project Muse, PsycArticles, Science Direct, SpringerLink, StetsWise, InformaWorld and Web of Science. The researcher also used search engines like Google web and Google scholar. Though the construct, namely ‘the exercise of Personal Agency by young people’s mobile phone use’, was hardly explored, some of the individual elements of agency such as Self-Efficacy had

already existing scales, though these were directed towards purposes different from the current study (Hewlett et al. 2001; Green 2004; Kurbanoglu 2006, Lee and Hsieh 2009). The items of such scales were adapted for the study if found fitting and appropriate. For example, Self-Efficacy is the core dimension of agency according to Bandura (2006). However, prior to adapting the items, the guidelines provided by Bandura (2006) for operationalisation of Self-Efficacy scales were carefully studied with the view of avoiding pitfalls and threats to validity.

In this way the researcher drew a sample of items that would adequately represent the construct under examination (Ghiselli, Campbell, and Zedeck 1981 cited in Hinkin 1998). Due to the exploratory nature of item development, the researcher started with a large number of items. It was assumed that after appropriate statistical analysis was conducted the robustness of the remaining items would be ensured. The researcher wrote items in simple and short sentences in a syntax that would be familiar to the target respondents, avoiding double barrelled items and avoiding leading questions (Hinkin 1998). The items drawn were grouped into dimensions, sub-dimensions and behaviour attributes (Germain 2006). The table 4.1 indicates some of the items associated with the exercise of Personal Agency by mobile phone use. These items were grouped into dimensions, sub-dimensions, and behaviour attributes. By organizing the items in such a manner the researcher gathered an initial 164-item quantitative measure as indicated in Appendix A. This preliminary instrument was pre-tested in Dublin to explore the construct.

4.2.2.1.5 Content validity assessment:

Once items were developed, they were subjected to an assessment of content validity. Content validity must be built into the measure, through the development of items; and must be assessed immediately after items have been developed. Assessing content validity provides the opportunity to refine or replace items before administering a questionnaire (Schriesheim et al. 1993 cited in Germain 2006). There seems to be no generally accepted quantitative index of content validity of psychological measures, and

Table: 4.1 Attributes associated with the exercise of Personal Agency by mobile phone use.		
Dimensions	Sub-Dimensions	Behaviour attributes
1. Belief in one's effectiveness in performing specific tasks		
	a) Ability to be in touch with significant others	I can call my parents whenever I want when the mobile phone is with me
	b) Ability to be in control of oneself when mobile	I feel secure to be out and about
	c) Ability to co-ordinate	I am able to contact people anytime/anywhere to get ideas and support about the matter on my mind
2. Planfulness		
	a) Memory	The Mobile phone is useful in keeping reminders.
	b) Co-ordination	The Mobile phone helps me to co-ordinate activities with my parents
	c) Information gathering	When faced with a problem I use the mobile phone to gather facts by calling people.
3. Children-Parent Attachment		
	a) Attachment with significant others	The Mobile Phone is useful to young people to feel connected with parents.
	b) Ways of feeling support	I have parents photos on their mobile phones
	c) Ease and comfort	I speak comfortably with friends on the mobile phone in the presence of parents
4. Teen Autonomy		
	a) Independence	The Mobile phone gives young people the possibility of being accessible any time to their parents or friends.
	b) Privacy	I move away from parents while talking on the mobile phone
	c) Decision	I decide on my own when and what to communicate
5. Temporal Orientation		
	a) Existential Agency	I feel uneasy if I don't carry the mobile phone with me
	b) Pragmatic Agency	I use the mobile phone in emergencies
	c) Identity Agency	I talk differently on phone with friends then with my parents
6. Bounded Agency		
	a) Parental Authority	My parents set limits/rules about how I can use my mobile phone.
	b) Technical Problems	I feel frustrated when I am unable to get in touch with people due to mobile phone problems (range, lack of sufficient credit, parental/school restriction)
	c) Personal Standards	I am aware of the etiquette to be followed in mobile phone use

Table 4.1 Attributes associated with the exercise of Personal Agency by mobile phone use.

judgments must be exercised in validating a measure (Stone 1978 cited in Hinkin 1998, p108). However in order to examine the consistency of judgments, with respect to content validity, the operational definitions of the constructs in the measurement are considered useful as criteria. Validity refers to the appropriateness, meaningfulness, and usefulness of the specific inferences from the test scores (Burns 1995). The APA Standards views validity as the most important consideration in test evaluation.

Content validity assessment in this study comprised three steps namely, passing the preliminary instrument through the university ethics committee, expert evaluation with panel 1, pre-testing in Dublin and Mumbai, and expert evaluation with panel 2.

4.2.2.1.5.1 Ethics committee:

The draft measure was submitted to the university ethics committee. The committee was contacted through standard procedures of the university. The questionnaire was approved with two recommendations. One was to modify the contact details in the consent form, and another was to administer the pre-test in Dublin only after procuring the consent from the participants. Both these recommendations were implemented.

4.2.2.1.5.2 Expert Evaluation Panel 1

For the content validity and in line with recommendations provided by Frazer and Lawley (2000), the revised questionnaire was submitted to the panel 1 of experts namely, the researcher's supervisor, a teacher, a parent and a peer, for assessment. These were opinion leaders with well-developed views on the research topic (Germain 2006). Given the generative purpose of this stage of item development, the sample size does not have to be large since:

the validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the

observational/analytical capabilities of the researcher than with sample size (Patton 2002, p245).

The researcher's supervisor, teacher, parent and a peer were met in person by appointment. The goal of this panel was to judge the appropriateness of the items to capture the domain presented by the instrument, in the current study.

The experts had to indicate by ticking the item, if it fitted the domain it was in, or by crossing the item if it did not, as well as indicating the number of the domain that they thought it would more appropriately fit in. Based on the responses and suggestions of the experts, the researcher rewrote, rearranged or modified the items, or changed the dimension under which they should appear in the questionnaire. It helped to obtain a better structure at the end. The experts provided feedback on the instrument clarity, completeness, and language. The review went back and forth till saturation was reached with regard to the changes in the questionnaire.

The expert panel 1 also advised that since the questionnaire was to be administered in Mumbai and was studying the Mumbai youth population, it could be further refined by pre-testing it in Mumbai with a sample of actual population. It would also help to refine the language and style as well as adaptation to the socio-cultural context.

4.2.2.1.5.3 Pre-testing on the sample population in Dublin

Pre-testing the prototype questionnaire is conducted first of all to enable the researcher to develop skills of conducting surveys and interviewing. The aim was also to get an indication if the wording is clear and that participants interpret the items as they are intended. The objective of administering this 164-item quantitative measure was to perfect the instrument so that the items would represent a reasonable measure of the construct under examination. A small sample of students was used for pre-testing this questionnaire. This pre-test was carried out on willing respondents in Dublin, by asking them to fill out the questionnaire.

Twenty volunteer leaving certificate students (age 17-18 years) from two schools were approached to fill out the questionnaire. Permissions were sought regarding administering the survey, from the Principals of each institution. The institutions were informed in advance on the objectives and nature of the questionnaire. They were also asked to provide a volunteer sample of students to participate in the pre-test survey. On the selected day, the consent form was given to the volunteering participants. Consent was requested regarding their participation in the survey and the use of data thus collected, for the purposes of academic research, ensuring the anonymity and confidentiality of this exercise. The questionnaire was administered to the leaving cert students. The researcher had assumed that the sample, that had volunteered, would contain mobile phone users and non-users. Unfortunately, in keeping with the mobile phone penetration in Ireland, the sample group contained no non-users. All students in the sample had mobile phones. This was in keeping with the statistics of Ireland which showed 100 percent mobile phone penetration (*Dharmakumar 2009*) in this age group. After this pre-test, the items that a high percentage of participants failed to answer, or those which were found to be incomprehensible, were noted, since the same questionnaire would be used for pre-testing on the Mumbai sample also.

4.2.2.1.5.4 Pre-testing on the sample population in Mumbai

The questionnaire was also pre-tested on willing respondents in Mumbai. The questionnaire was administered to a group of 10 participants (age 17) in their 12th year of formal schooling, equivalent to leaving certificate students in Ireland. They were asked to complete the questionnaire and identify any questions with unclear wording. An informal discussion was held with the participants, after the administration of the questionnaire. Changes were made to the questionnaire, based on their suggestions. The formulation and syntax of the items were adapted to suit the participants' understanding. Ninety two items were retained after this procedure as indicated in Appendix B. This ninety two item questionnaire was named Mobile Phone Assisted Personal Agency Questionnaire (MPAPAQ).

4.2.2.1.5.5 Expert Evaluation Panel 2

In Mumbai, seven judges with expertise in the areas of media studies, social psychology, child development, research methodology, youth research, economics and literature were asked to rate the relevance of each item and the instrument (MPAPAQ) as a whole, in relation to the concept of Personal Agency due to mobile phone use. They were provided with the operational definitions of the domains of the constructs.

Following the suggestions of Grant and Davis (1997 cited in Germain 2006), the content experts were asked to address two elements in examining the instrument: representativeness and clarity. Representativeness in this study referred to the degree to which each item reflected its nominated domain by circling the individual item that was not representative of the domain, with which it was associated. The second task was to underline words that were not in keeping with cultural sensibilities (Bandura 2006). The judges were given the instrument personally. The majority of the judges endorsed all the items with minor changes in formatting for better comprehensibility. Thus MPAPAQ met the criteria for content validity and was used for the final data collection.

4.2.2.1.6 Number of items:

There are no hard and fast rules guiding this decision but keeping a measure short is an effective means of minimizing response biases caused by boredom or fatigue (Schmitt and Stuits 1985 cited in Hinkin 1998). Harvey, Billings and Nilan (1985 cited in Hinkin 1998) suggest that at least four items per scale are needed to test the homogeneity of items with each latent construct. However internal consistency reliabilities can be obtained with as few as three items (Cook et al. 1981 cited in Hinkin 1998). It is important to assure that the domain has been adequately sampled, because inadequate sampling is a primary source of measurement error (Churchill 1979 cited in Hinkin 1998).

4.2.2.1.7 Item Scaling:

Likert-type scales are the most frequently used in survey research (Cook et al. op. cit.). They are also most suitable for use in factor analysis. The researcher in this study used the four point scale without a neutral midpoint to constrain the respondent to make a decision about the item. It was assumed that this will minimize social desirability bias arising from the respondent's desire to please the researcher or appear helpful (Garland 1991).

4.2.2.1.8 Explaining the Instrument

At the end of the item generation step, MPAPAQ was divided into items specific to users and non-users as indicated in Appendix B. The general structure is given in table 4.2. The diagrammatic depiction of the overall process of questionnaire development and division of the items in MPAPAQ is demonstrated in Appendix C. The demographics of the participants consisting of a profile and socio-economic status were determined in the first part of the questionnaire which consisted of 9 items. These items were common to both mobile phone users and non-users. The second part consisting of 41 items was specific to users. The third part of 42 items was specific to non-users. Thus 50 items were administered to users. For better understanding, this 50 item scale was called Personal Agency of Mobile Phone User Questionnaire (PAoMPUQ). Similarly, the non-users were administered 51 items and the 51 item scale was called Personal Agency of Mobile Phone Non-User Questionnaire (PAoMPNUQ). Focussing on the users, the PAoMPUQ comprised five sub-scales reflecting the exercise of Personal Agency by mobile phone use:

- Capability of keeping in touch
- Optimism of mobile phone's usefulness
- Competency in Planning
- Experience of Social Support
- Experience of Autonomy.

These five scales had 23 items that represented a reasonable measure of the construct under examination. These five sub-scales together were called Personal Agency of Mobile Phone User Scale (PAoMPUS). In addition, two other sub-scales were considered namely, ‘Boundaries of mobile phone use’, and ‘Personal Space’. The ‘Boundaries of mobile phone use’ sub-scale was used to evaluate its influence on the exercise of Personal Agency. The ‘Personal Space’ sub-scale was not considered for analysis in this study since it was being considered by the researcher for another study related to Personal Space and mobile phone. This non inclusion was inconsequential to this study.

<p>PERSONAL AGENCY OF MOBILE PHONE USERS QUESTIONNAIRE (PAoMPUQ)</p> <p>Demographics Items 1 to 9: of demographics and Independent variables (Gender, Educational level, religion, Socio-economic status, possession/non-possession of mobile phones),</p> <p>Characteristics of Users Items 10-12: Characteristics of mobile phone user Items 13-14: Independent variables (length of possession and frequency of use)</p> <p>Personal Agency of Mobile Phone Users Scale (PAoMPUS) Items 15 – 37: 23 items included in the 5 sub scales corresponding to the 5 component of Personal Agency</p> <p>Addressing Limiting Situations Items 38-44: Bounded Agency scale Items 45-50: Personal Space scale</p>
<p>PERSONAL AGENCY OF MOBILE PHONE NON-USERS QUESTIONNAIRE (PAoMPNUQ)</p> <p>Demographics The items 1-9 were common to mobile phone users as well as non-users.</p> <p>Characteristics of Users Items 51-56 profiled the characteristics of non-users</p> <p>Personal Agency of Mobile Phone Non-User Scale Items 57-79</p> <p>Addressing Limiting Situations Items 80-86: Bounded Agency Items 87-92: Personal Space</p>

Table 4.2 Overall structure of PAoMPU/NU Questionnaire

The response structure had a four-point Likert scale (not at all true, hardly true, moderately true, exactly true). The questionnaire was developed in English. The items related to the age of the participants, which was originally part of the questionnaire, was deleted. The reason for this was that young people at this stage, were referred to as respectively having completed or not completed 12th year of formal schooling (12th

standard equivalent to Leaving certificate in Ireland). It was assumed that young people who were studying in the 11th and 12th year of formal education were aged 16 or 17 years.

Furthermore, Aggarwal et al. (2005) developed a scale for categorizing people according to their socio economic status. This scale was adapted for the purpose of this study. It considered five questions based on education, occupation, family possessions, type of house and vehicle ownership. The New Middle Class is known for its consumerist taste, hence the family possessions were added. The socio-economic and demographic variables were considered also in order to describe the characteristics and differences between the users and non-users belonging to the new middle class families in Mumbai. The original rating in the Agarwal scale was scored as follows: Upper High > or = 76; High 61-75, Upper Middle 46-60, Lower Middle 31-45, Poor 16-30, very poor or below poverty line , or = 15. This rating was from the total score of 100. For the scale in the current study, from the total score of 33 (where each item ticked by the participant is scored 1 point), the researcher drew up a proportionate scoring. Thus, Upper High > or = 25; High 20-24, Upper Middle 15-19, Lower Middle 10-14, Poor 5-9, Very poor or Below Poverty Line < or = 4. Those who fell in the upper middle or lower middle were the prime focus in this study.

Once the questionnaire had fulfilled sufficient conditions for instrument development and content validity, the instrument development process was ready to move into the second step, namely the questionnaire administration.

4.2.2.2 Step 2: Questionnaire Administration:

Administering the instrument was the second step in instrument development. In this step of scale development, the researcher used the items that had survived the content validity assessment described in the first step to develop an instrument to measure the exercise of Personal Agency by mobile phone use.

Before administering the questionnaire, some preliminary procedures were set in place such as sampling procedures, permissions to be acquired, designing ways for recording the data, and the activities involved in administering the data collection instrument.

4.2.2.2.1 Sampling Procedures:

Random sampling and snowballing have been used effectively in studies that combine different research methods (Alridge et al. 1999). These methods were used to guide data collection for this study also.

There has been substantial debate over the sample size needed to appropriately conduct tests of statistical significance. As sample size increases, the likelihood of attaining statistical significance increases (Cohen 1969 cited in Hinkin 1998). For example, exploratory factor analysis has been shown to be particularly susceptible to sample size effects. A sample size of 150 observations should be sufficient to obtain an accurate solution in exploratory factor analysis, as long as item intercorrelations are reasonably strong (Guadagnoli and Velicer 1988 cited in Hinkin 1998).

The questionnaire was distributed to 350 randomly selected students studying in the 11th and 13th year of formal schooling. They were 16 to 19 years of age. The samples were drawn from three co-educational semi-private Junior colleges, Youth groups and Residential Estates. These residential estates comprised of apartments and homes where typical middle class families of Mumbai resided and thus were representative of Mumbai's Mobile phone using adolescent population.

4.2.2.2.2 Permissions and recording issues:

In Mumbai, the researcher met the authorities of three colleges. Permission was sought from the principals of each institution, where the questionnaire was deemed to be administered with prior appointment. First, an informal visit was made to the institutions, to get to know the institutions and to check out the logistics of the

administration of the survey and interviews. The dates of administration were decided with the authorities. The principal was asked to inform the participants regarding the survey. The principals were provided with the questionnaire. The nature and reason of the survey was explained to them. The principals assigned teachers to assist in the distribution and collection of the questionnaires.

4.2.2.2.3 Administering the instrument:

As seen earlier, the content validated survey instruments (PAoMPUQ and PAoMPNUQ) were administered to a sample of 350 students in the 11th to 13th year of formal schooling in 3 college campuses, youth groups, and homes in Mumbai. A total of 311 were returned which indicated an 88 percent response rate. The students that were sampled were from within the city area of Mumbai.

The researcher went on-site to administer the instrument and was assisted by the teachers in the educational institutions. In the institutions, the college authorities had designated a class room where the questionnaire could be administered and where the participants were assembled. The participants were informed in advance about the survey that was to be conducted. Participants first had to read the plain statement and sign a consent form before the questionnaire was distributed. The plain statement and consent form is given in Appendix D. Some of the participants were given the questionnaire at home. They were instructed about the nature of the research and asked to complete the instrument at home. They were informed that the researcher would collect it from them in a week's time.

4.2.2.3 Step 3: Item Reduction:

Data collected with the PAoMPUQ and PAoMPNUQ in Mumbai were analyzed in various ways to investigate the reliability and validity of this instrument. The focus of attention from this point onwards was the data collected from the users (PAoMPUQ). The data collected from non-users (PAoMPNUQ) was considered at a later stage.

The following statistical analyses were carried out: first, Discriminant Analysis, which is the initial item reduction technique to reduce the items of the questionnaire, followed by an Exploratory Factor Analysis, which exhibits the factors underlying the items.

Firstly, initial item reduction was carried out by using item discrimination indices. Item discrimination indices were used to address the validity of the items on the scale, that is, to examine the extent to which the items tap the attributes they were intended to assess. Those items that did not tap the attributes were discarded.

4.2.2.3.1 Discriminant Analysis:

Therefore, the item discrimination indices for each item of the PAoMPUS (5 sub-scales) were calculated by performing the Item Analysis, also called Discriminant Analysis, in SPSS. Item discrimination indicates whether or not each item is related to the other items as a set. Since all items in a test are intended to cooperate to generate an overall test score, any item with negative or zero discrimination undermines the test. Negative discriminations indicate faulty item design, and items that should be eliminated or modified. Positive item discrimination is generally productive, unless it is so high that the item merely repeats the information provided by other items on the test. The range of the item discrimination Index is +1 to -1. Values of 0.4 and above are regarded as high, and less than 0.2 as low and should not be considered for inclusion (Ebel 1954 cited in Hashway 1998).

Table 4.3⁸ indicates the “corrected item-total correlation” column which is also known as the “discrimination” index. It reports, one at a time, if each item was correlated to the scale as a whole. It indicated that the discrimination indices of the 23 items in the PAoMPUS ranged from 0.38 to 0.66. All items showed acceptable values. No indices were less than 0.20. Hence, all the items were retained in the scale as indicated in table 4.3.

⁸ Table 4.3 and the subsequent tables contain items depicted as q15, q16, q17 and so on. These items correspond to the questionnaire item 15, item 16 and so on till item 92 respectively. Appendix B shows the questionnaire with all the items.

Internal consistency of the 23-item PAoMPUS as calculated by Cronbach's alpha was 0.911 which is high as indicated in table 4.4. This indicated that PAoMPUS was internally consistent and reliable in measuring Personal Agency by mobile phone use.

Item number	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
q15	71.360	122.881	.666	.566	.902
q16	71.178	127.877	.548	.463	.905
q17	71.199	125.298	.629	.557	.903
q18	71.159	129.283	.457	.345	.907
q19	71.663	126.346	.500	.376	.906
q20	71.718	127.077	.441	.420	.907
q21	71.417	124.909	.574	.478	.904
q22	71.403	126.771	.566	.425	.904
q23	71.871	125.512	.542	.467	.905
q24	71.167	127.934	.550	.431	.905
q25	71.742	124.732	.554	.516	.905
q26	71.568	122.030	.661	.576	.902
q27	71.500	126.715	.553	.429	.905
q28	71.583	126.297	.451	.263	.907
q29	71.697	125.919	.470	.321	.907
q30	71.761	125.099	.465	.404	.907
q31	71.231	124.878	.571	.623	.904
q32	71.356	125.569	.584	.504	.904
q33	71.269	125.498	.568	.521	.904
q34	71.788	126.164	.461	.349	.907
q35	71.509	129.145	.382	.278	.908
q36	71.417	126.358	.496	.347	.906
q37	71.527	127.011	.458	.345	.907

Table 4.3 Discrimination indices of the 23-item PAoMPUS

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.909	.911	23

Table 4.4 Reliability Statistics of the 23-item PAoMPUS

Furthermore, as a second step towards item reduction, an exploratory factor analysis, was undertaken.

4.2.2.3.2 KMO and Bartlett's Test:

Prior to performing the factor analysis, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above as indicated in appendix E. Furthermore, the Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy, and Bartlett's tests of sphericity were evaluated for the factorability of the correlation matrix (i.e., to determine whether the items were factorable and could indeed be classified into a few categories). The Kaiser-Meyer-Olkin value was .906, exceeding the recommended value of .6 (Kaiser 1974 cited in Brace et al. 2009) and the Bartlett's Test of Sphericity (Bartlett 1954 cited in Brace et al. 2009) reached statistical significance ($p < .05$) as indicated in table 4.5. These measures supported the factorability of the correlation matrix.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	2364.158
	Df	253
	Sig.	.000

Table 4.5 KMO and Bartlett's test of the 23-item PAoMPUS

4.2.2.3.3 Exploratory Factor Analysis

In order to arrive at a parsimonious representation of the pattern among measured variables the researcher decided to do Exploratory Factor Analysis (EFA). In order to do an EFA, a number of assumptions about the data were checked. One major issue is sample size. At least 150 observations are required to obtain an accurate solution in EFA (Guadagnoli and Velicer 1998 cited in Hinkin 1998). This study consisted of 264 cases of mobile phone users out of the 311 participants who had returned the filled out questionnaire.

The term 'factor' in factor analysis means a dimension (or psychological construct) that underlies several measured variables. EFA, usually just called factor analysis, enables

the researcher to investigate whether there is an underlying structure in the pattern of correlations between a number of items (variables) (Brace et al. 2009). By discerning the pattern of correlations, factor analysis can establish whether one or more factors do underlie a large number of items. Thus it identifies how many factors underlie the items, and which particular items make up which factor. Those items which fall in more than one factor are eliminated. They are called confounding variables as they do not clearly fall in a single factor. In this way factor analysis allows the reduction of a set of observed items to a smaller set of items to create a parsimonious representation and a simple structure of the original set of items (Guadagnoli and Velicer 1988 cited in Hinkin 1998). Thus the 23 item PAoMPUS (items q15 to q37) was subjected to EFA using principal axis factoring and varimax rotation. SPSS was used for EFA. Data were excluded list wise. This allowed the items to be categorized into various themes, or factors.

Rotation serves to make the output more understandable and is usually necessary to facilitate the interpretation of factors. One of the orthogonal factor rotations that are often used is called varimax rotation. Varimax rotation is the most common rotation option. In varimax rotation, each factor tends to have either large or small loadings of any particular variable. In this way it yields results which make it as easy as possible to identify each variable with a single factor. This simplifies the interpretation because, after a varimax rotation, each original variable tends to be associated with one (or a small number) of factors, and each factor represents only a small number of variables (Abdi 2003). Orthogonal means that the factors are distinct i.e. do not line in the same space (or at 90 degrees, in vector terminology), so do not overlap. An orthogonal rotation is recommended when the intent is to develop scales that are reasonably independent of one another.

Furthermore, the number of factors to be retained depends on both underlying theory and quantitative results. The researcher should have a strong theoretical justification for determining the number of factors to be retained, and the examination of item loadings on latent factors provides a confirmation of expectations. Eigenvalue of greater than 1

(Kaiser criterion) and a scree test (Hinkin 1998) were used to support the theoretical distinctions.

To clarify the factor pattern, a rotation analysis of the factors was performed. The eigenvalues (measures of variance) greater than 1 in conjunction with the scree plot (a plot of the eigenvalues and the factors) were assessed to determine the number of factors to use in the rotation analysis. The analysis was performed with an orthogonal (varimax) rotation. Items accounting for at least 4.6% of the variance on a factor (with loadings greater than an absolute value of 0.4) were considered to load, or be sufficiently correlated with, a particular factor. Eigenvalue of greater than 1 (Kaiser criterion) and a scree test of the percentage of variance explained (Hinkin 1998) were used to support the theoretical distinctions.

Principal axis factoring with varimax rotation revealed the presence of four factors with eigenvalues exceeding 1, explaining 34.4%, 8.80%, 5.43%, and 4.61% of the variance respectively (see percentage of variance for initial eigenvalues in table 4.6). An inspection of the screeplot revealed a break in the curve after the third component after which the scores are levelled gradually as indicated in figure 4.2. Using Catell's (1966 cited in Brace et al. 2009) scree test, it was decided to retain three factors for further investigations.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.905	34.369	34.369	7.370	32.044	32.044
2	2.026	8.808	43.177	1.502	6.529	38.573
3	1.250	5.433	48.610	.717	3.117	41.690
4	1.061	4.613	53.224	.510	2.216	43.906
5	.993	4.317	57.541			
6	.956	4.157	61.697			

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

Table 4.6 - Eigen Values Percentage of Variance of PAoMPUS

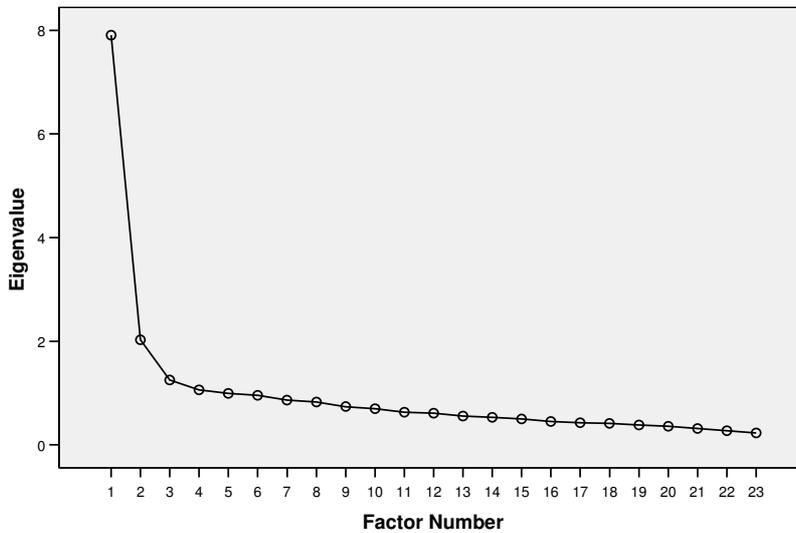


Figure 4.2 – Scree Plot for PAoMPUS

The factor loadings (measurements) of PAoMPUS are presented in table 4.7. Principal factor axis extraction along with the Varimax rotation was carried out. It indicated the presence of four factors as well as indicating items in the four factors with eigenvalue greater than 1. Items with factor loadings greater than or equal to an absolute value of 0.4 further clarified the factor's theme. Items such as q15, q22, q23, q26, q27, q31, q32, q33 were confounding variables. They loaded on more than one factor (seen in Table 4.7). Hence they were deleted.

The factor axis extraction with the varimax rotation was repeated on the remaining 15 items. At this time q37 loaded on more than one factor and q28 did not load at all. Both of them were deleted and factor axis extraction with the varimax rotation was repeated on the remaining 13 items. At this time q36 was loaded on more than one factor. It was deleted and factor axis extraction with the varimax rotation was repeated on the remaining 12 items. A clear factor structure was obtained as demonstrated in table 4.8 in the rotated factor matrix. The scree plot is indicated in figure 4.3.

	Factor			
	1	2	3	4
Q17	.683			
Q21	.638			
Q16	.629			
Q24	.619			
Q15	.549		.334	.326
Q26	.532			.308
Q22	.514	.365		
Q18	.499			
Q27	.386	.352		
Q25		.717		
Q20		.632		
Q30		.600		
Q23	.320	.564		
Q19		.510		
Q37		.486		
Q29		.470		
Q28		.327		
Q36		.319		
Q31	.386		.683	.338
Q33	.407		.602	
Q32	.337		.555	
Q34				.610
Q35				.508

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

Table 4.7 – Rotated Factor matrix with 23 items

	Factor		
	1	2	3
Q16	.656		
Q17	.753		
Q21	.646		
Q24	.652		
Q18	.502		
Q20		.672	
Q25		.800	
Q30		.534	
Q19		.453	
Q29		.454	
Q34			.525
Q35			.620

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.

Table 4.8 – Rotated factor matrix with 12 items

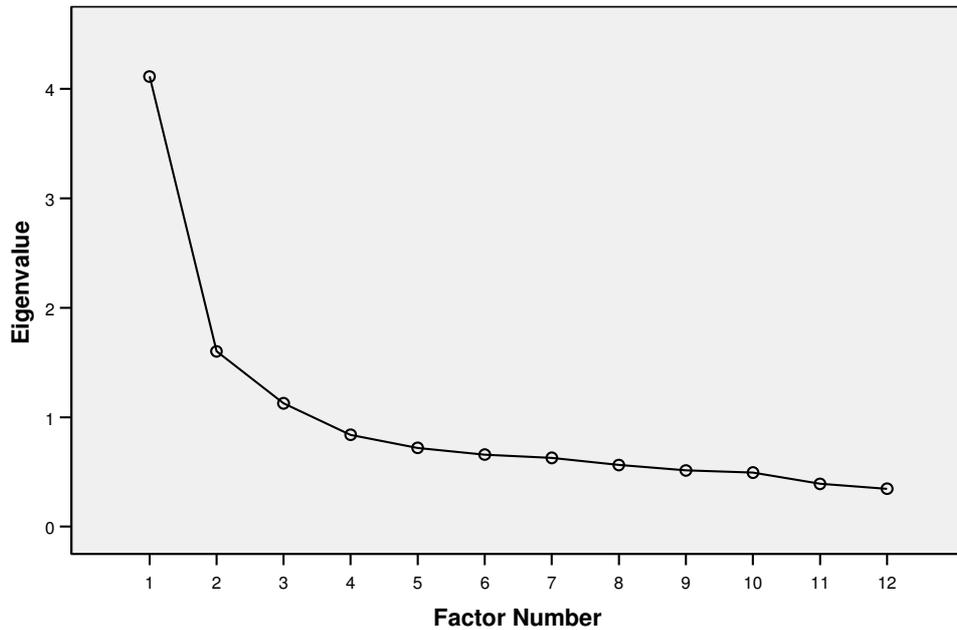


Figure 4.3 –Scree plot with 12 items

The first factor was named ‘Contactability’. It comprised five items (q16, q17, q18, q21, and q24) and was related to the ability to contact and be contactable. The second factor was named ‘Organizability’. It comprised five items (q19, q20, q25, q29, and q30) related to ability to organize oneself. The third factor was named ‘De-restriction’. It comprised two items (q34, q35) related to the ability to be free from restrictions.

Cronbach’s α was computed for all items loading on each factor and the entire PAoMPUS as indicated in table 4.9. Values higher than an absolute value of 0.7 were considered to have acceptable internal consistency. Cronbach α for contactability was 0.80 which was good and for organizability was 0.75 which was acceptable. The Cronbach’s alpha for de-restriction was 0.56. It was low. One reason for it was that there were two items only in the subscale. The Cronbach’s alpha for the entire scale was 0.81 which was high.

Factor	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Contactability	.803	.805	5
Organizability	.752	.754	5
De-restriction	.556	.560	2
Overall scale	.817	.822	12

Table 4.9 – Cronbach’s alpha for the 3 factors and overall scale

4.2.3 Summary:

In summary, the evaluation of the correlation matrix (Appendix E) indicated relationships among the items. Thus analysis of the correlation matrix indicated KMO (0.90) and Bartlett's test of sphericity ($P < .001$) for the 23 items of the PAoMPUS which suggested that, the correlation matrix was factorable. Examination of the initial eigenvalues (Table 4.6) and the scree plot (Figure 4.2) suggested that four factors would best categorize the 23 items. A varimax rotation was performed. Four factors explained 34 % of the variance of the mobile phone assisted Personal Agency. All items loading on a factor were then used as the basis for naming the factor. After deleting the confounding variables, those that did not load well and the ones that were isolated, the final PAoMPUS had 3 clear factors which were named ‘contactability,’ ‘organizability,’ and ‘de-restriction.’ The overall Cronbach’s alpha for the full PAoMPUS scale was 0.81 which was good. The PAoMPUS was accepted to have three factors since the rotated factor matrix (table 4.8) indicated a clear 3 factor structure, and the scree plot (figure 4.2) indicated 3 factors above eigenvalue >1 . Exploratory analysis is as it is called an exploration, and judgement needs to be used to ultimately select and deselect items and factors (Hinkin 1998).

The three factors extracted as a result of the exploratory factor analysis were examined and labelled based on the literature review presented earlier and according to the empirical model of agency (Hitlin and Elder Jr. 2007a). Factor 1, which comprised items

related to efficacy and certainty, in giving and gaining access to people, routinely and in emergencies, is labelled as ‘Contactability’. Factor 2 which comprised organising time, efficiency in information gathering, coordinating and mental alertness was labelled as ‘organizability’. Factor 3 comprising of items related to the experience of freedom and negotiation was labelled as ‘de-restriction’. As in the measurement model of agency constructed by Hitlin and Elder Jr. (2007a), agency was fundamentally composed of Self-Efficacy, optimism, planfulness, social support, and autonomy. Items related to social support did not load high because they were already reflected in the items representing Self-Efficacy and optimism. The entire refined PAoMPUS is indicated in table 4.10.

Personal Agency of Mobile Phone User Scale (PAoMPUS)	
Items	Mobile phone assisted Contactability
Q16	I can easily be contacted by my parents and friends directly wherever I am and whenever they need me.
Q17	Others can easily contact me in case of any emergency.
Q18	I can easily contact my parents and friends in case of any emergency.
Q21	I am certain that my parents and friends will be able to be in touch with me wherever I am.
Q24	I am certain that I will be able to contact my parents or friends in case of any emergency.
Items	Mobile phone assisted Organizability
Q19	I can easily pass time by entertaining myself with music or radio, anytime and anywhere.
Q20	I can easily seek information from information services, anytime and anywhere.
Q25	I am certain that I will be able to have quick access to information services.
Q29	I tend to pay attention to my words or text and while speaking or SMSing.
Q30	I can plan an instant face-to-face meeting e.g. group study or a meeting on Internet chat.
Items	Mobile phone assisted De-restriction
Q34	I feel free.
Q35	I negotiate with my parents regarding the time to return home if I am out with friends.

Table 4.10 – 12 item Personal Agency of Mobile Phone User Scale

4.2.4 Validity of the PAoMPU/NUQ:

This scale was developed after validating the items from peers, experts, pilot tests in Dublin and Mumbai and statistical analysis procedures of EFA and reliability. The PAoMPUS was developed in answer to the research question stated at the beginning of this chapter, can the exercise of Personal Agency by mobile phone use be measured which demonstrates that such a measure is possible. If this scale is to be replicated in other settings and contexts, Confirmatory Factor Analysis (CFA) will be necessary. Confirmatory Factor Analysis is just a confirmation that the prior analyses have been conducted thoroughly and appropriately. It also allows the researcher to quantitatively assess the quality of the factor structure, providing further evidence of the construct validity of the new measure.

However, the scope of this research was to explore the phenomenon under study in the context of the Mumbai sample. Hence, after obtaining a thorough content validity, the researcher judged the PAoMPUS to be sufficiently reliable as an instrument for the purpose of this study. Additional validity to the instrument was provided by triangulating this data with the qualitative study which the researcher collected concurrently, with the quantitative data in a mixed method triangulation concurrent design.

The questionnaire data provided a basis by which the researcher could examine the similarities and differences between mobile phone users and non-users in Mumbai. The researcher found that, where statistically significant differences in questionnaire scale were found students' interviews usually provided a plausible explanation, suggesting further support for the viability of the questionnaire. The inclusion of the interview data was vital for making sense of the questionnaire results.

4.3 Boundaries of Mobile phone use

Moving further to consider the Boundary sub-scale, the KMO (0.79) and Bartlett's test of sphericity ($P < .001$) for the items related to boundaries indicated that the sub-scale had a factorable correlation matrix. The items of the boundaries sub-scale are indicated in Appendix B. Seven items reflected the boundaries experienced in mobile phone use. The scree plot as indicated in figure 4.4 and the eigenvalues > 1 as indicated in table 4.11 demonstrated that a single factor best categorized the boundaries of mobile phone use, which accounted for 37.6% of the total variance.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.635	37.649	37.649	1.936	27.656	27.656
2	.984	14.061	51.710			
3	.832	11.892	63.602			
4	.758	10.828	74.430			
5	.676	9.664	84.095			
6	.624	8.911	93.006			
7	.490	6.994	100.000			

Extraction Method: Principal Axis Factoring.

Table 4.11 – Eigen values for Boundaries of mobile phone use

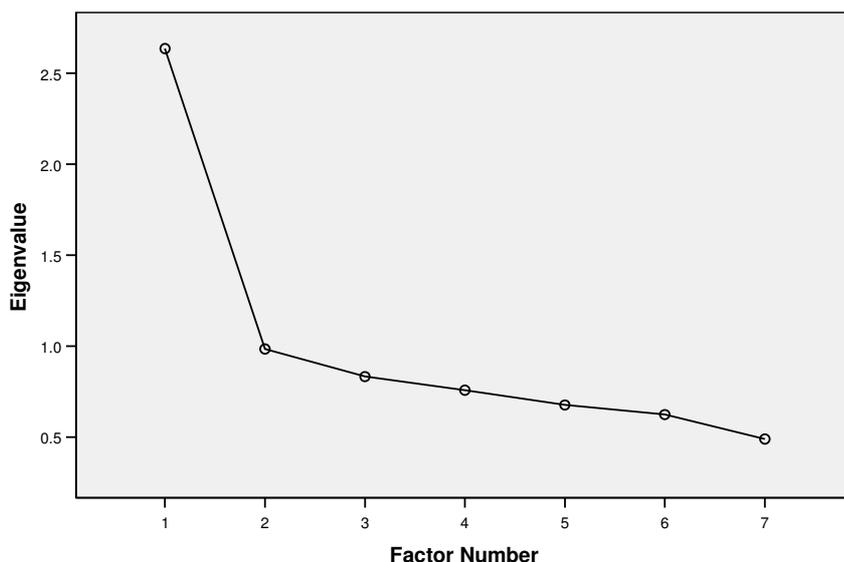


Figure 4.4 – Scree plot for Boundaries of Mobile phone use

A principal factor axis extraction with varimax rotation resulted in a single factor as indicated in table 4.12.

	Factor
	1
q38	.574
q39	.684
q40	.475
q41	.506
q42	.407
q43	.505
q44	.486

Extraction Method: Principal Axis Factoring.

Table 4.12 – Rotated factor matrix for Boundaries of mobile phone use

This factor comprised seven items about boundaries of mobile phone use related to legal restrictions, institutional restrictions (school), technical restrictions, personal ethics, gender restrictions, parental restrictions, and health concerns. Cronbach’s alpha for the 7 items was 0.71 which was acceptable.

Thus, based on the themes of the construct, a 12 item PAoMPUS was developed for mobile phone users. For the non-users, the items corresponding to the final 12 items in the PAoMPUS were used for analysis. This was named Personal Agency of Mobile Phone Non-Users Scale (PAoMPNUS) as indicated in table 4.13.

Personal Agency of Mobile Phone Non-User Scale (PAoMPNUS)	
Items	Mobile phone assisted Contactability
q58	I can't easily be contacted by my parents and friends directly wherever I am and whenever they need me.
q59	Others can't easily contact me in case of any emergency.
q60	I can't easily contact my parents and friends in case of any emergency.
q63	I am not certain if my parents and friends will be able to be in touch with me wherever I am.
q66	I am not certain if I will be able to easily contact my parents or friends in case of any emergency.
Items	Mobile phone assisted Organizability
q61	I can't easily pass time by entertaining myself with music or radio, anytime and anywhere.
q62	I can't easily seek information from information services, anytime and .anywhere.
q67	I am not certain if I will be able to have quick access to information services.
q71	I tend not to pay attention to my words and while speaking.
q72	I can't plan an instant face-to-face meeting e.g. group study or a meeting on Internet chat.
Items	Mobile phone assisted De-restriction
q76	I feel I can't do many things I would have wished to do.
q77	I can't negotiate with my parents regarding the time to return home if I am out with friends.

Table 4.13 – 12-item Personal Agency of Mobile Phone Non-User Scale

4. 4 Conclusion:

The data that was initially collected with PAoMPUQ and PAoMPNUQ, was analysed to develop PAoMPUS and PAoMPNUS respectively. To ensure reliability and validity, the items of the scale were subjected to EFA which also determined the factors underlying the items. The research question stated at the beginning of the chapter was answered by developing the instrument. The next chapter will analyse the data collected with the entire PAoMPUQ and PAoMPNUQ and address the other quantitative research questions of the study.

CHAPTER 5

Quantitative Results

5.1 Introduction:

In the previous chapter, the researcher developed the PAoMPUS for users of mobile phones. The PAoMPUS serves as a tool to measure the level of Personal Agency that mobile phone users exercise. It was part of a larger questionnaire, PAoMPUQ, which also contained the demographic and other information about mobile phone users that was required to address the research questions of this study. Furthermore, PAoMPNUS was also developed for non-users by selecting the items that corresponded to the validated items of PAoMPUS. It serves as a tool to measure the level of Personal Agency that mobile phone non-users exercise. This too was part of a larger questionnaire, PAoMPNUQ, which contained the demographic and other information about non-users that was required to address the research questions of this study.

In this chapter the quantitative data that was collected from users and non-users of mobile phones in Mumbai by using the PAoMPUQ and PAoMPNUQ was examined. Both sets of data were analyzed in order to address the quantitative research questions. The chapter ends by demonstrating the extent to which Personal Agency is exercised by mobile phone users in comparison with mobile phone non-users. To this end, the following research questions were examined:

- (i) What is the influence of demographic variables such as gender, academic qualifications, religion, socio-economic status, duration of possession of mobile phones, and frequency of mobile phone use, on the exercise of Personal Agency by the use of mobile phone?
- (ii) How do the demographic variables considered in the study interact to impact the exercise of Personal Agency by mobile phone use?

(iii) What is the relationship between the exercise of Personal Agency in mobile phone users and the boundaries encountered in mobile phone use?

(iv) Is there a significant difference in the exercise of Personal Agency by mobile phone users and non-users?

The quantitative data that was collected with PAoMPOUQ and PAoMPNUQ were prepared, screened and analyzed with SPSS. Descriptive and inferential statistics were examined with the objective of studying the research questions mentioned above. A series of *t*-tests were performed to examine significant differences in the mean values of all the variables of interest across the dimensions of gender, academic qualification, religion, Socio-Economic Status (SES), duration of mobile phone possession, and frequency of mobile phone use.

Therefore, first the data that was common to mobile phone users and non-users will be described. Following this, the analysis of the data collected from users and from non-users addressing the research questions (i), (ii) and (iii) will be presented. Finally the results of the research question (iv) will be elaborated.

5.2 Demographic data common to users and non-users:

A total of 311 respondents completed the PAoMPOUQ and PAoMPNUQ of which 39.5 percent were males and 60.5 percent were females. Furthermore, 32 percent were undergraduates and 68 percent were junior college students. It was assumed that those who were studying for their junior college in India and in the first year of under graduate degree ranged from 16-19 years, as is generally seen in India. In terms of religion, the respondent consisted of 61 percent Hindus, 22 percent Christians, 5 percent Muslims, 4 percent Jains, 3.5 percent Sikhs, 3.5 percent Buddhists, and one percent belonged to other religions.

Furthermore, in order to arrive at the socio-economic status (SES) of the participants, they were asked for the type of home they lived in (points were accorded in increasing

order from 1 to 7 corresponding to the household item the respondents indicated in the questionnaire), the household items they possessed (one point was accorded for each household item owned), and the number of vehicles that they owned (points were accorded in increasing order corresponding to the household item the respondents indicated in the questionnaire). The respondents were not made aware of the way the scoring was done. When the scores were calculated, they ranged from 3 to 33. To make SES easy to analyze, the respondents were divided into 3 categories. The sample consisted of 32 percent belonging to low, 33 percent medium, and 35 percent high SES. The division into three categories was done according to common convention of three sub-classes namely lower middle class, middle class, and upper middle class and is supported in literature (Fernandes 2006).

5.3 Users

5.3.1 Demographic data on users:

Furthermore the researcher focussed particularly on the users of mobile phones. The 311 respondents were distributed between 85 percent users and 15 percent non-users of mobile phones. Of the users 78 percent wanted to possess a mobile phone before they actually acquired it and 22 percent did not want it before they actually acquired it.

5.3.1.1 Manner in which children come to possess a mobile phone:

Also, among the users 15 percent bought the mobile phone with their own money and 85 percent were offered the mobile phone. This was pertinent when contrasted with in informal interviews in Ireland where children as young as 10 years, purchased their own mobile phones from their own funds, particularly from the money received on their first Holy Communion. Unlike in India, the researcher had also often observed children in primary schools visiting mobile phone showrooms to purchase mobile phones accompanied by friends, not their parents. Such actions were discouraged in India

where, to a large extent, the mobile phone was purchased by an adult and offered to the children as indicated in this result.

5.3.1.2 Duration of mobile phone possession:

Moreover, of the total number of participants 15 percent of users did not possess a phone at all, 9 percent possessed a phone for less than 6 months, 19 percent possessed it between 6 months to 1 year, 22 percent possessed it more than 1 year to 2 years, 14 percent possessed it for more than 2 years to 3 years, and 21 percent possessed it more than 3 years. This is indicated graphically in figure 5.1

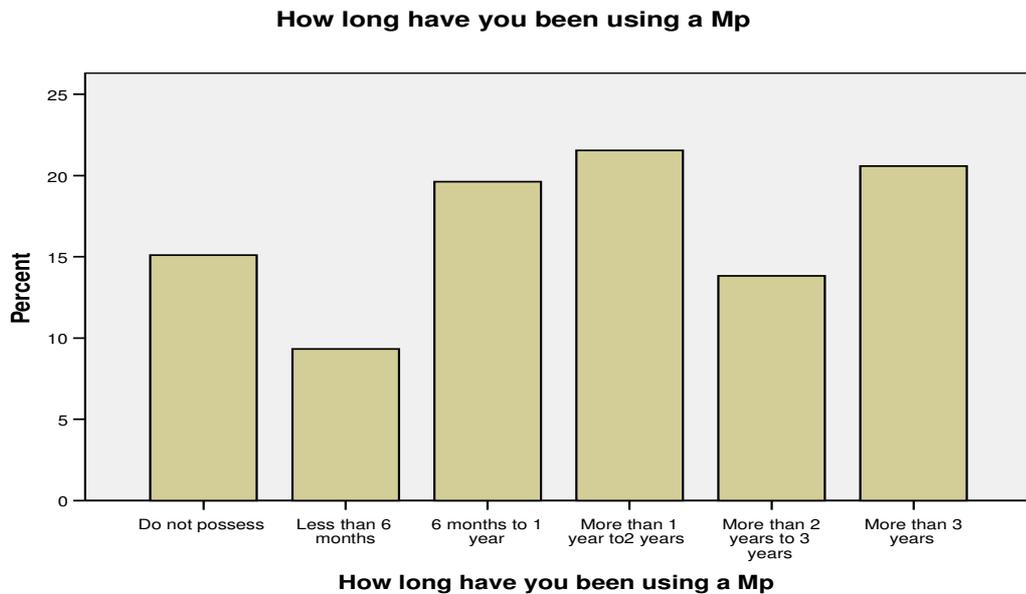


Figure 5.1 Duration of mobile phone possession

Nonetheless 15 percent who did not possess mobile phone also saw themselves as users. This highlighted the fact that these young people did not possess their own phone but used the mobile phone of others when they needed it. ‘Sharing’ of mobile phones is seen commonly in India (Chavan 2005) and in Asian and African contexts (Kalba 2008). In the literature review, the researcher termed the mobile phone as a ‘shareable’ technology.

5.3.1.3 Frequency of use:

In terms of Frequency of mobile phone use, of the total number of respondents there were 15 percent of those who did not possess a mobile phone at all, 1 percent who never used it (not using at all), 7 percent who used it rarely (once a week), 8 percent who used it sometimes (twice a week), 10 percent who use it often (three/four times a week), 15 percent who used it very often (at least once a day), and 44 percent who used it frequently (more than once a day) as depicted vividly in figure 5.2.

Again, as indicated earlier, there existed a group of users who did not possess mobile phones but used it by borrowing it from others. However, the frequency with which they borrowed it for use, was mostly ‘once a week’ as indicated later in this chapter. Furthermore, as illustrated in figure 5.2, a large number of respondents in this sample used the mobile phone ‘frequently’ i.e. more than once a day. There were conflicts between parents and children over the constant use of mobile phones. Because they lacked financial independence, young peoples’ use of the mobile phone was constrained by the financial limits on usage dictated by the parents. The interview data will indicate this later.

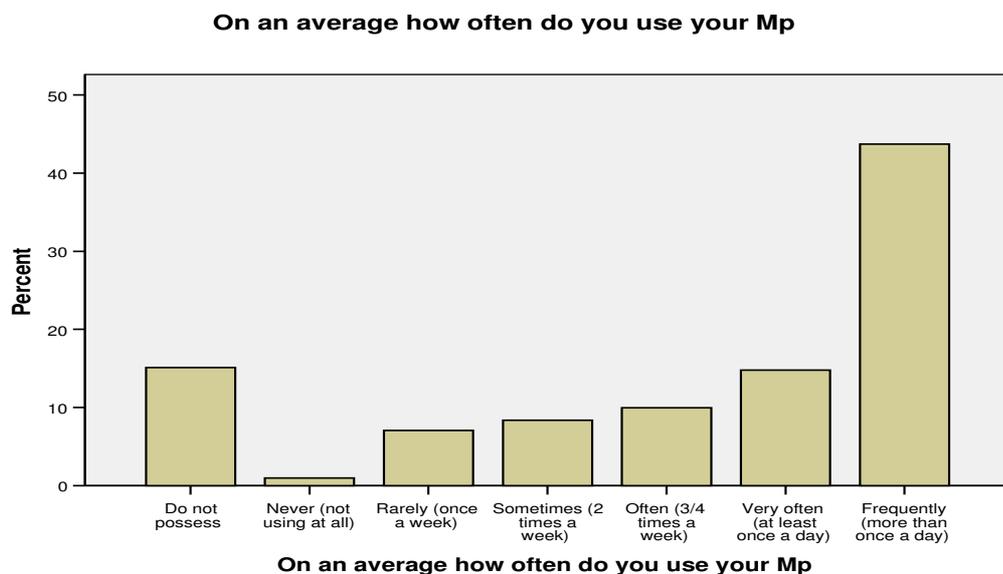


Figure 5.2 Frequency of mobile phone use

With the demographic profile of users and non-users established from the sample population, the key research questions could be addressed. Each research question was converted into a hypothesis. Each hypothesis was then tested statistically with an appropriate test.

5.3.2 Inferential Statistics:

5.3.2.1 Relationship between demographic variables and the exercise of Personal Agency by the Mobile Phone User:

As indicated in the beginning of the chapter the first research question that was considered was the following:

- (i) What is the influence of demographic variables such as gender, academic qualifications, religion, socio-economic status, duration of possession of mobile phones, and frequency of mobile phone use, on the exercise of Personal Agency by the use of mobile phone?

The quantitative data was analyzed to address each hypothesis with suitable statistical tests. The independent t-test compares the performance of the participants in one group with the performance of the participants in another group. Since gender had 2 levels, male and female, a t-test was considered as suitable since a t-test is suitable for two levels only. Thus an independent samples t-test was carried out to compare the difference of means between male and female mobile phone users in relation to their exercise of Personal Agency. It was hypothesized that there was a significant difference in the exercise of Personal Agency between male and female mobile phone users. The difference is demonstrated by calculating the means of their exercise of Personal Agency. The alternative and null hypothesis and the results are as follows.

5.3. 2.1.1 Comparison of the exercise of Personal Agency of mobile phone users with gender:

Alternative Hypothesis: There is a significant difference in the exercise of Personal Agency between male and female mobile phone users.

Null Hypothesis: There is no significant difference in the exercise of Personal Agency between male and female mobile phone users.

The researcher compared the exercise of Personal Agency between males with females. Table 5.1 reports the means (M) and significance (p) of the exercise of Personal Agency of mobile phone users in males and females.

The females averaged higher exercise of Personal Agency (M=3.32, SD=0.50) than males (M=3.26, SD=0.48). However the difference was not significant [t(262)= -.947, p >.05]. The value of significance (p) is required to be <0.05 (less than 0.05) for the result to be significant which is contrary to the result demonstrated in table 5.1.

Independent Samples Test

Gender	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Male	100	3.2680	.48148	-.947	262	.344
Female	164	3.3275	.50353			

Figure 5.1 Independent samples test comparing Personal Agency of mobile phone users between males and female

Thus table 5.1 demonstrated that the difference, in the exercise of Personal Agency between male and female mobile phone users, was not significant. Hence the null hypothesis, that there is no significant difference in the exercise of Personal Agency between male and female mobile phone users, is accepted. This indicated that gender did not make a significant difference on the exercise of Personal Agency of mobile phone

users in this sample. However a considerable influence of gender was indicated earlier in the literature review, as well as being demonstrated through the interview data later.

5.3. 2.1.2 Comparison of the exercise of Personal Agency with level of academic qualification of mobile phone users:

Alternative Hypothesis: There is a significant difference in the exercise of Personal Agency between undergraduates and junior college mobile phone users.

Null Hypothesis: There is no significant difference in the exercise of Personal Agency between undergraduates and junior college mobile phone users.

The researcher compared the exercise of Personal Agency between undergraduates and junior college students by performing a t-test. Table 5.2 reports the results.

The Junior college mobile phone users averaged higher exercise of Personal Agency (M=3.32, SD=0.48) than undergraduates (M=3.27, SD=0.50). However the difference was not significant [$t(262) = -.795, p > .05$] as demonstrated in table 5.2.

Academic Qual.	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Under graduates	95	3.2726	.50830	-.795	262	.427
Junior college	169	3.3232	.48829			

Figure 5.2 Independent samples test comparing Personal Agency of mobile phone users between undergraduates and junior college students

Thus table 5.2 demonstrated that the difference, in the exercise of Personal Agency between undergraduates and junior college mobile phone users, was not significant. Hence the null hypothesis was accepted. It indicated that academic qualifications did not make a significant difference on the exercise of Personal Agency of mobile phone users in this sample.

As indicated earlier, it is to be noted that the variable, gender, had two categories (male and female). Similarly academic qualifications had two categories (undergraduates and junior college). Hence, t-tests were carried out because t-tests are relevant when two categories of a variable are compared. However in the following hypotheses that are studied, independent variables (IVs) have more than two levels to be compared. For example, SES had three categories (low, medium and high). Similarly there were 7 categories in religion (Hindu, Muslim, Sikh, Christian, Buddhist, Jain, and any other). The IVs, duration of possession of mobile phone and frequency of mobile phone use, also had more than two categories. Hence a one-way between-subjects Analysis of Variance (ANOVA) was performed on each of such variables. The results are as follows.

5.3. 2.1.3 Mobile phone assisted Personal Agency's association with religion:

Alternative Hypothesis: There is a significant difference in the exercise of Personal Agency of mobile phone users of various religions.

Null Hypothesis: There is no significant difference in the exercise of Personal Agency of mobile phone users of various religions.

The researcher compared the exercise of Personal Agency between Hindu, Muslim, Christian, Sikh, Buddhist, Jain and 'any other' categories by performing an ANOVA. Table 5.3a reported the means of each of these categories. The 'any other' category is ignored because it has only two respondents and is a general category. The means of the remaining categories indicate a very minor difference between them. The significance level (p) is greater than 0.05 as reported in table 5.3b.

The data therefore demonstrated that religion did not make a significant difference on mobile phone assisted Personal Agency,
[F(6,257) = .734, p = **.623**]

Hence the null hypothesis was accepted. It was concluded that religion did not make a significant difference on the exercise of Personal Agency of mobile phone users.

	N	Mean	Std. Deviation
Hindu	162	3.2808	.51014
Islamic	13	3.3103	.48389
Sikh	10	3.4433	.35592
Christian	59	3.3780	.50121
Buddhist	9	3.3222	.34359
Jain	9	3.1741	.49910
Any other	2	2.9000	.23570
Total	264	3.3050	.49522

Table 5.3a Independent samples test comparing Personal Agency of mobile users between different religions

Mobile Phone Personal Agency (Average)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.086	6	.181	.734	.623
Within Groups	63.412	257	.247		
Total	64.498	263			

Table 5.3b ANOVA: Mobile Phone Assisted Personal Agency and Religion

5.3. 2.1.4 Mobile phone assisted Personal Agency's association with SES:

Alternative Hypothesis: There is a significant difference in the exercise of Personal Agency of mobile phone users of different socio-economic status.

Null Hypothesis: There is no significant difference in the exercise of Personal Agency of mobile phone users of different socio-economic status.

This hypothesis investigated the difference that socio-economic status made on the exercise of Personal Agency of the mobile phone user. Hence the researcher compared the exercise of Personal Agency between low, medium, and high SES by performing an ANOVA. Dividing SES into 3 segments as low, medium and

high is supported in literature (Fernandes 2006). Table 5.4a reported the means of each of these categories. It demonstrated a considerable difference in the mean values of low SES and the others. Table 5.4b indicated that the difference was significant ($p < 0.5$).

Mobile Phone Personal Agency

	N	Mean	Std. Deviation
Low (upto 15)	80	3.1617	.60518
Medium (16-22)	89	3.3607	.47134
High (above 22)	95	3.3735	.38106
Total	264	3.3050	.49522

Table 5.4a: ANOVA: Mobile phone assisted Personal Agency and SES

Mobile Phone Personal Agency

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.365	2	1.183	4.968	.008
Within Groups	62.133	261	.238		
Total	64.498	263			

Table 5.4b: ANOVA: Mobile phone assisted Personal Agency and SES

Hence the data demonstrated that the level of Personal Agency of mobile phone users differed significantly between the different SES, [F(2,261) = 4.96, $p < .05$].

Since the result was significant at less than 0.05, indicating a low likelihood that this result could happen by chance, the null hypothesis was rejected. Thus the result shows that SES made a significant difference in the exercise of Personal Agency of mobile phone users. This result was relevant because mobile phone use is closely related to the availability of financial resources. Higher middle class are known for their higher spending power. Hence young people belonging to this class were more likely to get adequate financial resources from their parents to use mobile phones.

However a significant F value from an ANOVA demonstrates merely that there is at least one significant difference among all of the groups. It does not inform the researcher whether there are other significant differences. To determine which groups were significantly different from each other, following a significant F, a post hoc test was done. There are numerous post hoc test alternatives from which to choose. One such post hoc test is Scheffe (1953 cited in Gliner and Morgan 2009).

When a post hoc analysis was done on the data using the Scheffé post hoc criterion for significance, the results, as indicated in table 5.4c, demonstrated that the difference in the means of the exercise of Personal Agency of mobile phone users was significant between low and medium SES ($p < 0.05$), and low and high SES ($p < 0.05$). Table 5.4c also indicated that there was no significant difference between medium and high SES ($p > 0.05$). Hence the categories medium and high SES can be merged as table 5.4d further confirmed.

Scheffe

(I) SES category	(J) SES category	Mean Difference (I-J)	Sig.
Low (upto 15)	Medium (16-22)	-.19901(*)	.031
	High (above 22)	-.21184(*)	.018
Medium (16-22)	low (upto 15)	.19901(*)	.031
	High (above 22)	-.01283	.984
High (above 22)	low (upto 15)	.21184(*)	.018
	Medium (16-22)	.01283	.984

* The mean difference is significant at the .05 level.

Table 5.4c Scheffe's Post Hoc Test

Scheffe

SES category	N	Subset for alpha = .05	
		1	2
Low (upto 15)	80	3.1617	
Medium (16-22)	89		3.3607
High (above 22)	95		3.3735
Sig.		1.000	.985

Means for groups in homogeneous subsets are displayed.

Table 5.4d: Homogeneous Subsets

Table 5.4d is a handy summary of the major differences among the means. It organized the means of the three groups into "homogeneous subsets" where subsets of means that do not differ from each other at $p < .05$ go together, and subsets that do differ, go into separate columns. Therefore, groups that don't show up in the same column are significantly different from each other at $p < .05$. It was indicated in table 5.4d that "low" category is different from "medium" and "high" categories. This indicates that medium and high SES categories were not significantly different from each other but they are significantly different from low SES.

Hence, these results demonstrated that this sample can be divided into two categories of SES namely, those with low SES (upto 15) and those with high SES (above 15). The division of SES in two categories, namely the lower middle class and the upper middle class is also supported in literature (Joshi et. al 2009). Thus the data demonstrated that SES made a significant difference in the exercise of Personal Agency of mobile phone users in this sample.

5.3. 2.1.5 Comparison of the exercise of Personal Agency with duration of mobile phone possession:

Alternative Hypothesis: The length of possession of mobile phones made a significant difference on the exercise of Personal Agency of mobile phone users.

Null Hypothesis: The length of possession of mobile phones made a no significant difference on the exercise of Personal Agency of mobile phone users.

This hypothesis investigated the difference that duration of mobile phone possession made on the exercise of Personal Agency of mobile phone users. For this, the researcher compared the level of the exercise of Personal Agency between the different durations of mobile phone possession by performing an ANOVA. Table 5.5a demonstrated that the means of each of these categories was not considerably different. This was confirmed by table 5.5b that the difference of the mean values was not significant ($p = 0.05$).

Therefore, the data demonstrated that the exercise of Personal Agency of mobile phone users did not differ significantly between the different SES,

[$F(4,259) = .579, p=.05$]. Hence, the null hypothesis was accepted.

Mobile Phone Personal Agency (Average)

Duration of possession	N	Mean	Std. Deviation
Less than 6 months	29	3.2586	.47955
6 months to 1 year	61	3.1770	.58429
More than 1 year to 2 years	67	3.3107	.51707
More than 2 years to 3 years	43	3.3008	.43876
More than 3 years	64	3.4448	.38892
Total	264	3.3050	.49522

Table 5.5a: Descriptives - Mobile phone assisted Personal Agency and duration of mobile phone possession

Mobile Phone Personal Agency (Average)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.315	4	.579	2.410	.050
Within Groups	62.184	259	.240		
Total	64.498	263			

Table 5.5b: ANOVA: Mobile phone assisted Personal Agency and duration of mobile phone possession

5.3. 2.1.6 Mobile phone assisted Personal Agency’s association with frequency of use of mobile phone:

Alternative Hypothesis: There is a significant difference in the exercise of Personal Agency of mobile phone users of different frequencies of mobile phone use.

Null Hypothesis: There is a no significant difference in the exercise of Personal Agency of mobile phone users of different frequencies of mobile phone use.

This hypothesis investigated the difference in the Means of the exercise of Personal Agency in relation to the frequency of mobile phone use. Hence the researcher compared the exercise of Personal Agency between the various categories of frequencies of mobile phone use, by performing an ANOVA. Table 5.6a reported the means of each of these categories. It demonstrated a gradual difference in the mean values. The table 5.6b indicated that the difference was significant ($p < 0.5$).

Therefore, the data demonstrated that the level of Personal Agency of mobile phone users differed significantly between the different frequencies of mobile phone use, [$F(5,258) = 11.092, p < .05$].

The result was significant at $p < 0.05$, indicating a low likelihood that this result could happen by chance. Hence the null hypothesis was rejected.

Descriptives

	N	Mean	Std. Deviation
Never (not using at all)	3	2.6889	.94301
Rarely (once a week)	22	2.7136	.65155
Sometimes (2 times a week)	26	3.2974	.41803
Often (3/4 times a week)	31	3.2860	.48272
Very often (at least once a day)	46	3.2500	.45001
Frequently (more than once a day)	136	3.4386	.40296
Total	264	3.3050	.49522

Table 5.6a Descriptives: Mobile phone assisted Personal Agency and frequency of mobile phone use

Mobile Phone Personal Agency (Average)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.412	5	2.282	11.092	.000
Within Groups	53.086	258	.206		
Total	64.498	263			

Table 5.6b: ANOVA: Mobile phone assisted Personal Agency and frequency of mobile phone use

Dependent Variable: Mobile Phone Personal Agency (Average)
Scheffe

(I) On an average how often do you use your Mp	(J) On an average how often do you use your Mp	Mean Difference (I-J)	Std. Error	Sig.
Never (not using at all)	Rarely (once a week)	-.02475	.27918	1.000
	Sometimes (2 times a week)	-.60855	.27659	.438
	Often (3/4 times a week)	-.59713	.27427	.450
	Very often (at least once a day)	-.56111	.27030	.507
	Frequently (more than once a day)	-.74971	.26476	.159
Rarely (once a week)	Never (not using at all)	.02475	.27918	1.000
	Sometimes (2 times a week)	-.58380(*)	.13140	.002
	Often (3/4 times a week)	-.57239(*)	.12645	.001
	Very often (at least once a day)	-.53636(*)	.11758	.001
	Frequently (more than once a day)	-.72497(*)	.10424	.000
Sometimes (2 times a week)	Never (not using at all)	.60855	.27659	.438
	Rarely (once a week)	.58380(*)	.13140	.002
	Often (3/4 times a week)	.01141	.12063	1.000
	Very often (at least once a day)	.04744	.11130	.999
	Frequently (more than once a day)	-.14117	.09709	.833
Often (3/4 times a week)	Never (not using at all)	.59713	.27427	.450
	Rarely (once a week)	.57239(*)	.12645	.001
	Sometimes (2 times a week)	-.01141	.12063	1.000
	Very often (at least once a day)	.03602	.10541	1.000
	Frequently (more than once a day)	-.15258	.09028	.722
Very often (at least once a day)	Never (not using at all)	.56111	.27030	.507
	Rarely (once a week)	.53636(*)	.11758	.001
	Sometimes (2 times a week)	-.04744	.11130	.999
	Often (3/4 times a week)	-.03602	.10541	1.000
	Frequently (more than once a day)	-.18860	.07737	.315
Frequently (more than once a day)	Never (not using at all)	.74971	.26476	.159
	Rarely (once a week)	.72497(*)	.10424	.000
	Sometimes (2 times a week)	.14117	.09709	.833
	Often (3/4 times a week)	.15258	.09028	.722
	Very often (at least once a day)	.18860	.07737	.315

* The mean difference is significant at the .05 level.

Table 5.6c Post Hoc tests: Mobile phone assisted Personal Agency and frequency of mobile phone use

To determine which groups were significantly different from each other, following a significant F, a post hoc test was done. Scheffe's (1953 cited in Gliner and Morgan 2009) post hoc test was performed as demonstrated in table 5.6c. Employing the Scheffe post hoc test, a significant difference was observed between rarely and sometimes ($p = .002$), between rarely and often ($p = .001$), between rarely and very often ($p = .001$), and between rarely and frequently ($p = .000$). There was no significant difference between never and rarely ($p = 1$), or sometimes and often ($p = 1$), or often and very often ($p = 1$).

Mobile Phone Personal Agency (Average)
Scheffe

On an average how often do you use your Mp	N	Subset for alpha = .05		
		1	2	3
Never (not using at all)	3	2.6889		
Rarely (once a week)	22	2.7136	2.7136	
Very often (at least once a day)	46	3.2500	3.2500	3.2500
Often (3/4 times a week)	31	3.2860	3.2860	3.2860
Sometimes (2 times a week)	26		3.2974	3.2974
Frequently (more than once a day)	136			3.4386
Sig.		.058	.069	.955

Means for groups in homogeneous subsets are displayed.

Table 5.6d Homogeneous Subsets

The results in table 5.6c suggest that the categories Never and Rarely can be merged into a single category called Rarely. The categories sometimes, often and very often can be merged into another category called Sometimes. The category frequently can be maintained as it stands. This was confirmed in table 5.6d which indicates the homogeneous subsets by grouping them into one group.

Hence it can be concluded that the exercise of Personal Agency co-varies with Frequency of mobile phone use. It is likely that young people who use mobile phones more frequently may also exhibit a higher level of Personal Agency.

5.3.3 Conclusion:

Thus, considering the results of all the above hypotheses suggests four important conclusions from this sample:

- (a) Young people who used mobile phones frequently were likely to exercise a higher level of Personal Agency than those who used it rarely.
- (b) The exercise of Personal Agency co-varies with SES, with those who belong to higher middle class SES are likely to exercise a higher level of the exercise of Personal Agency than those who belong to the lower middle class SES.
- (c) The length of possession of mobile phones does not have a significant influence on their Personal Agency.
- (d) The exercise of Personal Agency dose not significantly co-vary with variables such as gender, religion, and educational qualification.

On summarizing, the result of the previous hypotheses, the researcher noted that two variables such as SES and frequency of use had a significant effect on the exercise of Personal Agency of mobile phone users. Hence, it was pertinent to demonstrate the interaction between them. Therefore, the researcher carried out statistical tests to investigate the effect of the interaction of these two variables on the exercise of Personal Agency of mobile phone users. Hence the next research question was addressed:

- (ii) How do the demographic factors that significantly affect the exercise of Personal Agency of mobile phone users, interact with each other, to impact on the exercise of Personal Agency of the mobile phone user?

5.3.4 Effect of interaction of significant variables on Personal Agency of mobile phone users:

In order to study the effect of interaction of the variables that were significantly related to the exercise of Personal Agency of mobile phone users, the research question given above was converted into a hypothesis.

Alternative Hypothesis: Interaction between SES and frequency of mobile phone has a significant effect on the exercise of Personal Agency of the mobile phone user.

Null Hypothesis: Interaction between SES and frequency of mobile phone does not have a significant effect on the perception of Personal Agency of mobile phone user.

A univariate ANOVA was performed. The summary result is given in table 5.7. It indicates that the exercise of Personal Agency does not significantly co-vary with the interaction between the SES of mobile phone users and the Frequency of mobile phone use.

[F(8,248) = .669, p = **.719**], partial $\eta^2 = .021$]

Hence the null hypothesis is accepted. However the frequency of mobile phone use has a significance value of p= .000 which confirms that the exercise of Personal Agency significantly co-varies with the Frequency of mobile phone use.

[F(5,248) = 6.92, p = **.000**], partial $\eta^2 = .123$]

Having statistically tested the two research questions of the difference that demographic variables made on the exercise of Personal Agency of mobile phone users in the sample of this study, and the effect of the interaction of the frequency of mobile phone use and SES of the mobile phone users on the exercise of Personal Agency, and further demonstrating that the frequency of mobile phone use was the most significant variable associated with the exercise of Personal Agency, the researcher tested another independent variable namely 'boundaries of mobile phone use' that was pertinently related to Personal Agency. Furthermore, this variable played an important role in the Indian context. Evans (2007) also noted that the exercise of Personal Agency is bounded by situational and contextual factors. Therefore the researcher had formed a subscale of items that reflected boundaries to mobile phone use. The researcher believed that if the exercise of Personal Agency was related to mobile phone use and mobile phone use was restricted by certain factors, then the exercise of Personal Agency will be affected too. Hence the researcher formulated the research question to study this variable.

Dependent Variable: Mobile Phone Personal Agency

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	12.724(a)	15	.848	4.063	.000	.197
Intercept	908.766	1	908.766	4352.985	.000	.946
SEScat	.271	2	.135	.648	.524	.005
Freq	7.233	5	1.447	6.929	.000	.123
SEScat * Freq	1.117	8	.140	.669	.719	.021
Error	51.775	248	.209			
Total	2948.155	264				
Corrected Total	64.498	263				

a R Squared = .197 (Adjusted R Squared = .149)

Table 5.7 Univariate ANOVA: Interaction between Frequency and SES

5.3.5 Boundaries of mobile phone use

The research question was drawn to study the relationship of restrictions or boundaries of mobile phone use with the exercise of Personal Agency of mobile phone users. Hence the following research question was examined:

- (iv) What is the relationship between the exercise of Personal Agency and boundaries faced in mobile phone use?

A test of correlation provided a measure of the strength, significance and direction of such a relationship. It is to be noted that correlation does not imply causation. In any correlation, there could be a third variable that may explain the association between the two variables that are measured. Pearson's *r* calculates the correlation coefficients for parametric data. The strength of correlation is indicated by the value of the correlation which varies between 1 and 0. As a rule of thumb, *r* values of 0 to .2 are generally considered weak, .3 to .6 moderate, and .7 to 1 strong (Brace et al. 2009).

Furthermore the scattergram is also a useful graphic tool for checking for a correlation and also for checking that the relationship is linear (ibid.). It is a descriptive statistic that

illustrates the data. It plots the variables considered in the graph and the line running through the data points is called the regression line which represents the ‘best fit’ of a straight line to the data points. In a scenario when one variable increases in value as the other variable increases in value, the correlation is called a positive correlation. The closer the points are to being on the line itself, the stronger the correlation. It can also be found out whether or not this association is significant with an inferential statistical test of correlation. The strength of the correlation alone is not necessarily an indication of whether it is an important correlation. Hence, normally the significance value should also be considered. With small sample sizes this is crucial, as strong correlations may easily occur by chance in the data.

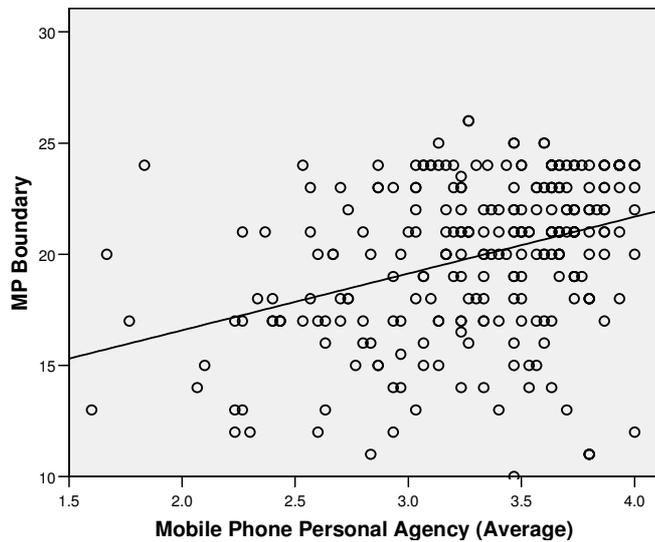


Figure 5.3 Correlation between Mobile Phone Assisted Personal Agency and Boundaries encountered in mobile phone use

To obtain these correlations, the researcher used a scattergram. Figure 5.3 is a scattergram which indicates that as the exercise of Personal Agency of a mobile phone user increased (indicated on the x axis), the boundaries due to mobile phone use (indicated on y axis) also increased. It is a positive correlation. The scattergram, indicated in figure 5.3, also shows that the data points are reasonably well distributed along the regression line, in a linear relationship.

The significance and strength (r) of this association are indicated in table 5.8. It indicates the correlation between the exercise of Personal Agency of mobile phone users and the boundaries encountered by mobile phone users in the use of mobile phone.

		Mobile Phone Personal Agency (Average)
Boundary	Pearson Correlation	.359(**)
	Sig. (1-tailed)	.000
	N	264

** Correlation is significant at the 0.01 level (1-tailed).

Table 5.8: Correlation between Mobile Phone assisted Personal Agency and Boundaries perceived by mobile phone users

Referring to table 5.8, the correlation between boundaries encountered and the exercise of Personal Agency, $r = .359$, which is a moderate correlation. Its p value is $.000$. Hence this correlation is significant. Therefore, from table 5.8, the researcher concluded that there was a significant positive correlation between the exercise of Personal Agency and the boundedness encountered in mobile phone use ($r = .359$, $N = 264$, $p = .000$, one-tailed).

It also demonstrated that boundedness increased as the exercise of Personal Agency of the mobile phone user increased. This was in line with the growing concern among the older generations (Castells et al. 2007) about the emergence of this new culture of constant attachment to the mobile phone among young people which, they fear, weakens children's ties with family and other social institutions (Sefton-Green 1998 cited in Castells et al. 2007) which is important for their personal and social wellbeing.

In summary, having demonstrated the significance of the frequency of mobile phone use to exercise of Personal Agency of the mobile phone user, and the positive correlation of the exercise of Personal Agency of mobile phone users with boundedness encountered by them in mobile phone use, the researcher then focused on the quantitative data collected from non-users of mobile phone. The aim was to validate the questionnaire for mobile phone non-users that measured their exercise of Personal Agency and which the

researcher named as 'Personal Agency of Mobile Phone Non-User Questionnaire' (PAoMPNUQ). The validation was done by the use of Cronbach's alpha for reliability. This was done primarily to compare the exercise of Personal Agency of mobile phone users and non-users and demonstrate the difference statistically. This was the final objective of the research. To this end the researcher first elaborated the demographic data of the non-users sample from whom the quantitative data was collected.

5.4 Non-Users:

5.4.1 Demographic data on non-users

As stated earlier, a total of 311 respondents completed the entire survey of which 85 percent were mobile phone users and 15 percent were non-users. The data also indicated that, among non-users, 60 percent did not borrow mobile phones for use where as 40 percent borrowed it for use. The fact that 40 percent of the non-users still borrowed mobile phones for use indicated that they perceived that, when required, a mobile phone can be a useful instrument to fulfil a purpose.

5.4.1.1 Frequency of borrowing:

Among those who borrowed the mobile phone, 5 percent never used it, 59 percent borrowed it rarely (once a week), 26 percent borrowed it sometimes (two times a week), 5 percent borrowed it very often (at least once a day), and 5 percent borrowed it frequently (more than once a day). Figure 5.3 indicated that the sample of non-users that was surveyed rarely (once a week) borrowed the mobile phone for use predominantly. Some of the reasons for it are elaborated in the interview data as will be seen later.

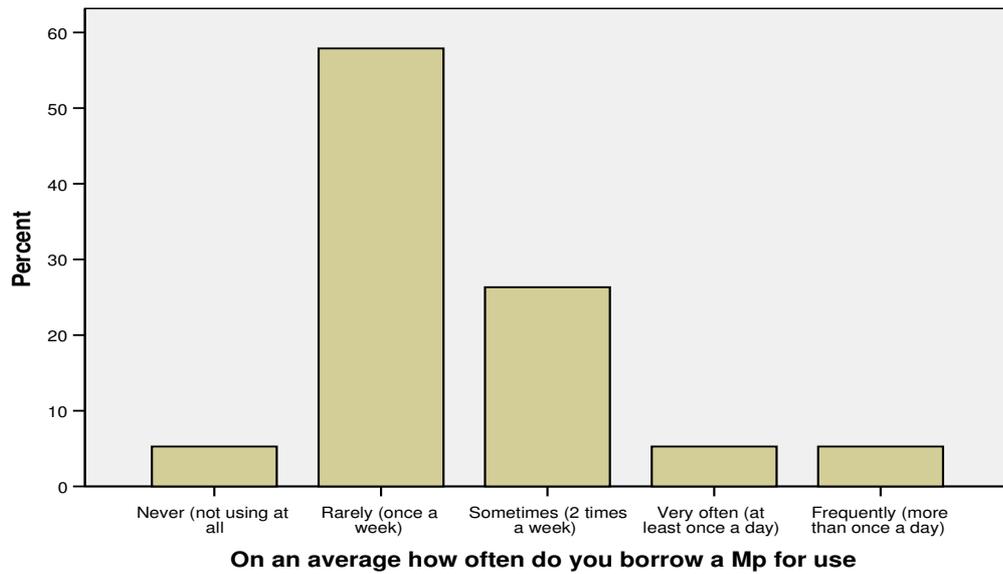


Figure 5.4 Frequency of mobile phone borrowing

5.4.1.2 People from whom mobile phone was borrowed:

The data indicated that, of those who borrowed mobile phones for use, 25 percent borrowed them from parents and 15 percent borrowed them from friends.

In summary, table 5.9 indicated that in the sample that filled out the PAoMPUQ and PAoMPNUQ, 85 percent possessed as well as used mobile phones, 6 percent did not possess but borrowed mobile phones to use, and 9 percent neither borrowed them nor used them. However it is to be noted that those who borrowed the mobile phones for use, did not have control over the use of the instrument, since they borrowed them from their parents or friends. Such use was restricted and dependent on the others as indicated in the interview data.

The breakdown of 47 non-users in the sample revealed that 79 percent of them wanted to buy a phone later whereas 21 percent did not want to do so. This result was in line with 78 percent among the users who desired to buy a mobile phone before they actually

acquired it. This indicated an aspiration for mobile phone possession and use in this sample.

		Frequency	Percent
Non-Users	Did not borrow	28	9.0
	Borrowed for use	19	6.1
Total Non-Users		47	15.1
Total Users		264	84.9
Total respondents		311	100.0

Table 5.9 Total sample distribution

5.4.1.3 Desire to acquire mobile phone:

5.4.2 Difference in the exercise of Personal Agency

On exploring the demographics of the mobile phone non-users, the researcher ventured to test if the exercise of Personal Agency is higher in mobile phone users than in mobile phone non-users. To this end the following research question was drawn up and the hypothesis was formulated

(iv) Is there a significant difference in the exercise of Personal Agency between mobile phone users and non-users?

Alternative Hypothesis: The exercise of Personal Agency in a mobile phone user is higher than the exercise of Personal Agency in a non-user.

Null Hypothesis: The exercise of Personal Agency in a mobile phone user is not higher than the exercise of Personal Agency in a non-user.

This hypothesis was addressed by first validating the PAoMPNUS. It was done by testing the three factors of the questionnaire for reliability, and comparing the average

means of the exercise of Personal Agency derived from mobile phone users and non-users measured from both the questionnaires.

The researcher first analyzed the data collected from non-users of mobile phones and tested the reliability of each factor.

5.4.2.1 Reliability of the three factors on mobile phone non-users:

The researcher carried out a reliability test on each of the three factors and on the entire scale. This was to ensure that the PAoMPNUS was reliable. Table 5.10 indicated that the Cronbach's alpha for the first factor, namely 'Contactability' of the mobile phone non-users was 0.69 which was acceptable. The researcher defined 'contactability' as the ability of the individual to contact and be available for contact.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.689	.683	5

Table 5.10: Reliability Statistics for 'contactability' of PAoMPNUS

Table 5.11 indicated that the Cronbach's alpha for the second factor namely, 'Organizability' was 0.66 which was acceptable because it was approaching the value of 0.70. 'Organizability' was defined by the researcher as the ability to organize oneself.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.659	.657	5

Table 5.11: Reliability Statistics for 'organizability' of PAoMPNUS

Table 5.12 indicated that the reliability of the third factor namely 'de-restriction' was 0.48. De-restriction is defined as the ability of the individual to circumvent restriction. The researcher believed that the reason for the low reliability score for this factor was

caused by the fact that there were only two items in it as well as few respondents in the sample. However the researcher used it in the subscale because it was relevant to the concept of mobile phone use as well as Personal Agency and considered important in literature pertaining to mobile phone, Personal Agency as well as youth.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.477	.477	2

Table 5.12: Reliability Statistics‘De-restriction’of PAoMPNUS

Table 5.13 indicates that the reliability of the complete PAoMPNUQ was 0.79, which was high. Thus the entire PAoMPNU scale was tested and found reliable.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.789	.788	12

Table 5.13: Reliability Statistics of PAoMPNUS

However, as indicated earlier, the results can be enhanced by a larger sample size. The sample size was small because it was difficult to collect many respondents within the time frame that the researcher had at his disposal for data collection. However the scale was reliable and it was useful in the analysis in order to compare the data of users and non-users.

Similar to the procedure carried out for PAoMPUS where the number of items in each factor was unequal, it was deemed erroneous to sum up the scores in case of PAoMPNUS to measure total exercise of Personal Agency. Thus the researcher derived the mean of the exercise of Personal Agency of mobile phone non-users by calculating the mean of each factor. These mean scores were used for analysis. The researcher did not consider it necessary to test the relationship of the demographical variables on the exercise of Personal Agency of non-users because the sample number was small.

Additionally, not testing them was not considered to be undermining any results of the study.

Furthermore, table 5.14 indicated correlations between PAoMPNUS and its three factors. The correlation between ‘contactability’ (factor 1) and PAoMPNU, $r = .780$, which is a good correlation. It’s p value is .000. There was a significant positive correlation PAoMPNU and ‘contactability’, ($r = .780$, $N = 47$, $p = .000$, one-tailed).

		Non-users Personal Agency (Average)
Contactability of MPNU (Average)	Pearson Correlation	.780(**)
	Sig. (1-tailed)	.000
	N	47
Organizability of MPNU (Average)	Pearson Correlation	.785(**)
	Sig. (1-tailed)	.000
	N	47
De-restriction of MPNU (Average)	Pearson Correlation	.809(**)
	Sig. (1-tailed)	.000
	N	47

** Correlation is significant at the 0.01 level (1-tailed).

Table 5.14: **Correlations** – factor of PAoMPNU

The scattergram (Figure 5.5) shows that the data points are reasonably well distributed along the regression line, in a linear relationship with no outliers.

The correlation between organizability (factor 2 shown below) and PAoMPNU, $r = .785$, which is a good correlation. It’s p value is .000. Hence this correlation is highly significant. From table 5.15, there was a significant positive correlation between PANU and organizability, ($r = .785$, $N = 47$, $p = .000$, one-tailed). The scattergram (Figure 5.6) shows that the data points are reasonably well distributed along the regression line, in a linear relationship with no outliers. It is an acceptable correlation.

The correlation between ‘de-restriction’ (factor 3 shown below) of users and non-users was tested, $r = .809$, which is a good correlation. It’s p value is .000. Hence this

correlation is highly significant. Hence from the table 5.14 we can conclude that there was a significant positive correlation between de-restriction and Personal Agency of mobile phone non-users, ($r = .809$, $N = 47$, $p = .000$, one-tailed). The scattergram (Figure 5.7) shows that the data points are reasonably well distributed along the regression line, in a linear relationship with no outliers. It is an acceptable correlation.

Hence the three factors were highly correlated to the overall scale PAoMPNU for non-users.

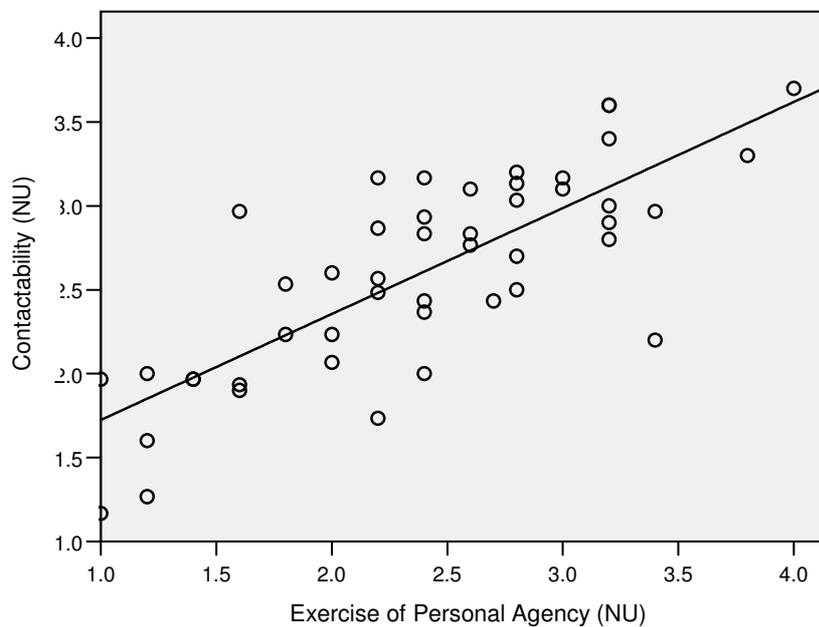


Figure 5.5: Scattergram of correlation between PAoMPNU and Contactability

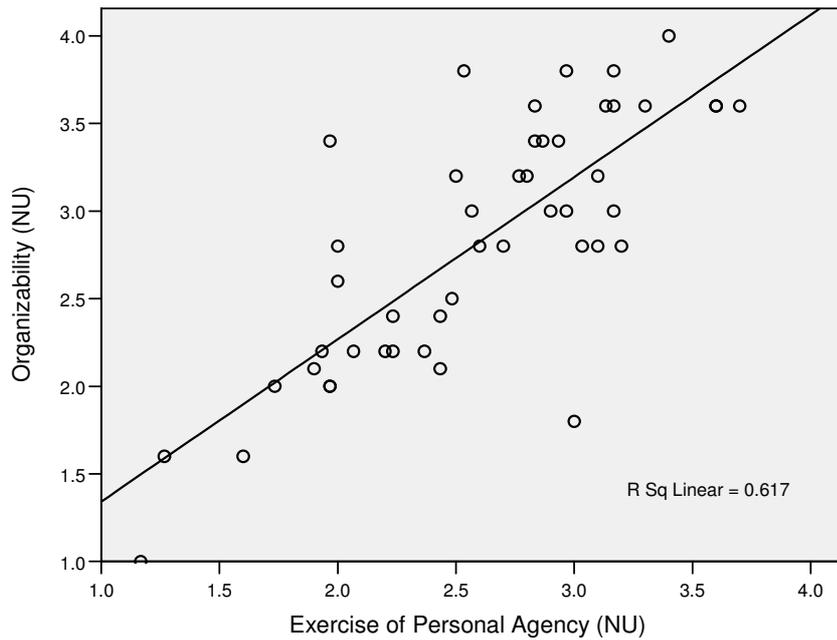


Figure 5.6: Scattergram of correlation between PAoMPNU and Organizability

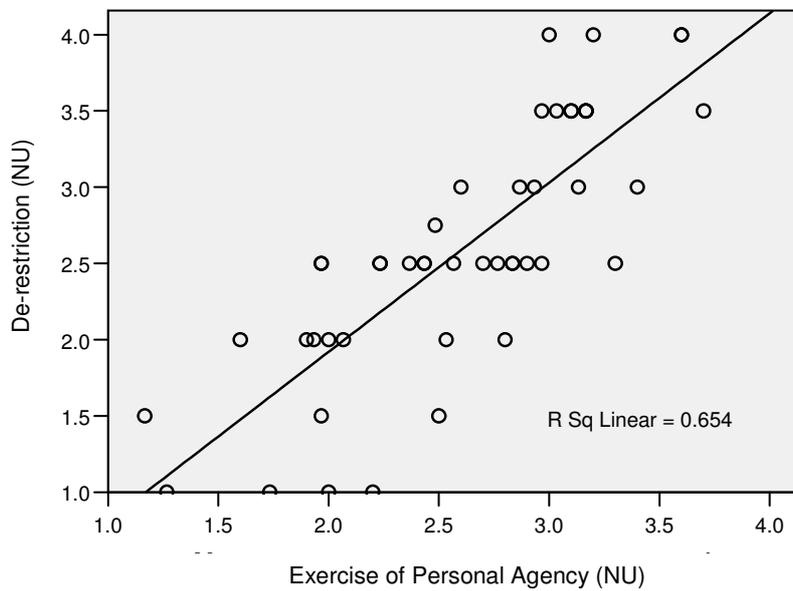


Figure 5.7: Scattergram of correlation between PAoMPNU and de-restriction

On testing the correlation between the three factors and the entire PAoMPNUS and finding them positively correlated with each other, the researcher performed a t-test on

the scores of the three factors between users and non-users to test the hypothesis formulated earlier, the null hypothesis being: the exercise of Personal Agency in a mobile phone user is not higher than the exercise of Personal Agency in a non-user.

Table 5.15a indicated that mobile phone users (mean 3.50) exercised higher ‘contactability’ than non-users (mean 2.39). An independent t-test demonstrated that the difference between exercise of Personal Agency between the user and non-user was significant ($t = -9.732$, $df = 56.130$, $p = .000$, 2-tailed).

Table 5.15a also indicates that mobile phone users (mean 3.1) exercised higher ‘organizability’ than mobile phone non-users (mean 2.82). However, an independent t-test showed that the difference between user and non-user was significant at 90% confidence level ($t = -1.722$, $df = 309$, $p = .086$, 2-tailed).

Table 5.15a further indicates that mobile phone users (mean 3.39) exercised higher ‘de-restriction’ than mobile phone non-users (mean 2.59). An independent t-test showed that the difference between users and non-users was significant ($t = -6.335$, $df = 55.106$, $p = .000$, 2-tailed).

	Mobile Phone User/Nonuser	N	Mean	Std. Deviation
‘Contactability’	Nonuser	47	2.3936	.74670
	User	264	3.5072	.57540
‘Organizability’	Nonuser	47	2.8277	.71314
	User	264	3.0148	.68173
‘De-restriction’	Nonuser	47	2.5904	.82985
	User	264	3.3930	.60743
Personal Agency	Nonuser	47	2.6039	.60462
	User	264	3.3050	.49522

Table 5.15a: **Group Statistics:** t-test – difference of means between PAoMPU and PAoMPNU

Lastly, mobile phone users (mean 3.30) had a higher exercise of Personal Agency than mobile phone non-users (mean 2.60). An independent t-test showed that the difference in the exercise of Personal Agency between users and non-users was significant ($t = -$

7.513, $df = 57.500$, $p = .000$, 2-tailed).

	t-test for Equality of Means		
	T	Df	Sig. (2-tailed)
Score Contactability	-9.723	56.130	.000
Score Organizability	-1.722	309	.086
Score De-restriction Skills	-6.335	55.106	.000
Score Personal Agency	-7.513	57.500	.000

Table 5.15b: Independent Samples Test between PAoMPU and PAoMPNU

5.5 Conclusion:

This chapter analyzed the quantitative data that was collected from users and non-users of mobile phones in Mumbai through the PAoMPUQ and PAoMPNUQ. The quantitative research questions were addressed. It was demonstrated that the frequency of mobile phone use influenced the exercise of Personal Agency among the mobile phone users in this sample. The data indicated that as frequency of mobile phone use increased, the exercise of Personal Agency in the users increased. It was also demonstrated that the boundedness that mobile phone users experienced was positively correlated with the exercise of Personal Agency. Thus as boundedness increased the exercise of Personal Agency also increased. Furthermore it was demonstrated that difference in the exercise of Personal Agency of mobile phone users and non-users was significant and the data showed a higher level of the Personal Agency among users than non-users.

This section, consisting of two chapters, addressed the quantitative research questions. It demonstrated the process undertaken to develop the questionnaire and validate it in various ways to ensure that the instrument would be reliable and sound. This quantitative instrument was used to collect the data and answer the research questions of this study. The next section, consisting of two chapters, describes the process that was used to gather and analyse the qualitative data and answer the qualitative research questions of the study.

Section III

Chapter 6

Chapter 7

CHAPTER 6

Phase I - Exploratory Phase:

Qualitative Instrument Development and Data Collection

6.1 Introduction:

Being a Mixed Methods research study, this research uses both, qualitative and quantitative methods of data collection and analysis and combines them. Combining these methods of data collection provides more comprehensive evidence for studying a research problem (Creswell and Plano Clark 2007). As seen in the earlier section, Personal Agency is not consistently conceptualized in relation to the phenomenon of mobile phone use by adolescents. Hence in the first phase of the current study, the empirical model of agency (Hitlin and Elder Jr. 2007a) was used to define the components of agency namely Self-Efficacy, Optimism, Planfulness, Social Support and Autonomy. A questionnaire (PAoMПУQ and PAoMPNUQ) was developed and data was collected from mobile phone users and non-users to assess the difference in the level of Personal Agency that may be attributed to the use of mobile phones by adolescents. The sample of users and non-users of mobile phones consisted of students in the age group of 16 to 19 years who were in their 11th and 13th year of formal education. This age bracket was chosen because the researcher determined that a range of opinions about mobile phone use for Personal Agency will be covered by selecting young people who fell at the extreme ends of this age group.

In the same phase, the manner in which Personal Agency is exercised by using the mobile phone and its contextual and cultural ramifications was studied by collecting qualitative data from interviews and focus group discussions. The quantitative results are used to determine the level of Personal Agency exercised by mobile phone use whereas the qualitative results delve deeper into the nature and manner in which Personal Agency

is exercised by mobile phone use, its influence on the typical Indian cultural value of obedience to parents, and educational practices.

While the earlier section showed how the survey data was collected as part of the quantitative inquiry, this section discusses how the interview and focus group data was collected as part of the qualitative inquiry. Both the qualitative and quantitative data were collected concurrently i.e. about the same time period. These data from the interviews, focus group discussions and survey were then converged in the interpretation stage which will be elaborated later.

6.2 Research Questions

Qualitative method aims at gaining an understanding of the nature and form of a phenomenon, at unpacking meanings, at developing explanations or at generating ideas, concepts and theories (Ritchie et al. 2003). The qualitative data gathered in the current study was aimed at investigating the following qualitative research questions that were stated in the beginning of this study namely:

- (i) What are the capabilities that mobile phone use promotes in individuals, that assist them in exercising Personal Agency in the events that occur in their daily lives?
- (ii) What are the contextual and socio-cultural factors that limit the use of mobile phone by young people?

Unlike surveys which reflect positivist epistemology, the qualitative interview tends to be more constructionist. In this phase of the current study, interviews and focus groups discussions were conducted with adolescents, parents and teachers to explore the nature of the capabilities enhanced in young people who use mobile phones and the factors that limit their use of mobile phones.

6.3 Qualitative Interviews Framework:

6.3.1 Definition:

Interviews are widely used in qualitative research. A leading model of interviewing that is typical of survey research conceives of an interview as a face-to-face conversation with a purpose between two unacquainted individuals, one the interviewer and the other the interviewee or respondent (Gubrium and Holstein 2001). Much of conventional methodological wisdom bearing on this model is built on this distinction and largely centres on the role of the interviewer, rather than on the respondent which is taken for granted. The interviewer aims for neutrality and objectivity and, equipped with a number of questions, invites responses from the interviewee which are as detailed as is warranted. In the other form of interviewing such as qualitative interviewing, the nuances of understanding and depth of experience are especially important. Hence in the semi-structured interviewing, which is a form of qualitative interviewing, the rules or expectations for the behaviour of the interviewer are relaxed. The current study uses qualitative interviewing.

Qualitative interviews are:

repeated face to face encounters between researcher and informants directed towards understanding informants' perspectives on their lives, experiences and situations as expressed in their own words (Gubrium and Holstein 2001, p40).

Qualitative interviewing is collaborative and based on conversation (Warren 2001). It is an interaction aimed at understanding the meaning of respondents' experiences and life worlds (Warren 2001). Though the interviewer prepares a list of predetermined questions, the interviewer in a conversational manner offers participants the opportunity to explore issues they feel are important (Longhurst 2003). As such qualitative interviewing is exploratory, the interviewer has greater freedom to raise a topic, formulate questions, and move in new directions. Furthermore, it is theory driven. The

exchange is designed not so much to collect the facts, as to gather information that meaningfully frames the importance of those facts in the interviewee's life (Gubrium and Holstein 2001). It intends to draw concepts through conversations, and since the interviewer exercises some amount of control on the conversation even though they seem like conversations they are never "mere conversations" (Rapley 2004 p26).

6.3.2 Strengths:

In contrast with surveying in which participants are considered passive conduits for retrieving information, in qualitative interviewing, participants are meaning makers (Warren 2001). Individuals, no matter how insignificant they might seem in the everyday scheme of things, are important elements of the population. Each person has a voice to be heard. People are experts on their own experience and therefore are best able to express how they experienced a particular event or phenomenon (Darlington and Scott 2002). Hence by seeking everyone's opinions, the interview has increasingly democratized experiential information (Gubrium and Holstein 2001).

Furthermore, bearing in mind the overall philosophy of pragmatism used in the current study, the researcher assumed that qualitative interviewing would provide a pragmatic flexibility that would assist him to attend to unanticipated questions that may arise due to the participant's active voice without leaving any issues unaddressed. Hence by affording flexibility (Darlington and Scott 2002), interviews assist the gathering of large amounts of data efficiently. They also assist in following up questions that arise in the course of the interview immediately and instantly. It is for this reason that interviewing is suggested as the most appropriate method of data collection (Backman and Kyngäs 1999).

6.3.3 Challenges:

However qualitative interviewing also has some challenges. First, it should be noted that interviews may tell us what people say they do, while in reality may not disclose what

actually happens. Among other reasons, this is because of a concern on the part of the interviewee with regard to how much the interviewer can be trusted. Therefore he/she may choose not to divulge information he or she considers 'sensitive'. Hence interviews may not provide access to how people actually perform a wide variety of activities (Coffey and Atkinson 1996).

According to Kvale (1996 cited in Ryen, A. 2003, p431):

to get beyond a merely polite conversation or exchange of ideas, the interviewer must establish an atmosphere in which the subject feels safe enough to talk freely.

This requires the ability to develop trust and rapport. This ability to establish relationships with interviewees facilitates valid data collection. For this the interviewer should not be judgmental but eager to listen (McCracken 1988). Second, interviews involve interrogating some one who is a complete stranger and the interviewee in that limited period of time has to give or create opinion under time pressure. Third, the lack of time may also mean gathering of incomplete data. Fourth, the meaning of words may not be understood in the same way by the interviewee and the interviewer and hence may leave a residue of ambiguity no matter how carefully the interviewer works the question (Myers and Newman 2007).

6.3.4 The reluctant respondent:

Although it is nearly a sociological maxim that people like to talk about themselves, the researcher occasionally found in the course of this study that some potential respondents were reluctant to be interviewed. Some individuals were reluctant to grant access, other either raised objections, or expressed doubts when an interview was initially requested, and some others were restrained and unforthcoming even when they agreed to be interviewed. However reluctance of respondents has been noted since the earliest days of recorded reflection on social scientific interviewing (Adler and Adler 2001). The variety

of respondents who may feel some reluctance to be interviewed can be seen as falling along a spectrum of degrees of aversion to revealing aspects of self (Hastings 2000) and/or being part of social scientific research (Adler and Adler 2000). Furthermore, Hastings (2000) observes how Asian Indians strategically avoid self-expression in culturally specific ways. First, ideas that challenge the image of the speaker, hearer or the Indian cultural identity of the participants may prompt self-suppression (Hastings 2000). The large interdependent social network that Hastings (2000) terms as 'gossip network' in India provides the context for understanding the implications of self-disclosure. The gossip network offers a constant reminder of the importance of speaking and acting judiciously. Thus "to prevent extensive damage one must be cautious in speaking" (Hastings 2000, p93). In this study too some participants were reticent in articulating their opinions, or stating their ideas. Second, self-expressions are also avoided due to a powerful omnipresent awareness of social expectations. Third, Chavan (2005) emphasizes that Asian Indians do not feel comfortable when under the spotlight. Furthermore, Yammiyavar et al. (2008) indicates that cultural factors, such as hierarchy, authority, and age (elders), play a definitive role in human interactive communications among Asian Indians. These factors also play a role in data collection sessions. Being observed makes the Indian interviewee uncomfortable and it is perceived to be an 'examination' situation even more than in Western cultures (Chavan 2005). In relation to this, Weikop (2009, online) emphasize a fundamental fault with the interview technique saying:

All the methods ...used in the Western world are based on the premise that participants will find it easy to articulate their thoughts and feel comfortable to say what works for them and what does not (Hall Edward 1977). However, this assumption is heavily loaded in favour of certain cultures and against others.

In such situations, methods and tools in the design process can be adapted to suit different cultures (Chavan 2005). In the current study, the researcher floated prompts (McCracken 1998) or asked interviewees to clarify a term. The researcher used these probing techniques with skill such that it did not lead to bias. The interviewer also

allowed the interviewee to have his/her trusted companion along with them during the interview if they wanted to. However, they were told only to provide company, remain neutral and not to assist the interviewee or answer any questions themselves but allow the interviewee to answer from their own perspective and opinion.

However not all respondents were reluctant. Dean et al. (1969 cited in Adler and Adler 2001) provide a useful guide of the types of respondents at the other end of the reluctance spectrum—those who are not reticent to talk to researchers. In the current study, the researcher found many of those types. Some respondents had bought or received the mobile phone in the proximate past and were willing to open up about their experiences. Others were “old-timers”—those who were using mobile phones for quite some time. These also included parents and teachers who felt secure enough to perceive that they would not be jeopardized by what they said. There were those who were “Frustrated”—who felt deprived without the mobile phone, who had their mobile phone taken away by parents or were unable to top up their credit due to a shortage or lack of pocket money. There were “outsiders” —who were friends of the interviewees and resonated with what the interviewee narrated but had a unique vantage point external to the interview i.e. were not ‘in the hot seat’ of being interviewed themselves. And lastly, there were “Rookies” or naïve informants—who at times did not even realize that they were revealing intimacies of their experiences of mobile phone use.

6.3.5 Bias:

Given that the researcher avoided sharing his opinion on any question but had occasionally floated prompts, in interviews it is essential for researchers to be alert to hear the voices of the interviewees, not their own. Johnson (2001) notes that because researchers don’t necessarily “hear” what their informants tell them, but only what their own intellectual and ethical development has prepared them to hear, they may inadvertently contribute to bias.

On the question of bias, the researcher concurred with Rapley (2004) that knowledge is not conceived as existing in some pure form apart from the circumstances of its production. In the context of an interview, it is a product of an interaction between interviewer and interviewee and hence an interview cannot be biased. However, the researcher was alert to the fact that he should not impose assumptions or rigid directions that might compromise the quality of this co-created data. Furthermore, according to Latham and Millmam (2001) trained interviewers minimize bias and the result is the collection of valid information. In the context of the current study, the pilot interviews conducted in Dublin and Mumbai with a small sample were a suitable hands-on training for the researcher that helped him to be aware of factors that may introduce a bias. Furthermore, the researcher developed interview guides that specified the types of questions that were to be asked of participants in order to minimize interviewer bias.

Also, the researcher's attempt was to be as emotionally distant as possible from the interviewee or the process. However the researcher also determined that although asking, listening, talking and hearing are important, so are feelings as a means of apprehending the social world (Warren 2001). In the light of this the researcher was aware that though he had decided to remain objective yet he felt partisan in some interviews towards the position of young people and other times the position of the parents or teachers but maintained a neutral stance.

6.3.6 Reflection:

The researcher had assumed that the users and non-users of mobile phones would not have much difficulty in expressing themselves, keeping in mind that the media portrayed an image of young people in colleges in India speaking impromptu as soon as the mic is pointed at them for TV news and current affairs programmes. However it was observed that, even though most students 'appeared' cool, relaxed and willing to talk, they often stopped short of reflecting on the phenomenon under study. Johnson (2000 cited in Gubrium and Holstein 2001) states that deep understandings are held by the real-life members or participants in some everyday activity, event or place. He further states that

deep understandings begin with common sense perceptions, explanations and understandings of some lived cultural experience. They aim to explore the contextual boundaries of that experience or perception in order to uncover what is usually hidden from ordinary view of reflection or to penetrate the more reflective understandings about the nature of that experience. Despite experiencing the constant use or non-use of the mobile phone in daily life, several students were initially unable to offer deep reasons for their own and others' attitudes and behaviours. This caused uncertainty in the researcher as to whether the phenomenon under investigation would get the required depth of treatment. Also, participants were purposively selected due to their experience of mobile phone use or non-use in daily life. However, it seemed that they were not necessarily used to reflecting on phenomena. This was another reason for using probing strategies such as encouraging participants to reflect and articulate their opinions, thoughts and experiences regarding the use of mobile phone for Personal Agency and Bounded Agency. On such an observation Denzin (2002) suggests that interpretive researchers hope to understand their subjects better than the subjects understand themselves, to see effects and power where subjects see only emotion and personal meaning.

6.3.7 Gender:

Gender is an important issue that required consideration in qualitative interviewing (Warren 2001). Gender and power disparities may make it difficult for male researchers to conduct interviews with female interviewees in India. Furthermore meeting people of the opposite gender without the presence of any third independent party is considered inappropriate. There are strong conventions about men and women mixing with each other and meeting face to face. Women are often subordinate to their husbands or other males in their family, which may mean that men are required to be present for all interviews. It is also possible that the women may be expected to remain quiet and allow the men to answer questions for them. While this is more striking in rural India, it is not absent in urban India. Though the community's cultural practices have to be respected, women cannot be disqualified as autonomous individuals in the eyes of an

ethical researcher. It is argued by researchers that in the case where it is difficult to recruit women directly for research, third party subjects related to the participants can be involved to recruit them (Reed 2007).

6.3.8 Approaching Interviewees:

Brannen (1988 cited in Adler and Adler 2001) asserts that researchers' success in attaining interviews, especially about sensitive topics, may be influenced by the relationship between researchers and respondents. The Respondents will be more forthcoming, if they believe they will never cross paths with the researchers again. The researcher in the current study did experience that though some interviewees agreed to be interviewed, they felt some amount of embarrassment since they knew the researcher earlier and thought that they would cross paths sometime again. There is an ironic security in detachment (Adler and Adler 2001) which creates anonymity and more likelihood for self-disclosure. However this opinion goes against the understanding of other researchers, who believe that trust is best forged between a researcher and a respondent when a more personal relationship is established (Alder and Alder 2001, Warren 2001, Johnson 2001). Many researchers are now experimenting with various types of collaborative research ventures in which respondents are brought into the planning and analysis phases of the research (Adler and Adler 2001). The expectation is, then, that problems of access are reduced in the process.

After presenting a framework for qualitative interviewing, the study moved into the actual process of qualitative data collection. First the process will be detailed with relation to interviews first with students and second with parents and teachers.

6.4 Interviews with students

The process covered five areas proposed by Creswell and Plano Clark (2007) namely: Sampling procedures, permissions needed, information to be collected, recording the data, and administering data collection.

6.4.1 Sampling Procedures:

The following sections will briefly consider the sampling procedures adopted in the qualitative data collection.

6.4.1.1 Location:

First, the researcher decided on the sites where the interviews would be carried out. Three semi-private colleges spread out in Mumbai city. The colleges were selected on the basis of their location in large pockets of population belonging to the middle class socio-economic category, and by the fact that they were catering largely to the middle class populations which was the target population of the study. Second, it was convenient for the researcher and the participants of the study to meet in the institutions they were studying in or in the vicinity of these institutions. Most of the students were staying close to the educational institution which they attended. According to official estimates as early as 1978, 93 percent of the population in India was served by a tuition free primary school within one kilometre radius (NCERT 1989 cited in Chattopadhyay and Durdhawale 2009). With respect to colleges, from personal experience and documented travel time for teachers (Pandya 2008), the researcher estimated that college students travelled as much as 1 to 2 and half hours a day to commute back and forth between their homes and colleges. The third reason was that colleges and residential settings such as *chawls*⁹ and apartments¹⁰ made it more convenient to meet students in

⁹ According to Kundu and Basu (1999), a *Chawl* is a set of small multi-storied residential units or rental tenements mostly in the nineteenth century, to accommodate industrial workers particularly in Bombay between 1926 and 1956. Described as "inner city, run-down, walk ups", these one-room tenements with a cooking place and shared common lavatories were provided and meant to house mostly single men for nominal rents. With consolidation of male migrants in the city, their families joined them. The closest parallel would be turn of the century New York tenements or Dublin's inner city housing in the first decades of the last century.

¹⁰ An apartment or flat is a self-contained housing unit (a type of residential real estate). Such a building may be called an apartment building, especially if it consists of many apartments for rent. Apartments may be owned by an *owner/occupier* or rented by *tenants*. The burgeoning middle class live in mass produced apartments of various shapes and sizes, ranging from around 450 square feet to 1,400 square feet. Most have one or two bedrooms, which again accommodate whole families including grandparents. Apartment complexes, especially the newer ones, are usually built with a great range of facilities including gyms, club houses, gardens, and playgrounds. Residents organize social occasions throughout the year, and

one place. At the same time to enrich the sample with diversity, some students were also recruited from youth centres. Each of these settings was convenient for the participants as they resided in their vicinity. Additionally the researcher secured a safe and mutually acceptable setting to administer the interviews.

6.4.1.2 Maximizing Variation:

In order to obtain the necessary qualitative information, the researcher used purposeful sampling. In purposeful sampling:

researchers intentionally select participants who have experience with the central phenomenon or the key concepts being explored (Creswell and Plano Clark 2007, p112).

It was decided that a popular variant of purposeful sampling strategy called maximal variation sampling would be used for the current study. The reason for this was that the researcher required a mix of participants who were users and non-users as well as those who belonged to different genders and levels of schooling. Profiling people by their religion is considered highly distrustful in India because many large scale violent riots have occurred owing to religious mistrust. Hence though a fair balance was maintained with regard to a religious mix among participants, care was taken that participants were not predominantly of one religion. No explicit focus was put on the participants' religion, neither were they asked for their religious affiliation. In India a person's name reflects his or her religion to a large extent. The researcher bore this in mind. The sample also consisted of participants in their 11th year and 13th year of schooling as they were in the first years of their respective stage of education. They had completed their transition to a higher section in the immediate past and it was assumed that they would be able to reflect on their experience of transition. This was significant because the mobile phone was an important technology, possession of which was likely to be permitted by parents

celebrate festivals together. The children have an almost endless array of playmates, and often get together for games of cricket or to ride their bikes.

after transition from primary school to Junior college or from Junior college to University (Withers 2006). A fair gender balance was also maintained. The researcher assumed that the participants would be able to provide views that would reflect the variety in the population of users and non-users within the cultural mix of Mumbai city and thus enhance the qualitative data of this study. The aim of maximizing difference in this way was to discern meaningful patterns with thick descriptions (Warren 2001).

6.4.1.3 Recruitment of the participants:

In the current study, the survey was administered concurrently with the interview. While attention was paid to the fact that the questionnaire data was collected from a representative sample drawn systematically from a larger population, interview respondents were chosen based on a theoretical sampling and snowballing (Spradley 1979 cited in Warren 2001). Using the theoretical sampling strategy the researcher selected respondents who seemed likely to epitomize the question in which he was interested.

After selecting the colleges, the college authorities were requested to grant access to their students for the interviewing. After permissions were provided the college authorities placed course coordinators to assist the researcher in recruiting student volunteers for the interviews. The researcher went to the classes during a regular day of college along with the class coordinator who introduced the researcher to the class and sat at the back of the class. The researcher spoke to the year 11 and year 13 students. He gave a brief overview of the study without being very specific and requested students' voluntary participation. He assured the students that the interviews were approved by the college authorities and that participation was voluntary. It was also mentioned that confidentiality would be strictly maintained. Further, the researcher informed them that if they volunteered to be interviewed, they would be given a consent form which they and their parents would have to sign in order to provide consent for the interviews. The researcher read the contents of the consent form. Further, the researcher also informed the students that along with mobile phone users, this study required interviewees who

were non-users of mobile phone. Hence even if one never used or did not want to use mobile phones, whether one did not have a mobile phone or did not wish to have it, whether one had just acquired it, or even if they had lost it, they could still volunteer for the interview. Such instruction was given so as to be able to engage maximum participation from non-users. Students were then asked to present themselves to the researcher during the class break with their names and phone numbers if they wished to volunteer for the interview. The consent forms were given to those who were willing to be interviewed.

The researcher got volunteers from mobile phone users but found it difficult to get non-users through the general request he had made. Therefore, while talking informally with the students during the class break the researcher had to resort to ingenious ways of finding respondents for the interviews (Warren 2001). He found that among the students there were those who did not possess mobile phones but did not want to say so in public in order to avoid embarrassment. Among young people of this age group, not having a mobile phone was considered a status lowering proposition – a sign of not being ‘in with the crowd’.

Procuring a sufficient number of participants for interviewing can be a problem, especially when the topic of the interview is stigmatizing or when the occurrence of needed respondents is rare in a population (Warren 2001). This was just what seemed to be the case among non-users of mobile phones in these colleges. Hence the researcher had to rely on the snowballing technique to get participants who were non-users for interviews. In snowballing, participants were recruited with the aid of students who had already volunteered to participate in the interviews. It is a referral system i.e. one respondent is located who fulfils the theoretical criteria. Then that person helps to locate others through her or his social networks (Arksey and Knight 1999 cited in Warren 2001). Also during travel, shopping or visits to friends, whenever the researcher found someone who fulfilled the criteria of non-user, he requested an interview. Permissions were given by the college authorities to conduct the interviews in the college campuses.

Some interviews were also conducted in the gardens of the residential complexes where the students resided. Due to the snowballing technique, students had to be contacted at their residential settings. Such students (non-users) were contacted through their friends and permission was requested from them after explanation and information about the researcher and the research study was provided. Some agreed to the interviews, some did not because of reasons cited earlier.

Contacting non-users directly was inconvenient as they did not have a mobile phone. Non-users had to be contacted either through their friends, through their landlines or their parents' mobile phones. The phone numbers were provided by their friends. Often parents acted as gatekeepers preventing access to their children since the researcher was a stranger. Hence the researcher had to explain the research and ask consent personally from the parents on phone prior to getting in touch with the potential interviewees. Also piggybacking on the names of the friends of their children who had provided their names proved useful. The fact that the participants were residents of the residential complexes, the fact that the researcher was known directly or indirectly through their friends, and that the interviews were done for study purposes was considered by the authorities of the residential complexes as sufficient conditions to allow interviews to be held in those settings. Thus in snowballing for non-users, sampling began with acquaintances and moved on to strangers (Warren 2001 cited in Holstein and Gubruim 2001).

One thing to be borne in mind is that because it was the time of the summer exams the researcher had very limited time in the colleges to conduct the interviews in college premises and hence had to depend on meeting the interviewees in public places such as gardens of their residential complexes or youth centres. In such cases, the researcher collected the names of volunteers and informed the students that the interviews would be held at their convenience after the exams ended. The researcher felt that these months were not best suited to conduct interviews due to the final exams and after the exams the students were likely to go on vacations. Hence there was uncertainty if the recruited participants would be retained for the interviews.

6.4.2 Permissions needed:

After selecting the colleges, the principals were contacted on phone from Ireland where the researcher was based. The researcher introduced himself and explained the purpose of the call i.e. to request permission to collect data by carrying out a survey, interviews and focus group discussions among students of those colleges. Getting the principals on phone was not easy, first, because of the different time zone between India and Ireland. Ireland lags behind India by 5 and a half hours during the month of December. Hence appropriate time of the day had to be chosen to be able to speak to the principals directly. Making phone calls was also proving expensive especially because several calls had to be made and principals were difficult to reach due to which calls would be repeatedly wasted. Another reason was that many researchers were approaching colleges for surveys and interviews with students. According to the Principals, this proved disruptive to the college timetable and hence the front desk employees were instructed to screen out calls with such purposes and prevent researchers from accessing principals. Another reason for reluctance to provide the researcher access to students was that the authorities were not willing to allow students to disclose any information that might be considered potentially embarrassing or damaging to the reputation of the colleges to a researcher who is a complete stranger. The researcher of this study was able to get access because of his extensive involvement in education and because he was acquainted with the management's social circle.

After the initial contact with the principals on phone and the acquisition of permission, the researcher requested a meeting with the principals at a time closer to the interviews to which the principals agreed. After arriving in Mumbai in January 2009, the researcher met the principals in person, provided them with the documents (survey questionnaire, interview and discussion guides, consent form and plain language statement) and requested permission to meet students beforehand in order to introduce himself. The researcher also requested for a class coordinator from the college.

6.4.3 Information to be collected:

6.4.3.1 Development of Interview Guide

The researcher prepared an interview guide because the use of an interview guide gives some amount of structure and direction to the interview Creswell (1998). However, the researcher believes that it is important not to hurry respondents into interview situations and that a less structured atmosphere enhances rapport with subjects. Hence the researcher was flexible and attentive to the variety of meanings that emerged as the interview progressed. He allowed himself the latitude to use a personally congenial way of asking and sequencing the questions, and to segment them appropriately for different respondents (Miles and Huberman 1994). At the same time the interview guide was useful because it focused the researcher on the questions. It also prevented uncertainty in the researcher as to whether all issues that the researcher required the data for were covered in the interview or not.

In the interview guide, the main themes were based on relevant literature review, personal hunches that the researcher developed, and informal pilot interviews conducted with students in Dublin and Mumbai. The interview guide for young people is given in Appendix F (mobile phone users) and Appendix G (mobile phone non-users). To become familiar with the art of qualitative interviewing the researcher conducted four pilot interviews in Dublin using the basic interview guide. The four leaving certificate students for the pilot interviews were selected from two Dublin schools. Care was taken that they fitted the criteria of the sample. The schools were from working class areas of Dublin. The procedures for getting permissions and consents were followed by making a phone call to the principals, asking permission to interview after explaining the purpose of the interview. Two schools agreed to allow the pilot interviews. The researcher also met the principal and showed the plain language statement and the consent form which the volunteering students would have to sign as well as their parents. The class coordinator demarcated by the Principals asked the two volunteers to obtain their parents permission to be interviewed. On the appointed day the researcher met the two selected

volunteers during school hours in a class room provided for the interview and conducted the pilot interviews individually. The purpose of this was to sharpen the researcher's skills of qualitative interviewing, gauge the language and responses of the respondents, to become aware of biases that may creep in, and to make necessary changes to the interview guide. Some changes were made as a result of the pilot interviews. The changes were mostly about the language and follow up questions.

6.4.3.2 Interview Process

In total, 18 formal interviews were conducted in Mumbai between February and April 2009. They were held at locations the respondents felt at ease with and which were convenient to them. Since the researcher had already met the interviewees in person in the college and then spoken to them on phone to fix the interview schedule, the researcher and the interviewees were familiar with each other to some degree. Hence during the interviews, after exchanging pleasantries and thanking the students for their participation the researcher assured them of confidentiality, read through the plain language statement and the informed consent form (See Appendix D). In addition, the youth participants seemed honoured by the fact that the researcher was requesting their signature, which decreased their focus on the provided description of what the consent meant and entailed (DeRoche et al 2008)

The researcher also requested their permission, as they were informed earlier, to record the interview. He gave them a general overview of the kind of questions that could be expected. He also informed them that they may ask for clarification if they found any questions unclear. The interviewees were also asked not to be anxious about the digital voice tape recorder used for recording even though the researcher might have to turn his gaze on it occasionally to ensure that the recorder was running smoothly. After following all the protocols the interviews commenced. Once the interview was completed, the researcher thanked each student. The length of interviews varied between 18 and 30 minutes. As stated earlier some students were more articulate and reflective

than others. The researcher, in his mind, compared and contrasted opinions and insights received from interviews and surveys which were completed earlier.

Initially the researcher tried to transcribe and type the interviews personally. However it was proving to be cumbersome since he had to play the recorder, listen to the segment, stop the recorder, type the words (and if he could not decipher the recording replay the tape and listen to it again). It led to much frustration. The researcher determined that frustration may lead to a loss of interest in the data. Hence the researcher hired a professional typist. In the wake of this, while the researcher listened to the recorded data and dictated, the typist typed it. Every word or silence was indicated in the transcript. The typist was a professional and unrelated to the research and hence confidentiality of the interviewees was maintained. Further the researcher dictated proxy names for interviewees as well as places. This further ensured confidentiality. Listening to the recordings and dictating as well as keeping an eye on the typing assisted the researcher in getting familiar with the data. However it is known that transcribing personally can also lead to an engagement with the data and can be of help in the analysis (Darlington and Scott 2002). Time was an important factor that the researcher kept in mind in deciding to hire a professional typist, ensuring validity of the data by keeping a keen eye on the accuracy of the transcript.

6.4.4 Recording the data:

A digital voice recorder was used for recording interviews. The researcher had learnt its functions by himself personally and practiced it during the in pilot interviews conducted in Dublin prior to the main interviews in Mumbai. Digital recording is preferable for sound quality, data duplication, back-up, ease of retrieval and replay. The researcher believed that recording facilitates more attention in the respondent (Lofland and Lofland 1984). However some people are known to be nervous of speaking into recording devices (Thomas et al. 2005). But in the current study the digital voice recorder did not pose much of a problem due to its small size and to the fact that it was placed on the table like a mobile phone is often placed by young people among other accessories on

their study table. Young people are used to seeing electronic devices such as a mobile phone, iPod, pen drive and so on placed next to them on their table and so are oblivious to it. This assisted the smoothness of the interview process.

However the researcher had kept a pen and pad with him to note down important comments or indeed if the recorder failed. Though most students were perfectly comfortable with the recording device some did ask “is it on?” or commented “don’t record this”. This suggested that they were aware that they are being recorded but were not overly anxious about it and if they wished that something they wanted to say was embarrassing to themselves or did not want to be recorded, they were able to say so. However nobody objected to anything being recorded. But the researcher needed to keep in mind that such situations may require note taking. On the other side, from past experience the researcher determined that taking notes while the interviewee is speaking can reduce rapport, lead to a failure to attend to the interviewee, alienate the interviewee from the researcher and restrict the smooth flow of data from the interviewee to the interviewer.

6.4.5 Administering data collection:

6.4.5.1 Setting up the interview:

After identifying and selecting participants, the researcher had to decide on the time and place for the interviews in collaboration with the interviewee. Venues and schedules were largely adjusted to the convenience of the respondents.

On two occasions the interviewees did not show up at all for the interview. This is not unusual (Warren 2001). The rest of the interviews were held as planned. The researcher went prepared for the interviews with the interview guide, the consent letter, the tape recorder and pen and pencil as a backup. The researcher met the interviewees at mutually agreed locations such as schools, residential complexes or youth centres. Having interviews at their home was not considered suitable by the interviewees. They opined

that they would feel freer to speak if they were not in the presence of their parents. Secondly, the interviewees considered the prospect of exposing the house to the gaze of the interviewing stranger as insensitive to the other family members of the household if the household was economically weak. The researcher kept this in mind and hence preferred places that were neutral as well as safe. Setting up a place required negotiation with the interviewee as well as respect and sensitivity to the interviewee's social and situational standing and the interviewer bore it in mind throughout the interviewing process.

According to Warren (2001, p90):

respondent is one who responds, someone who is able and willing to talk to the interviewer. But the respondent is also raced, classed, and gendered. The interviewee is also situated in the present moment, with anticipatory notions of what an interview might entail.

The researcher told the interviewees the questions at the outset of the interview and provided a few moments for them to be recollected so that they could share all that they had on their mind related to the questions or anything else of interest to them. They were also provided pen and paper if they wished to write down their thoughts in points so that nothing of what they wanted to say in the interview would be forgotten. Furthermore, as the interviews progressed, the researcher was evaluating in his mind how one interview would fit with another interview and into the overall analysis.

6.4.5.2 Attending to ethical issues:

The interviewees were assured of confidentiality and anonymity and it was maintained in the report by assigning a pseudo name for each interviewee (McCann and Clark 2003). The profile of the young people who participated in the study under their pseudo names will be detailed during analysis of the data.

In some instances the teachers inquired from the researcher what the students had said. This is a consequence to be kept in mind when interviewing people of the same unit such as teachers and students of the same school or parents and children of the same household where one group attempts to draw out information and opinion from the other (Warren 2001).

6.5 Interviews with Parents and Teachers

6.5.1 Sample procedures

The objective of interviewing parents and teachers in the current study was to collect their perspectives on the nature of Personal Agency facilitated by mobile phone use by adolescents, the manner in which Personal Agency is exercised by adolescents use of mobile phones, and the influence it had on their household, relationships with them, traditional educational practices, and typical Indian cultural values of duty to obey (parents) and to gain knowledge (study).

Before the start of the pilot study, the content of the interview questions was reviewed by experts in qualitative research. Changes were made according to their remarks. The framework of the interview is illustrated in Appendix H (Teachers) and Appendix I (Parents). The interview was piloted once in Dublin and the second time in Mumbai with two parents of mobile phone using children who themselves also used mobile phones. They were also asked to evaluate the content of the questions, the method of performing the interview and the emotions that it evoked. No major substantial changes were needed.

The parents interviewed in the main study held a variety of occupations. They had private sector or public sector jobs such as clerks, accountants, and IT professionals. They lived in apartments and chawls. Their children attended semi-private schools or colleges.

Teachers were selected for interviewing from the three colleges from which the students had been chosen earlier. They travelled to work by train which is a common middle-class person's mode of transport in Mumbai for persons from middle class especially if they came from locations like Thane or Vasai which were on the periphery of Greater Mumbai or beyond it. Mumbai's Suburban Rail System carries about 64 lakhs (6.4 million) passengers per day. Those who live closer to their place of work travel with 2 wheeler motorcycles or by public government managed bus transport. Over 88% of the commuters in Mumbai travel by suburban trains or BEST buses. BEST has a fleet of red single and double-decker buses. There are air conditioned and low floor buses as well. In Mumbai, as in many cities, the middle class is more likely to use public transport for travel than the poor. It is the most convenient, efficient and cheap form of transport for a population largely without sufficient income to afford cars. The characteristics of the middle class population in India were further elaborated in the literature review presented earlier in the current study.

Parents and teachers were recruited through personal contact and referrals from friends and acquaintances from the central and western suburb of Mumbai. Parents were also recruited from among those who would linger around after dropping their children to school. The following inclusion criteria were borne in mind: (1) Parents who had at least one child below 19 years who owns a mobile phone; and (2) Parents who themselves may or may not be mobile phone users. Once the criteria for the choice of parents and teachers were satisfactorily established, they were contacted by a phone call or personal contact. Parents who were interviewed had a mobile phone but used it mainly to make voice calls. They very rarely used it for texting, and if they did so, were very slow at it.

On being contacted, the researcher introduced himself and briefed them about the purpose and scope of the current study in detail and requested an interview. Six parents were contacted. The parents who were contacted had a range of educational qualifications. Two had a university degree; and four were educated to Higher Secondary levels. All participants were housewives. Two responded to this initial contact. The others declined stating a lack of time. The parents who expressed interest were mostly mothers. The literature review indicated earlier showed that children were

in contact by mobile phones more with their mothers than fathers. The Dublin pilot study also indicated this. The mean age of the parents was 45 years. The socioeconomic status of the parents was classified according to the occupation of the working member among the parents, and in cases where both worked, according to the occupation of the head of the family. Their husbands worked as professionals, owned small businesses or in clerical professions.

The mean age of teachers who were recruited was 35 years. Six teachers were contacted by personal request or on being allocated by the school authorities. Interviews were conducted with two teachers and four of them were asked to join the group discussion.

Being a male interviewer, one of the difficulties that the researcher faced was to recruit female participants among parents for a face to face interview. In many developing countries, gender roles are very different than in Western countries (Unite For Sight 2010). Hence the researcher had to resort to a female researcher to recruit and introduce him to the participants. This did not compromise the confidentiality since the female researcher had no access to the data of the interview and it depended solely on the interviewee to accept being interviewed or not. From this point the researcher continued the process of making arrangements with female interviewees to conduct an interview. The location of the interview was chosen by mutual understanding and mostly occurred in the common living rooms of their homes in the presence of other members of the family. Where interviews occurred with parents who were lingering after leaving children to school, it was in the open and in the presence of the general public. The formality of the occasion was indicated by the fact that the interviewer had mic, voice-recorder, pen and paper with the interviewer. The friends of the interviewees were also present at a little distance from where the interview was taking place. Further, the researcher did not maintain any form of contact with the interviewees after the interview was over. The interviewee was also aware of the cultural conventions and provided consent for the interview. Thus cultural norms were firmly respected.

The teacher interviews occurred in classrooms or in quieter areas of the staff rooms. The teachers were much more independent, open and confident in sharing their opinions on the questions asked during the interviews than parents.

6.5.2 Permissions needed

The Plain language statement and the consent form were read to the parents who then signed the consent form thus providing written consent. The teachers also signed the consent form which was administered to them in the same manner as for parents.

Parents and teachers consented to volunteer for interviews after seeing that participation in the study posed no harm to them or their reputation. The researcher also told them of the importance of the study in the context of the widespread dominance of mobile phone technology among the young people of the day. They agreed to it because of its social benefit. They also agreed in order to be of assistance to the researcher in the current study. Hoehn et al. (2005) mentions five kinds of reasons for or against permitting their children and themselves to participate in research studies: societal benefit, individual benefit for their children, risk of study participation, perception that participation posed no harm, and anti-experimentation views (Hoehn et al. 2005)

As compared to students, teachers were not very reluctant or resistant to being interviewed save for time constraints and fearing the disapproval of school authorities if they were not to say the 'right thing' (what is favourable to the school). However on knowing that their principals had approved of the interviews, and being cognizant of the privacy and confidentiality of the interviews, they volunteered without much ado. They provided a written consent to the researcher.

Methodologists have suggested a variety of techniques to improve the consent process DeRoche and Lahman (2008) while conducting research with youth. These include a detailed discussion of consent with parents, providing the participant with the control of the audio recorder to stop the interview at any time, and reading the consent form to

individuals (ibid.). The parents as well as teachers were informed that they could stop or leave the interview whenever they wanted. They could also ask to stop the recorder whenever they wanted.

Another observation was that while precautions were taken by parents and colleges authorities to provide consent in the case of their children or charges, with regard to themselves, parents and teachers instead signed the consent form without appearing to read the full document themselves (ibid.).

Some parents and teachers were open to both oral and written consent. However, the researcher asked the parents to provide consent by signing the consent form after reading the plain language statement. They were also informed that their interview would be recorded for transcription purposes and the tapes would be available only to the researcher. They were also informed that they need not answer any question if they did not want to.

6.5.3 Information to be collected

An interview guide was prepared similar to the one for students but covered additional areas related to teachers (Appendix H) and parents (Appendix I). It included questions related to the influence of mobile phone on parenting, Indian values of duty and obedience, and traditional educational practices. Basic demographic characteristics and information was also collected from the parents as well as teachers.

6.5.4 Recording the data

All interviews were recorded on a digital voice recorder and transcribed before starting the analysis. The teachers as well as parents were comfortable with being recorded. They did not pay attention to the recorder but continued conversing with the researcher normally.

6.5.5 Administering data collection

6.5.5.1 Setting up the interview

Unlike with young people where interviews were conducted in schools, open spaces or youth centres, interviews with parents and teachers were conducted in the family homes or the teachers' classrooms and staff rooms (Dawe 2006). This was because of reasons cited earlier depicting the strict conventions in gender interaction in India (Kaul and Kulkarni undated). Wood (1998) describes how differences between gender cultures are infused in communication. This idea is further reinforced by Krishnan (2001).

Furthermore, parents had the authority to make their own decisions whether the researcher could be invited to their home. They were also confident in their own house and felt free from any pressure to furnish their opinions, unlike children for whom parental presence during interviews made them feel as if they were being supervised and their opinions are being judged, and who consequently preferred interviews outside of the home. None of the parents who were interviewed were those of the young people who were earlier interviewed for the current study. However some of the teachers who were interviewed taught in the same colleges in which the pupils had already been interviewed. This was because it was convenient to recruit participants in the same setting. It also avoided wastage of time due in travelling between venues. At the same time this did not compromise on the validity of the data collected.

The interviews were semi-structured and conversational in nature rather than formal, in order to let themes around these topics emerge naturally. This was supported by the interview guide to ensure that despite being a conversation all the themes were addressed in the course of the interview without losing sight of the main questions the researcher wanted responses to.

In total, four interviews were conducted with two parents and two teachers in the central and western suburbs of Mumbai. Interviews lasted from 20 to 30 minutes. The interviews with teachers were somewhat longer because the teachers were more fluent

and familiar with speaking, reflecting and giving opinions. However, the teachers were also anxious because of their constrained schedules. Hence the timing was strictly maintained.

All interviews took place between February 2009 and April 2009. At the start of the interview, after greeting the parents and teachers, a broad overview of the study was provided without going into the details, and the confidentiality of the process was emphasized. The plain language statement and consent form were then read and signed. Then the interview commenced. The researcher thanked the interviewee after the interview.

6.5.5.2 Attending to Ethical issues:

According to Eysenbach and Till (2001), ethical propriety depends much on what data is collected and how it is reported, how vulnerable the community or sensitive the topic is, and the degree to which the researcher interacts with the participants. In this research study, all the interview questions were passed through the University ethics committee and experts in the field of qualitative research. There were no potential hazards seen to participants. Confidentiality and anonymity was ensured by the researcher and only the researcher had access to data that was so generated. Thus privacy issues were ensured. In the publication of the results in the thesis it was ensured that no actual names would be mentioned but only pseudo names.

Furthermore, the data generated was not considered to be the kind that would harm the participants or negatively affect their reputation. Nevertheless all data was well protected in the researcher's office. While transcribing, the researcher hired a professional typist in order to type while the researcher listened to the recordings and dictated the data. Any names, where they occurred, were replaced by pseudo names. The researcher did not maintain contact with the interviewees once the interview was done. This also served to allow the interviewees the opportunity to provide their opinion freely since that they knew that they would not meet the researcher again.

6.6 Qualitative Analysis framework:

On collecting the data the researcher developed a qualitative analysis framework. Among the many approaches that researchers have undertaken in qualitative research data analysis (Gibbs 2006), the investigation of meanings of texts or actions is very frequently used. Researchers have to seek methods that fit with the philosophy and methodology of their research study and to choose methods congruent with the research topic. The Researcher read and re-read the transcripts to get a sense of the whole data and decided which themes in the data were relevant to the questions asked. Qualitative methods involve transcribing the interview data, coding data into themes, connecting the themes, restating their meaning by summarizing them, and drawing conclusions regarding the phenomena based on these themes and summaries.

6.6.1 Thematic Analysis:

The word 'thematic' relates to the aim of searching for aggregated themes within data. According to Marshall and Rossman (2006 cited in Gibson and Brown 2009), analysis involves using generalized themes to look at the relationships between components of a data set. Gibson and Brown (2009) give three general sets of aims in thematic analysis: the examination of commonalities, the examination of differences and the examination of relationships. Examining commonality involves finding ways to pool together all the examples from across a data set that can be categorized as 'an example of x'. These commonalities are then subjected to further analysis and subdivision. Examining differences involves finding and analyzing the contrasts within a given data set, and examining their relevance for the specific issue being explored. Examining relationships involves looking at how particular individual characteristics or differences relate to general themes.

However according to van Manen (1998 cited in Gibson and Brown 2009), a theme becomes treated as a topic of a generalized nature in order to compare it with other instances of data that are labelled in the same way. Hence they get decontextualized

from contextually specific aspects of social life resulting in an impoverished view of complex lived features of social life. Nevertheless one should not imply that making themes or categorizing is less valuable because van Manen (1998 cited in Gibson and Brown 2009, p129) also describes a theme as:

...knots in the webs of our experiences, around which certain live experiences are spun.

Themes, therefore, are a useful device for narrative construction.

In this connection, two important aspects about thematic analysis should not be neglected. First, the relevance of the context of the given piece of data should not be ignored. Second, in reflecting on the context, the researcher should be candid about how the themes might be further investigated through sampling, or their limits delineated (Gibson and Brown 2009).

6.6.1.1 Distinctive features and resources in thematic analysis:

Most researchers initiate the organisation of the data by breaking it down into more manageable chunks (Welsh 2002). In thematic analysis these chunks of data can be categorized by using codes. A code is a label that summarizes and depicts the core idea of a segment (Boeije 2010).

Lewins and Silver (2007, p81) offer a more pragmatic definition of coding:

Qualitative coding is the process by which segments of data are identified in relation to, or being an example of, a more general idea, instance, theme or category. Segments of data from across the whole dataset are placed together in order to be retrieved together at a later stage.

In this way of thinking, a code may 'represent a deeply theoretical or analytical concept; it could be completely practical or descriptive; or it could simply represent "interesting stuff" or "data I need to think about more". To code is to create a category for describing a general feature of data. It is the first step in moving beyond concrete statements in the data to make analytic interpretations.

Codes can be created and applied to a wide variety of data forms, including interviews, observations, visual and textual data. However the significant part of thematized analysis involves working out the relationships between code categories. Further it involves working out the significance of such relationships for the development of theoretical conceptions (Gibson and Brown 2009).

6.6.1.2 Generation of codes:

Codes can be generated inductively (from salient aspects identified in the data) or deductively (according to predefined areas of interest). In an inductive approach the researcher immerses himself in the documents and identifies themes that seem meaningful to the participants in the study (Lewins and Silver 2007). 'Grounded Theory' is a frequently discussed form of inductive qualitative research. Working inductively is a 'bottom-up' approach that starts at the level of detailed inspection of the data and moves through recoding, regrouping, rethinking, towards a higher level of abstraction. The aim may often be to generate theory from the data (Lewins and Silver 2007). A Deductive approach to coding is more explicit about the themes or categories to be considered at the outset of the coding process.

Berg (2001 cited in Lewins and Silver 2007, p85) notes:

In deductive approach, researchers use some categorical scheme suggested by a theoretical perspective.

Further, Miles and Huberman (1994) also suggest that the generation of codes prior to commencing fieldwork may be informed by a variety of factors such as the conceptual framework, research questions, hypotheses and the problem areas.

A deductive approach was adopted in the qualitative data analysis of the current study. There are different reasons for adopting a deductive approach. Two are described here as follows.

6.6.1.2.1 Theoretical coding

Analysis may be based on directly using existing theoretical ideas. In the current study the major elements of the theoretical model underpinning the study was the measurement model of Personal Agency (Hitlin and Elder Jr. 2007a). The core principles of each of these were used for generating a coding schema before coding of the text began.

6.6.1.2.2 Question-based coding

Analysis may be based around respondents' answers to questions, derived from the interview data. In this study all the answers to each question were closely related to the stated aims and objectives of the study. The answers of the participants were coded across the dataset in order to view and analyse the themes (Lewins and Silver 2007). This allowed easy identification of findings. However coding only in this way can restrict flexibility and ability to think outside the question structure (Lewins and Silver 2007).

6.6.1.2.3 Recursive abstraction

In a common method called recursive abstraction, datasets are summarized, and those summaries are then further summarized. The end result of such a distillation process is a compact summary that would have been difficult to accurately discern without the preceding steps. A frequent criticism of recursive abstraction is that the final conclusions

are several times removed from the underlying data. Qualitative analysts complement this method by using coding method, by documenting the reasoning behind each summary step, citing examples from the data. The qualitative approach requires the researcher to exercise judgment in summarizing all the information. For this, depth is the key.

Inductive and deductive approaches to coding are not viewed as dichotomously opposed or mutually exclusive (Lewins and Silver 2007). Gibbs (2002 cited in Lewins and Silver 2007 p88) states:

You do not have to do either one or the other or even one and then the other.

Some authors have developed particular approaches to qualitative research and analysis which formally advocate a combination of approaches to coding. Layder's (1998 cited in Lewins and Silver 2007) 'adaptive theory' for example, is a multi-strategy approach to the whole process of analysis in which he argues that particular aspects cannot be viewed in isolation. In coding data this approach takes account of both existing theoretical ideas and those which develop directly from the data under construction.

CAQDAS packages such as NVivo support the combination of both these approaches. The structure and functionality of NVivo also promotes a cyclic and flexible process of coding as well as the identification and analysis of 'surprising or contradictory aspects of the data. This is aided by the searches that are possible through computer aided methods. It helps search and the organization of evidence and counter evidence. In this way the researcher is prevented from accepting theoretical concepts without thorough investigation and hence ensures accuracy and reliability (Morison and Moir 1998; Richards and Richards 1994 cited in Welsh 2002).

6.7 The use of software for coding:

Whichever approach researchers use to make sense of the research participants' accounts and interpret their meaning they have a choice of using either manual and/or computer assisted methods. Coffey and Atkinson (1996, p172) recommend that:

Anyone embarking on a sustained piece of qualitative research should seriously consider the potential value of computer-aided storage and retrieval.

Apart from the ability to handle large amounts of data and generate complex analytic frameworks, Computer Assisted qualitative Data Analysis Software (CAQDAS) also serves as a database for storage and retrieval (Creswell 1998) and facilitates management of the entire project. The use of CAQDAS is known to prevent a compromise of data security (Bringer et al. 2004) and sloppy coding (Darlington and Scott 2002). However CAQDAS also has its drawbacks. It is considered to provide direction to the researcher (Seidel 1991 cited in Welsh 2002) and distances the researcher from the qualitative data like quantitative data does (Welsh 2002).

In the current study the researcher felt it appropriate to use a software package called NVivo8 designed by QSR for the qualitative analysis. The researcher made this decision initially on the basis of the volume of data that was gathered in this study assuming that it would assist in making analysis efficient, robust, transparent and less cumbersome. A support network of colleagues was also consulted who had used it for their own analysis. Their views regarding the advantages and disadvantages of NVivo and its suitability to assist in analysing qualitative research questions also played a part in deciding to use it in this study.

Apart from consulting my network who had worked on NVivo8, the researcher spent time on self-training through books and CDs. Initially some of the terminology of NVivo was confusing. For example NVivo8 calls 'codes' as 'nodes' and 'grouped categories' as 'tree nodes'. Without it, the researcher would have found engaging with

the large amount of data that I had collected to be very cumbersome and time consuming. It allows display of data which assists in enhancing the validity of the study.

However, computers and software only facilitate analysis and are not substitutes for a robust intellectual investment on the part of the researcher which is an essential requirement for in-depth data analysis. Despite the ability of the software, it is the skill of the researcher to use it effectively which is of utmost importance (Gibbs 2006).

6.8 Process of Data Analysis

The process of data analysis undertaken in this qualitative study consisted of creating and formatting the transcript, coding the transcript, carrying out searches on the data, and making models that express data comprehensively. This approach was demonstrated by Gibbs (2006).

Due to the non linearity supported by NVivo several stages of data analysis occurred concurrently. But it is presented in this study in a linear fashion for better comprehension. According to (Gibbs 2006) NVivo8 supports four steps: the creation and storage of texts and document, the creation of codes, creation and examination of ideas; and reporting results.

6.8.1 The creation and storage of texts and documents:

On completion of data collection, the interviews and group discussions were transcribed and saved as Word documents. Each transcript was then transferred from Microsoft Word to NVivo's document browser. An example of the interview document transferred to NVivo's document browser is depicted in figure 6.1

For the analysis to commence the data was first prepared. Since the interviews were a set of structured documents where participants were all asked basically the same set of questions (except for the prompts and probes which differed according to individual

interviewees), NVivo's document browser features were used to format each transcript using consistent paragraph styles. For example, questions were formatted using heading 1 paragraph style, answers were given a normal style and sub-question were accorded heading 2 paragraph style.

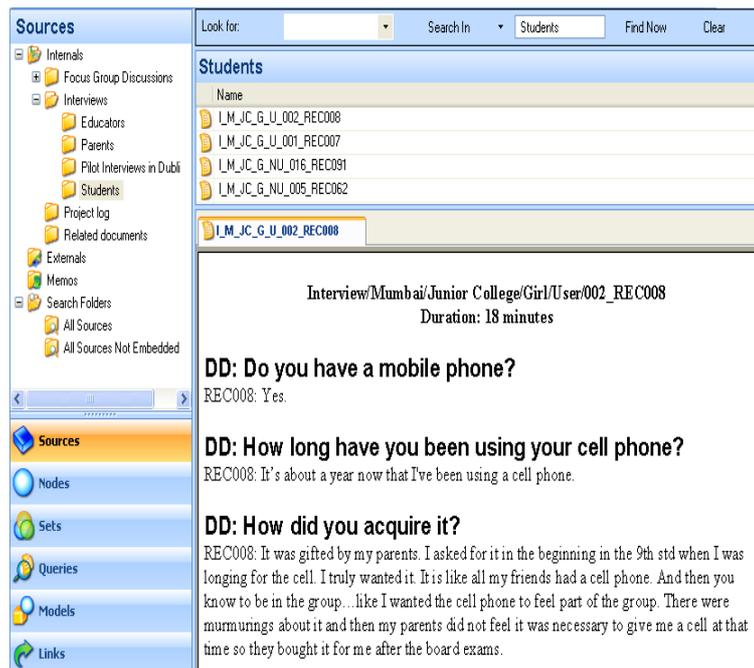


Figure 6.1 Microsoft Word document transferred to NVivo v.8

In order to gather early ideas the researcher began a project log to keep track of the project as it evolved. An example of the project log is demonstrated in Figure 6.2. It chronicled the study's research goals, assumptions, viewpoints and challenges that the researcher encountered throughout the process. It was also a central place to store all preliminary materials such as briefs from participants, literature notes and anything relevant to the research study. Every time some text had to be entered the time and the date was inserted so that the evolution of ideas could be traced.

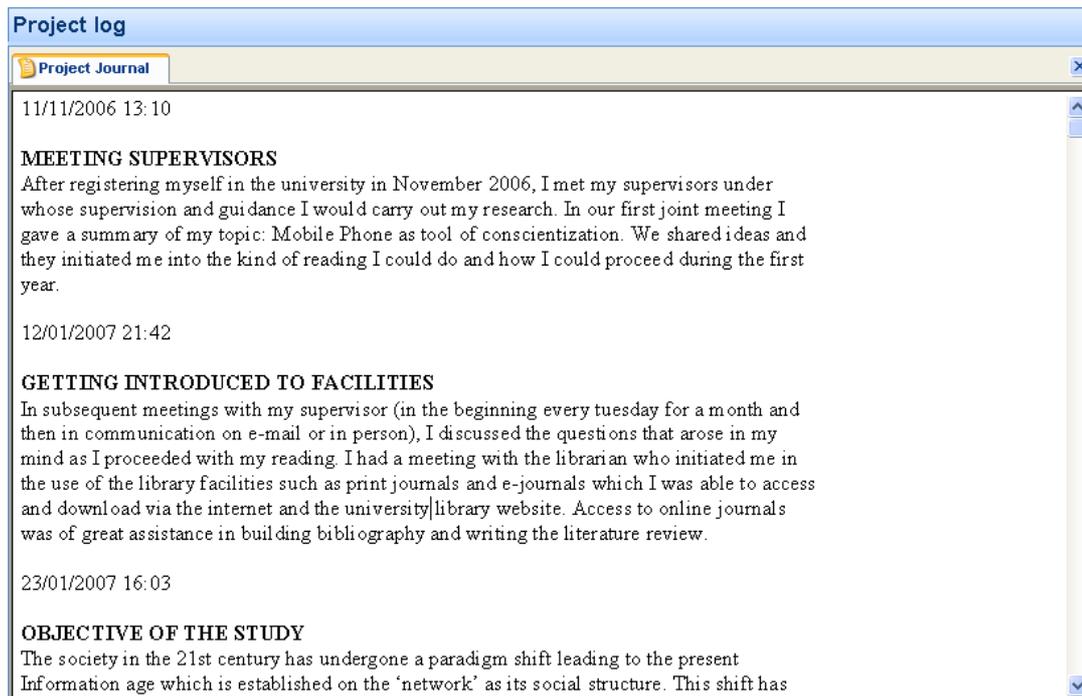


Figure 6.2 Project Log

6.8.2 The creation and manipulation of codes

Once transcripts were created in NVivo, coding was undertaken. Coding is the process of identifying and labelling one or more discrete passages of text that exemplify the same theoretical or descriptive idea. Codes in NVivo are known as nodes. The researcher began constructing nodes, memos and annotations concurrently.

6.8.2.1 Constructing Nodes

A node in NVivo is like a receptacle that brings together ideas, thoughts, and definitions about the data, along with selected passages of text. In this way passages of text from one or more documents are connected to a node because they are examples of the idea or concept it represents. This process is called coding the text at a node (QSR International 2008). The construction of nodes and a node structure is an analytic process. It is the building up of a conceptual schema. As Dey (1993 cited in Gibbs 2006) suggests, the

nodes should mirror the data and serve some analytical purpose because they form a focus for thinking about the text and its interpretation. The categories or concepts the nodes represent may come from the literature, previous studies and so on. It is possible to construct a collection of nodes and even a hierarchy of nodes without, at first, using them to code the data. With a clear theoretical framework it is likely that the researcher can have some good ideas beforehand about what potential nodes will be needed for the study (QSR International 2008).

For the purpose of this study the researcher constructed free nodes and tree nodes as will be seen further.

6.8.2.2 Free Nodes:

Based on the objectives and research questions of this study, nodes were created to reflect components of Personal Agency proposed by Hitlin and Elder Jr. (2007a) namely agency, Self-Efficacy, optimism, planfulness, social support, autonomy, Apparageist theory (Katz and Aakhus 2002), and items from the questionnaire used in the quantitative analysis of this study. Pilot interviews that were conducted in Dublin and Mumbai also provided hunches which were created as themes for the initial nodes. Another set of nodes were created as themes emerged on examination of the interview transcripts. These initial nodes are called free nodes as indicated in figure 6.3 in NVivo which gives an example of a few nodes created for this study in NVivo. Free nodes appear as a simple list in the program. They can be created without having to worry immediately about how they relate to other nodes (Gibbs 2002).

The Researcher made free nodes for texts extending from one word, to a sentence or paragraph. These texts were coded at the nodes that reflected the concept of that code. NVivo8 offers the possibility of coding a single word or short phrases taken directly from the participants and naming them as nodes. These are called 'in-vivo' nodes. (See figure 6.4).

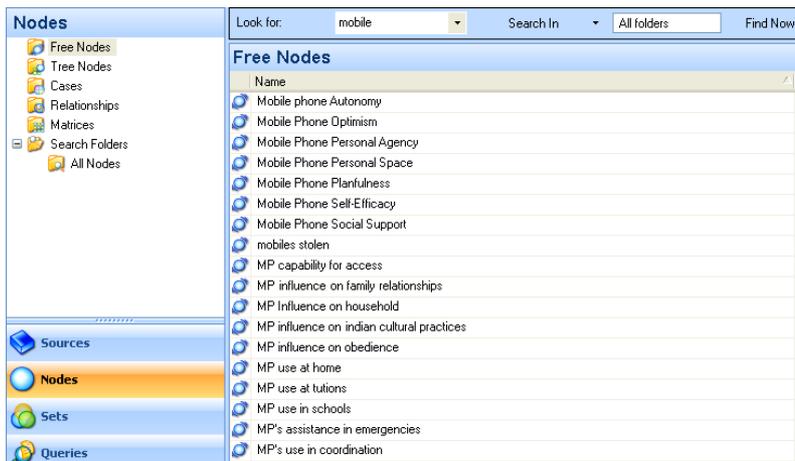


Figure 6.3 Free Nodes

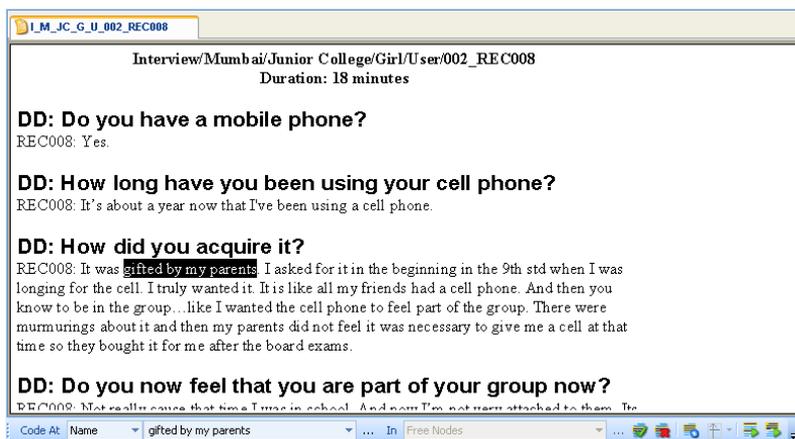


Figure 6.4 'In-vivo' Nodes

Furthermore, it should be noted that Nvivo also gives the possibility of exploring the node. When the node is selected it opens in detail and displays a text based view of all the references that have been gathered for a node. For example, when the node personal space was opened, the references that have been coded at the node personal space are displayed in detail view as indicated in figure 6.5.

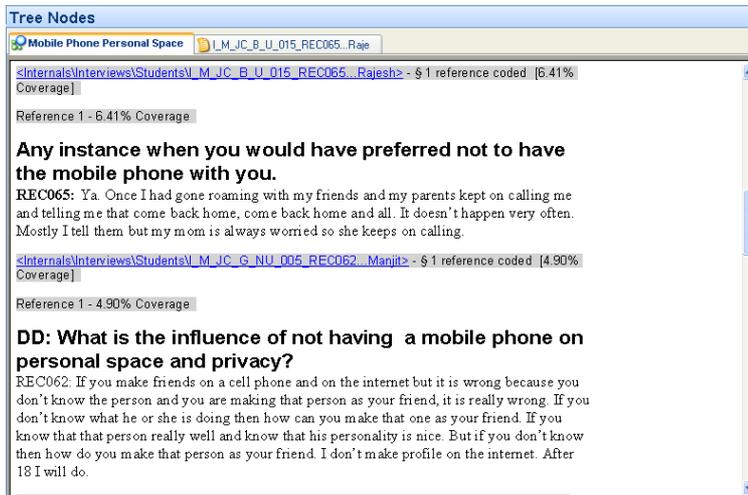


Figure 6.5 Detail of node, Mobile Phone Personal Space

6.8.2.3 Tree Nodes:

A long list of free nodes may complicate the analysis. Hence free nodes are organised into a tree where their relationships can be seen more clearly as indicated in figure 6.6.

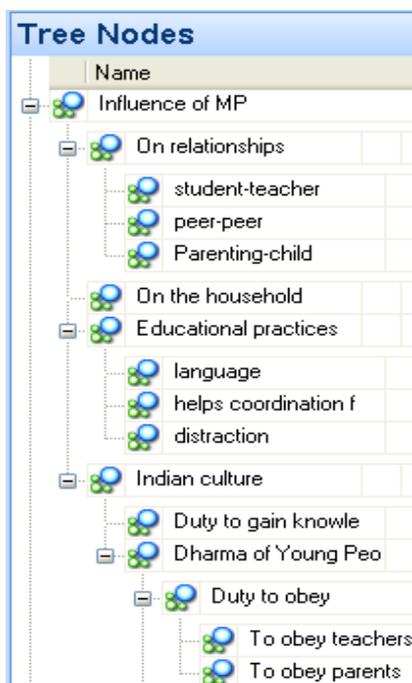


Figure 6.6 Tree node hierarchies

NVivo8 supports the organisation of free nodes into a hierarchy or tree. It shows this hierarchy in the browser similar to a folder hierarchy in windows explorer. These are called tree nodes. Tree nodes have a place in a tree structure. Tree nodes also form the basis for further investigations. The creation and manipulation of a node tree is one of the ways of coming to a clearer understanding of the structure of your analysis (Gibbs 2006).

6.8.2.4 Creating Memos and annotations:

Memos are seen as a way of theorizing and commenting as the researcher goes about coding and about the general development of the analytical framework. Memos record developing ideas about nodes and their relationships and can be linked to documents, or nodes.

Furthermore, editing an original data document is not a desirable way of recording ideas. If this is a record of an interview transcript, or a letter, it is unlikely that the researcher would want to alter it, add comments, or distract from the voice of the respondent. For such commentary it is preferable to add an annotation that is linked to the text but does not interrupt it. Annotations are short passages usually commenting on the contents of a document and linked to them as indicated in figure 6.7.

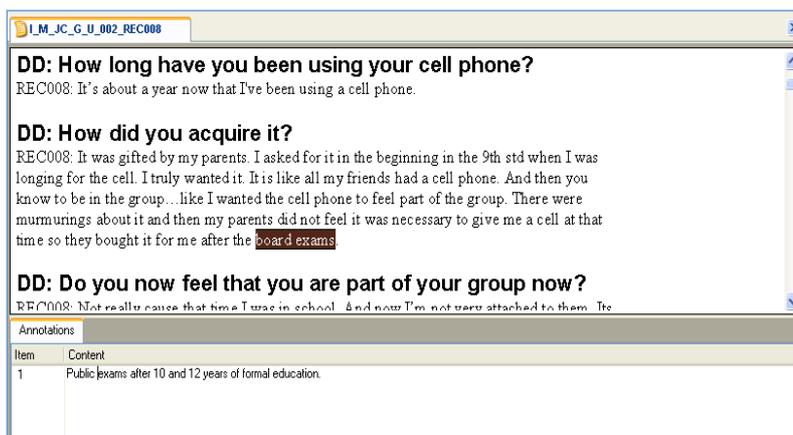


Figure 6.7 Annotations

6.8.2.5 Displaying Coding Stripes:

Furthermore, coding stripes are coloured bars down the margin of a text that enable the researcher to see the nodes at which a particular content is coded. They show all the nodes that have been applied to the document at the same time as indicated in figure 6.8. It is useful when the texts need refining.

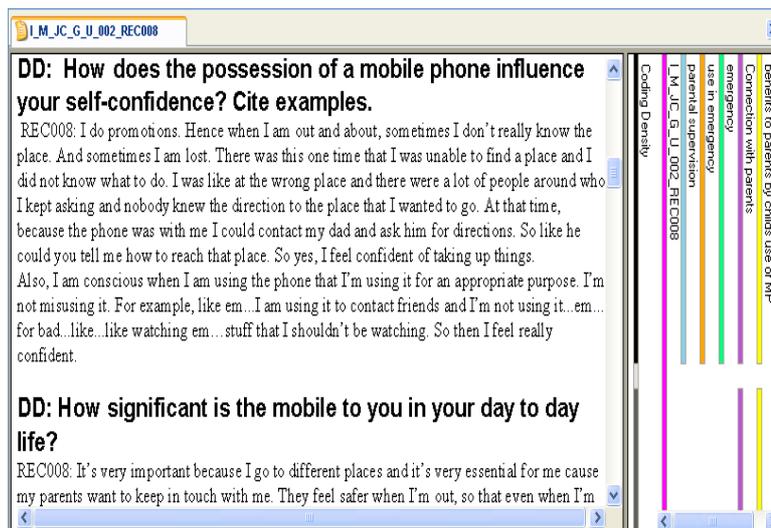


Figure 6.8 Coding stripes

6.8.3 Creation and Examination of ideas

New ideas were created and evidence was drawn out from the data with the assistance of various NVivo search and modelling tools.

6.8.3.1 Finding Evidence in the data:

The theoretical ideas which emerged in the first round of coding were systematically evidenced in the data, thus ensuring the completeness in examining the data and the validity of the research results. Welsh (2002) proposes three strategies for searching evidence.

6.8.3.1.1 Finding Evidence in the Tree nodes:

Free nodes were individually analysed and where necessary, memos were assigned to them. Then they were formed into a hierarchy of nodes. The creation and manipulation of a node tree was one of the ways in which I came to a clearer understanding of the structure of the analysis. The ideas that were developed and recorded in the nodes or memos were useful at this stage. The model explorer tool in Nvivo mapped out diagrammatically how the themes were related to each other. As coding progressed the tree's structure was regularly reviewed to make sure that it adequately reflected the coding and the state of the researcher's thinking about the data. This was done by rearranging, merging, moving, grouping, comparing or clarifying nodes (Gibbs 2006).

6.8.3.1.2 Finding Evidence by summarising and linking memos and coded data:

In order to pull out themes across the data the researcher found it useful to write short summaries on nodes that became prominent in the study (Welsh 2002). These were seen as a way of theorizing and commenting as the researcher went about coding and about the general development of the analytical framework (Gibbs 2006). Memos were linked to other documents or within themselves. They represented ideas whose content was coded like that of any other source. They captured insights while working through the data. Some memos were linked to items, others were used to record the growth in my ideas about themes and concepts.

6.8.3.1.3 Finding Evidence by using searching tools:

The searching tools in NVivo allowed the researcher to interrogate the data. It improved the rigour of the analysis process by validating (or not) some of my own impressions of the data. However care was taken to use manual as well as electronic search (Welsh 2002). NVivo8 offered various ways of searching for patterns in the data. A simple way of finding any item or items was the search tool. This feature offered a simplified process to carry out a simple search. Simple text searches were carried out in order to find instances and patterns in the data. After search for keywords it was possible in NVivo to code the relevant text passage at new nodes or already existing nodes.

However the query tool was more powerful and flexible than the simple search tool. It gave efficiency, accuracy and completeness over analysis of data by hand (Gibbs 2006). Text search query was most often used in this research. This type of search listed all sources that contained the specified text. Words were searched and coded at particular nodes with this type of search. The scope technique was useful. In scoping, the Query tools were used to specify what, how and where to search the data. What was to be done with the results was also indicated, for example to preview or to form a node of the results.

6.8.4 Reporting Results:

6.8.4.1 Visualising the data by drawing models

A Model is a diagram in which elements that represent nodes, documents or simply ideas are linked with line and arrows. These lines and arrows show how the elements relate to each other. NVivo8 offers the possibility of creating models to visualize and clarify ideas as well as making the connections in the data visual. For example, Figure 6.9 is model of mobile phone assisted Personal Agency created and will be used later during the data analysis.

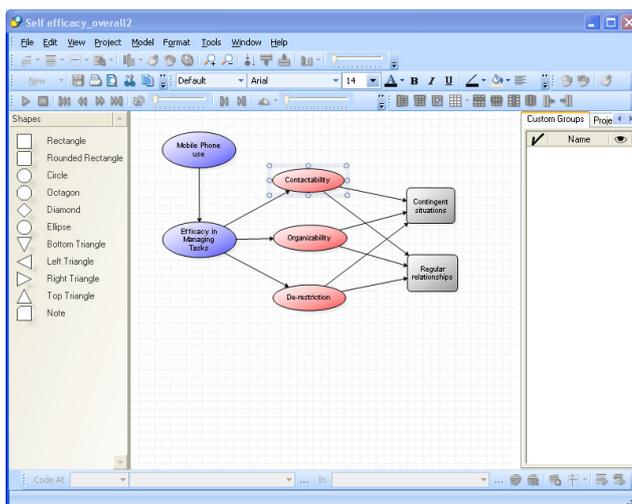


Figure 6.9 Modelling

6.9 Validity:

The concept of Validity is defined by Maxwell (1996 in Siccama and Penna 2008, p87) as the:

correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account.

Qualitative researchers have preferred terms such as "trustworthiness", "rigorousness", or "quality" of the data. The origin of the concern with causality and validity lies in quantitative research where there is a strong emphasis on ensuring the validity, reliability and generalisability. However, in qualitative research, Gibbs (20067) contended that good quality research can be produced by collecting and analyzing the data in a systematic way, and by examining the data carefully to rule out any potential threats to validity. To rule out validity threats the current study used strategies such as the recording of interviews with a digital audio recorder, conducting a verbatim transcription, following interview protocols and using open ended questions, triangulation with the use of three kinds of population such as parents, children and teachers, examination of the data during analysis by a colleague to confirm findings and examination by an expert in qualitative research.

Other approaches specific to NVivo were also used (Siccama and Penna 2008) to ensure validity of this qualitative study such as ensuring analytical rigour, data management, interrogating interpretations as a form of sound inquiry, scoping data for a well founded analysis, maintaining a project log, and the use of visual representations.

6.9.1 Ensuring analytical rigour

To ensure a thorough and rigorous analysis, first, the data were transcribed and free nodes were created. Furthermore, free nodes were arranged to into tree nodes in order to generate broad categories. Mergers, searches, summaries and models were also used.

6.9.2 Data management

The researcher first organised the data by creating folders ‘individual interviews’ and ‘group interviews’ in the sources folder. The interview folder contained sub folders for students, teachers, parents and pilot interviews. The interviews were stored in the folders as Word documents. The group interviews folder contained discussion with students and educators. A third folder was created for the project log and the list of students participating in the study with their attributes. A final folder was for all other documents relevant to the study such as questionnaires and final written products. These formed the study’s database. Links were used to link the transcripts to other documents such as literature review and questionnaire. All the data was regularly backed up in an external drive.

6.9.3 Interrogating interpretations

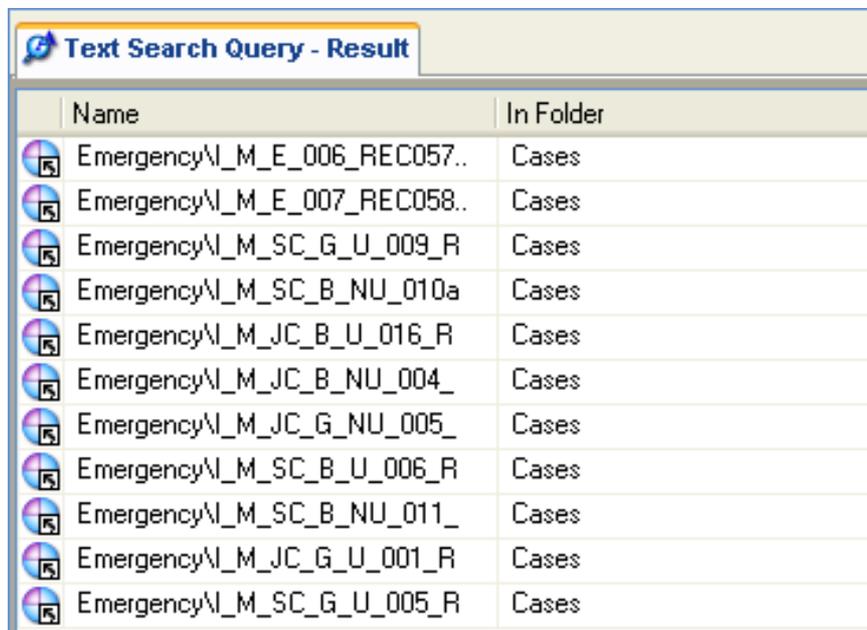
Interrogating interpretations refers to establishing a thorough inquiry into the data (Richards 2004 cited in Siccama and Penna 2008). Passages of texts from the transcripts were coded as boundaries, mobile phone influence, stolen, freedom, urgency, affordability etc. Coding involved searching, retrieving, sorting and organizing the data into meaningful concepts (Creswell 1998). Some of the concepts were organized into abstract themes and linked to each other to show relationships as tree nodes. These relationships were sharpened to allow the emergence of a conceptual framework.

The use of software was an important way of providing thoroughness, transparency and rigour to the study (Welsh 2002). It enhanced quality of the research especially by allowing data to be searched thoroughly. However even though electronic searches may rule out human error, manual methods were not abandoned. For example, when a single keyword such as call was searched all the relevant data related to that keyword did not necessarily emerge since respondents expressed ideas related to call by using synonyms such as contact or keeping in touch. Keeping this in mind software searches were complemented with manual scrutiny (Brown et al. 1990). Software also enabled the

storage of the searched results as another node. In manual methods coding in this way would be inconvenient (Welsh 2002).

6.9.4 Scoping Data

Scoping data was useful in checking the completeness and validity of coding (Gibbs, 2006). As shown earlier, text search query was used to scope the data. It enabled searching for words or phrases in selected sources or nodes. For example, interviewees discussed their experience that the mobile phones are useful during emergency situations. To verify that mobile phone users as well as non-users had discussed emergencies, a text search in NVivo8 as shown in figure 6.10, was executed. It found users as well as non-users had referred to 'emergency'. The text search displayed 11 cases where 'emergency' was found. By clicking on a case, the information about what the participants said about emergency was located.



The screenshot shows a window titled "Text Search Query - Result" with a table of search results. The table has two columns: "Name" and "In Folder". There are 11 rows of results, each starting with a folder icon and a search icon. The names in the "Name" column are: Emergency\I_M_E_006_REC057.., Emergency\I_M_E_007_REC058.., Emergency\I_M_SC_G_U_009_R, Emergency\I_M_SC_B_NU_010a, Emergency\I_M_JC_B_U_016_R, Emergency\I_M_JC_B_NU_004_, Emergency\I_M_JC_G_NU_005_, Emergency\I_M_SC_B_U_006_R, Emergency\I_M_SC_B_NU_011_, Emergency\I_M_JC_G_U_001_R, and Emergency\I_M_SC_G_U_005_R. The "In Folder" column for all rows contains the word "Cases".

Name	In Folder
Emergency\I_M_E_006_REC057..	Cases
Emergency\I_M_E_007_REC058..	Cases
Emergency\I_M_SC_G_U_009_R	Cases
Emergency\I_M_SC_B_NU_010a	Cases
Emergency\I_M_JC_B_U_016_R	Cases
Emergency\I_M_JC_B_NU_004_	Cases
Emergency\I_M_JC_G_NU_005_	Cases
Emergency\I_M_SC_B_U_006_R	Cases
Emergency\I_M_SC_B_NU_011_	Cases
Emergency\I_M_JC_G_U_001_R	Cases
Emergency\I_M_SC_G_U_005_R	Cases

Figure 6.10 Text Query - Emergency

6.9.5 The Modelling

The model tool allows for the investigation of emerging ideas without interrupting the database of documents in the study (Bazeley and Richards 2000). For example, the modelling tool was used to find patterns and themes (Figure 6.11) in relation to the profile of young mobile phone users participating in the study. In this way, this tool supports building up the analysis (Gibbs 2006).

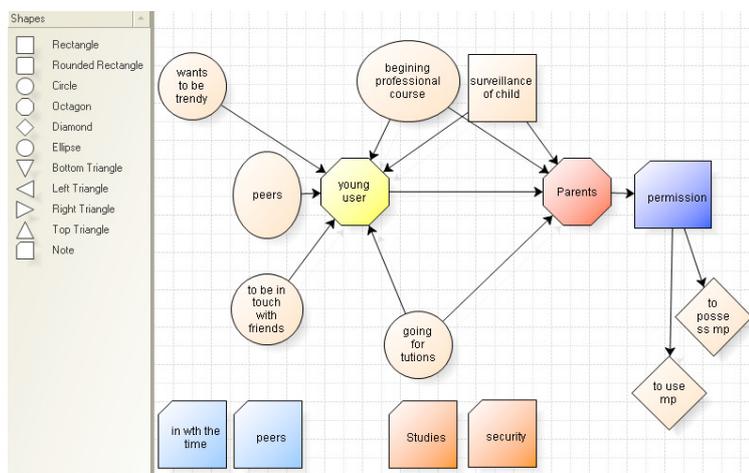


Figure 6.11 Modelling the profile of young mobile phone users

6.9.6 Maintenance of Project Log

Maintenance of project log trails assisted tracking decisions and assumptions throughout the research process. It offered a peep into how decisions and assumptions evolved over the life of the study. For example, see figure 6.2 (pg. 180) for the project log.

6.10 Conclusion:

This chapter developed the framework for qualitative data collection and data analysis. It described the process of data analysis with NVivo and demonstrated the process undertaken to ensure validity of the qualitative data and its analysis. The next chapter presents a detailed analysis of the qualitative data.

CHAPTER 7

Qualitative Results

7.1. Introduction:

On developing a framework for data collection and analysis, and collecting the data from the sample population as shown earlier, the researcher carried out a detailed analysis of the qualitative data with NVivo. The analysis had the objective of exploring the exercise of Personal Agency by mobile phone use from the perspective of young people interviewed in Mumbai. This objective was addressed through the exploration of the following research questions:

- (i) What are the capabilities that mobile phone use promotes in individuals, that assist them in exercising Personal Agency in the events that occur in their daily lives?
- (ii) What are the contextual and socio-cultural factors that limit the use of mobile phone by young people?

The ideas which emerged in the course of data analysis relate closely to three abilities namely, the ability to seek and allow access, the ability to organize oneself and steer through regular or contingent situations, and the ability to negotiate restriction. Each of these abilities, however, is bounded. The results of the analysis will be presented in three parts in this chapter. The first part will elaborate on the profile of the participants and the significance that the mobile phone had for them. It also points to issues that mobile phone users and non-users encounter on account of mobile phone use or non-use. The second part focuses on the capabilities that are enhanced or restricted in mobile phone users and non-users. It also dwells on the nature of Personal Agency by mobile phone use particularly when they are required to manage contingent situations and maintain regular relationships. The third part sheds light on the contextual and socio-cultural factors that limit mobile phone use.

The first part of the research findings focuses on the profile of the young people involved in the study and their perceptions of the significance that the mobile phone held in their daily lives. Mobile phone users were asked what significance the mobile phone had for them. While initiating them on the topic of the research, this question also encouraged them to reflect on the phenomenon under study more broadly and in depth. Participants were also asked how they would define the mobile phone. The definitions that they gave the mobile phone were examined. Furthermore, the issues of time of acquisition, sharing of mobile phones, and the reasons why the mobile phone was significant to the young people will be elaborated on in contrast to the nature of use of mobile phones by adults involved in the study.

7.2. Profile:

7.2.1 Possession of mobile phones:

Table 7.1 shows the overall distribution of the sample participants. There were eight mobile phone users and six non-users among the students for the individual interviews. Group interviews consisted of three users and one non-user among the students. The sample consisted of students and adults. This supported triangulation of data.

Method of data collection	Type of participant	Stage of education	Possession of Mobile phone	Gender	Number of Interviews	Total	Grand Total	
Interview	Students	Junior College (JC)	Non-user	Boys	2	4	8	
				Girls	2			
			User	Boys	2	4		
				Girls	2			
		Undergraduates (UG)	Non-User	Boys	2	2		6
				Girls	-			
			User	Boys	2	4		
				Girls	2			
	Parents					2		
	Educators					2		
Group discussion	Students	Mixed groups of Junior college and undergraduates (3 users 1 non-user)				1		
	Teachers	(4 users)					1	

Table 7.1 Distribution of the sample participants

The students were between the ages 16 to 19. They belonged to the junior colleges (JC) or were undergraduates (UG). The individual interviews with students were the primary source of the data, but the data gathered through them was triangulated with other data such as group interviews among students, the individual interviews of parents and teachers and group interview among teachers. The parents in the sample had teenage children whereas the teachers that were interviewed were teaching in schools, colleges and universities and were in close contact with young people.

Name	Course	Gender	User (U) /Non-User (NU)	Age	When Mobile phone was acquired	Duration of possession in years
INTERVIEWS						
Students						
Savio	JC	M	NU	17	-	-
James	JC	M	NU	17	-	-
Rajesh	JC	M	U	16	After 10 th	2
Amar	JC	M	U	17	After 10 th	2
Manjit	JC	F	NU	17	-	-
Rekha	JC	F	NU	17	-	-
Jasmine	JC	F	U	16	Since 8 th	4
Priti	JC	F	U	17	After 10 th	1
Roshan	SC	M	NU	18	-	-
Sayed	SC	M	NU	18	-	-
Goyal	SC	M	U	19	After 12 th	1 and half
Laban	SC	M	U	19	After 10 th	4
Ruhi	SC	F	U	18	After 12 th	1 and half
Hasina	SC	F	U	19	After 10 th	4
Parents						
Karam		M	U	42		
Hema		F	U	44		
Teachers						
Zainab		F	U	39		
Crystal		F	U	33		
GROUP DISCUSSIONS						
Students						
Ranjit	JC	M	U	17	After 10 th	2
Jyotsna	JC	F	U	17	After 10 th	1
Lucky	SC	M	U	19	After 10 th	3
Reshma	SC	F	NU	16	-	
Teachers						
Radha		F	U	32		
Jessy		F	U	34		
Taslim		F	U	37		
Gayatri		F	U	36		

Table 7.2: Profiles of Research Participants

Table 7.2 gives a detailed picture of the participants of the study. Pseudo names have been given to the participants in this study in order to protect confidentiality. The parents and teachers were between the ages 32 to 44 years.

7.2.2 Time of acquisition:

During the interviews participants were asked about the time of mobile phone acquisition and the length of possession of the mobile phone. The participants that were interviewed from the junior college were using mobile phones between one to four years; the time of acquisition was related to the ways in which they were obtained. Rajesh (U,JC,16)¹¹ was given a mobile phone by his sister as a reward after passing his board¹² exams. Amar (U,JC,17) was also given a mobile phone by his uncle as a reward, fulfilling his promise that he would receive it for getting a good percentage of marks in the board exams. Jasmine (U,JC,16) received it as a gift from her parents on her birthday when she was in 8th std¹³. She was the only exception among the junior college students who had obtained the mobile phone during school years. Furthermore, undergraduates had also obtained the mobile phones after their 10th or 12th std board exams and were using it for one to four years. Hema (U,P,44), said:

My son had the handset but did not have a SIM¹⁴ card. He was allowed to get a SIM only after he had finished his 12th std. board exams.

One other boy did not buy a cell but just asked permission to use one which was lying

¹¹ When quotes from participants are cited, their name will be tagged with information such as user(U)/non-user(NU), level of education or occupation [Junior college (JC), Undergraduate (UG), Parent (P), Teacher (T)], and their age. In the subsequent quotes the tag will be dropped. Additional information about each participant is presented in table 7.2.

¹² Board exams are state public transition exams held by the government's department of education. They are held after 10 and 12 years of formal education and are considered stepping stones to university, technical or professional studies.

¹³ Std is an acronym for standard or level. Each year of formal education in India is called a standard or std. Hence 10th std means a student studying in the tenth year of formal education.

¹⁴ A subscriber identification module card securely stores the service subscriber key used to identify a subscriber on mobile telephony devices such as mobile phones. The SIM card allows users to change phones by simply removing the SIM card from one mobile phone and inserting it into another mobile phone.

unused at home.

Two observations can be made here. The first is that, irrespective of whether the mobile phone was obtained after the 10th or 12th std., the board exams were considered as the threshold after which one could be allowed to possess a mobile phone. There was the exception of Jasmine who obtained the mobile phone when she was in the 8th standard i.e. in primary school. According to Singh and Goyal (2007), children are able to influence their parents in buying the products of their choice more in the present times than earlier. This is probably due to small family size of one or two children these days, where parents comply more with the requests of their children as compared to the past. However as seen in this sample in Mumbai parents were more likely to give mobile phones to children after their board exams. Priti (U,JC,17), a junior college girl commented:

I asked for it in the beginning in the 9th std when I was longing for the cell. I truly wanted it. It is like all my friends had a cell phone...like I wanted the cell phone to feel part of the group. There were murmurings about it and then my parents did not feel it was necessary to give me a cell at that time so they bought it for me after the board exams.

The board exams are important threshold points in the lives of young people in India especially as they make their transition to college or university. Parents worry that mobile phones will serve to distract children from their studies, make children prone to inappropriate use, and expose them excessive freedom disproportionate to their age and stage of development. Parents are often alerted about the hazards children face by using mobile phones before the age of 16 (Perl, hubpages.com) and therefore parents often prefer postponing the acquisition of mobile phone for their children.

However there are exceptions like Jasmine who was able to obtain the mobile phone when she was in primary school: "I was in the eighth standard. That was the first time I got the cell". In relation to this, Wilska (2003) points out that in 2001, one third of Finnish children aged 7-10 years had their own mobile phone and about 70 percent were allowed to use it regularly. Campbell (2005) also provides the percentages of age groups

of children possessing and using mobile phones in several countries in Europe, where it is common to be allowed to possess mobile phones during primary school years. This contrasts with the situation in India where parents postpone mobile phone acquisition for their children till after their 12th std. However there is a change coming in with regard to this in India (Singh and Goyal 2007).

A second observation about the study sample is that for all students interviewed for this study, the mobile phone was obtained by them as a gift or a reward, and they were 'provided' with the mobile phone handset and the SIM card by an elder of the family. They had not bought them of their own accord or with their own money. Singh and Goyal (2007) notes that college-going students in India have to rely on their parents to buy products like mobile handset and motorbike. This is because a large majority of such young people are not economically independent till the age of 22-24 years and have to content themselves with what their parents buy for them. Furthermore, even if they were gifted with a mobile phone by their relatives there were not allowed to use it till their parents permitted them to.

7.2.3 Sharing of mobile phones:

One interesting phenomenon that the data revealed concerned that of 'sharing' of mobile phones among members of the family. This was interesting because the construction of the mobile phone lends itself for individual use and personal use. According to Alastair Curtis, director of Nokia's design group (Katz and Sugiyama 2005, p74), "Our primary concern is to tailor products as much to the individual as possible."

Furthermore, Amar, in one of the interviews in the study remarked: "It's not always with me. My dad also used the cell phone." Weilenmann and Larsson (2001) presents various ways in which mobile phone sharing is observed among teenagers and which, despite being known as a device for individual and personal use, has become a tool of collaborative interaction. There are minimal ways of sharing where what is shared is only information and there is no physical form of sharing of the phones, i.e. the phone

remains in the hands of one person. Another way of sharing is where the sharing of content is done through several people actually handling the phone. This is a different form of sharing which is more 'hands-on'. A third way of sharing is where phones are borrowed and lent to each other. This borrowing and lending of phones seems natural to the teenagers. This suggests that the mobile phone is a collaborative resource for teenagers, rather than just a personal phone. This was the case in Amar's situation in my study. The instrument changed hands between Amar and his father on a regular basis.

There may be implications due to sharing. Chavan (2007) expounds three instances of sharing of mobile phones in different situations in India displaying some amount of strain. One being about a teenager who having borrowed his father's mobile while going for a party returns late at night and finds his father waiting for him. The son had not delayed but has not deleted the messages that he made to his girlfriend and the record of calls that he made to her. He finds himself in a dilemma if his father were to ask for his phone at that moment. In contrast with this, in the case of Amar in my interview, he was undisturbed about sharing the phone with his father since he did not have the opportunity or need to indulge in any behaviour that may be seen to be of concern to his father such as making a large number of calls and receiving high bills, talking to girl friends, or sending and receiving inappropriate pictures and texts. While it may suggest that Amar was at peace with the situation of sharing the mobile with his father, it turned out later in the interview that this was not the case. Sharing the mobile phone curbed his freedom to talk to his friends for long durations. He commented:

Well actually in my case, it does not give me freedom. No. Actually, not really because my dad also takes my cell phone sometimes. If I can freely pick up the cell and like talk...talk...talk to people I want to talk to...then fine...but like my dad doesn't want me to talk to some of them...so there is no freedom really even though I have a cell.

While it seemed like Amar was unperturbed with his situation, it is likely he was merely resigned to the situation that he did not own a mobile phone and had to share it with his dad. Hence it did not matter to him if he had a mobile phone or not.

7.2.4 Reasons for acquiring a mobile phone:

There were several reasons for obtaining a mobile phone.

7.2.4.1 Trendy:

One of the reasons was that it was a trend (Wilska 2003) and pattern to possess a mobile phone in the peer group. Those in Junior college (JC) felt out of place with friends who had a mobile phone. They also felt that having a mobile phone was part of the trend.

This JC girl wanted it because "all my friends had a cell phone so I wanted one too. It was a trend." A JC boy wanted a phone because:

My friends had a phone before I actually got a phone... once my friends got..even I wanted to have one...em...because I found it very trendy to have one and em..I felt out of place if I didn't have it at that time.

As the quantitative data indicated, there was a longing, eagerness, and desire in many of those who had mobile phones for possessing a mobile phone before they got one. One SC boy said: "if I would get one it would be great." Hence after the 10th std. when young people enter junior college, several of them in the peer group begin acquiring mobile phones. Furthermore, at this age, trendy consumer appliances such as mobile phones are seen as status symbols and enhancers of self-esteem. One of the participants said:

...after a particular age everybody yearns to have a cell phone...all possessions.

7.3 Permission for use:

7.3.1 Those who do not have mobile phones:

Manjit (NU,JC,17) was a non-user among the participants of this study who had recently entered JC. She was offered a mobile phone but decided not to take it. She commented:

My dad had given a cell phone to me, but the SIM card was purchased on my mother's name since I am not yet 18yrs. The SIM card is lawfully given only after 18 years. And it is not right to cheat. So I told them that I will not take it.

Since a new connection is lawfully permitted to a user who is 18 years of age or over (m-GovWorld, undated), parents often buy a connection in their own identity and give it to their children who may be below the eligible age for possessing mobile phones in India. While the mobile phone is a gadget which is considered inappropriate for use by younger children due to concerns about their effect on health (Gandhi and Singh 2005), it is also considered as an object for use by those that have attained a suitable level of maturity and responsibility. Zainab (U,T,39) commented about her student:

He can start using the phone when he is fifteen and above, after school. A cell phone like any other scientific device should be in the hands of responsible children and children should know how to use it responsibly. I am not saying that children cannot be responsible but there could be a possibility of misuse, of over doing it.

Also it is not considered appropriate to start using mobile phones without explicit permission of parents in India. Callow (2009) in a blog gathers the worries parents have on the use of mobile phones by children. Despite the restrictions parents place on children regarding possession and use of mobile phones at a very young age, they permitted it for several purposes, namely if it is useful for studies, for supervision, and to be 'in touch'. Goyal U,SC,19) was a non-user who had joined an Engineering college very close to the time of the interview. Till then he did not have a mobile phone. However he felt that as he entered higher education, he would have to meet people and network with them which warranted the possession of a mobile phone. Hence he asked for a mobile phone to be bought for him. He said:

When I entered the graduation course I thought I would need it for various projects and for expanding my network with my friends.

Laban (U,SC,19) was offered a mobile phone by his mother. He said:

My mom offered it to me. I did not really require one but she wanted me to have a phone so that she would know where I was and all.

7.4. Differences between use by parents and children:

7.4.1 Interests in technological features:

As a background it is required to keep in mind that the students who were interviewed were between 16 to 19 years, while the parents were 42 to 44 years of age. Thus, when participants were asked how adept young people were (Thurlow 2003) in mobile phone use in comparison to adults, Amar compared his mother's interest in its technological features with his own interest. He spoke about the knowledge and use of facilities available in the mobile phone. Amar said:

I browse everything. I try to see what the advantages of the cell are, what the cool things about the cell are. But my mom would not do all these stuffs. She would just ask me which the call button is, how do you call, how you answer the phone, simple stuff, and how you add numbers, all this simple stuff. My mom won't be interested in games and other stuff, nah, all that net and other applications, I don't think my mom will be interested in it. She will be only interested in taking calls, making calls.

However, Karam (U,P,42) commented:

It's more like a toy for him. Yet he will go deep into it. For me it's like any other hi tech device which is expensive. I will see the value for money. And for him that is of no concern.

Hasina (U,SC,19) compared the use of young people and adults. She said:

Elders don't use it as much. As far as I have seen my parents use it for calling or for messaging at the most. They don't bother for music into it or nothing, nothing into the technology part of it. It's the youngsters definitely who use it more.

7.4.2 Comfort of use:

Some parents said that they were not very enchanted and versatile with mobile phone use but were comfortable with it. Hema (U,P,44), a parent said:

Whenever I have to make a call or receive a call I use it. I use it whenever I am in need of making a call, or say for receiving or for calculation also and sometimes for messages.

Priti (U,JC,17)commented:

My dad, you know, he comes to me when he doesn't know how to operate his phone and he is like...baby could you show me like, you know...like type this message for me, I'm too slow at it.

7.4.3 Interest in exploration:

Interest in technology is an important differentiator between young people and adults as Laban, a user, explained:

When you give the phone to a youth he will look at the phone, he will see all the features of the phone. He will check the phone, camera, memory. He will know where to find things in the phone. You give the same phone to an adult they will only check the look of the phone, they will not check, they will say its looks good and ok they will not see how it feels and how it functions. And after that if they have to search for something then they will ask you like they will find a youth and ask him okay how do I do this thing, show it to me and all of that. But a youth will never ask any one. They will figure it out and try it and after trial and error they will find the thing and how to use it.

7.4.4 Placement of the phone:

Ruhi (U,SC,18) said: “my dad only uses it for his office work and then his phone is always lying on the table and mine is always in my hand.” Gandhi and Singh (2005) in their study observed the mobile phone placed on different areas of the body such as the shirt pocket and waist pockets.

7.4.5 Duration of daily use:

For Hema, parent: “I use it limitedly for a limited period and he uses it all through the day. There is no time limit as such.” Explaining such differences Jasmine said:

The adults have been through a time when there was nothing like it, so they know it's not difficult to live without it. But we have not seen something like that. We are already addicted to it so now we can't get over it. We need these things in our life. Without it, life is boring. Can't imagine life without it

The data showed that though the parents were aware of the mobile phone technology to some extent, they were not well acquainted with it. They knew the basic functions though sometimes they needed assistance from their children. There were differences regarding where the mobile phone is placed, the manner, the extent, the speed and the purpose for which it was used, the level of interest in it, and the expense involved in its use. Thus based on the opinions expressed by the young people as well as adults in the study, people can be categorized into four levels of engagement in mobile phone use. The elderly show a *lack of interest* or even dislike to the mobile phone technology, apart from decreasing physical capacities (e.g. loss of sight, reduced motor skills, also due to cognitive and perceptual capacities (Pelzer et al. 2007)). The middle age group consisting of parents of the sample in the current study who are *comfortable* with it but not 'savvy' and use it for basic functions. The third category is the young people who are '*attached*', '*addicted*' and '*cannot do without it*'. The fourth category consists of young people who do not have mobile phones or would not like to have them and are *never, rarely or against* mobile phone use.

7.5. Significance of mobile phones to individual users:

7.5.1 “From Use to Presence”

Participants were asked what the significance of the mobile phone is in their lives. Participants used the capabilities that mobile phones offered to make voice calls, send and receive SMS’, send and receive ‘missed calls’, surf the internet, listen to music, record and watch videos, and to store data. However there were participants who had become ‘sophisticated users (Aoki and Downes 2003) and related to the mobile phone as a ‘friend’ [Rajesh, Hasina, Jasmine(U,JC,16)]. Such participants had integrated the mobile phone into their lives and developed a ‘relationship’ between themselves and the mobile phone leading up to call it a "friend who was always there" (Jasmine) and a "priceless possession" [Hasina(U,SC,19)]. They had integrated the technology into everyday practices (Hjorth 2005) making them use phrases such as "need it all the time" [(Hasina, Niamh¹⁵ (U,Leaving Cert,17)], it was "part of me"[Amar, John¹⁶ (U,Leaving Cert,17)] and "if I don’t have it I feel uneasy” (Priti). Such phrases from participants showed that the significance of the technology increased in their daily lives as it moved from being a technology of ‘use’ to being a technology of ‘presence’, from describing a thing in terms of what it is ‘used for’ to what ‘it is’ in their lives. Thus they defined a mobile phone based on how it was accepted as part of their life world (Hallnas and Redstrom 2002).

It was also accepted as part of their life world because it supported a “mobile youth culture” (Ling 2004 cited in Campbell and Park 2008). Among the participants of this study, the mobile phone has moved from being a technological tool (see pictures, listen to music, see videos) to being a social tool (communicate, exchange numbers, access, be accessible, pass time, connect to anyone anywhere) (Campbell 2005). It also was seen to give expression to youth qualities such as expressiveness, independence, connectedness, peer acceptance, companionship, and restricting boredom. Apart from supporting social

¹⁵ Participant from Dublin pre-test sample.

¹⁶ Participant from Dublin pre-test sample.

skills and building social networks it also was seen to be a fillip to their psychological makeup. The enhancement of these personal, behavioural and psychological abilities in the user influenced the process of developing close relationships with the mobile phone deeming it with the attribute of friendship. Hasina put it as: "I can live without it but I would not want to".

7.5.2 Relationship left unaffected by use of Mobile phone:

Even though, for some participants the mobile phone became part of their daily lives, Laban considered the mobile phone as an impersonal instrument and was unaffected by mobile phone use. He said:

Its not a very personal thing though. If anyone wants to check my phone, messages, videos, no problem. There is nothing very personal about it.

This was unlike many of the participants. When Laban was further asked, he revealed that he actually did not wish to have a mobile phone, and it was his mother that wanted him to obtain a mobile phone to keep track of him.

My mom offered it to me. I did not really require one but she wanted me to have phone so that she would know where I was and all.

So he had ignored the mobile phone and said that there was nothing personal about having a mobile phone and that his texts were open for anyone to read. It was for him a "wireless leash" (Qiu 2007).

7.6 Summary:

This part, which was the first part of research findings, began by undertaking an analysis of the significance the mobile phone had for mobile phone users and non-users. After noting the profile of the participants who were interviewed, various issues such as the time of acquisition, reasons for acquisition, sharing of mobile phones, and differences between parents and young people's use of mobile phone were focused on. This broad

sweep gave a flavour of the participants' use of mobile phones and the issues which were of concern to them. It also painted a picture of the context of the sample population. But the most significant aspect of the mobile phone is its ability it enhances in young people to address tasks that they encounter in their daily lives. Hence the next part, the second part of research findings, will focus on the capabilities that mobile phone enhanced in mobile phone users which assisted them in completing tasks such as management of contingent situations and maintenance of relationships. In this way they are able to exert influence on their daily life's circumstances.

7.7 Exerting influence on life's circumstances

Agency is primarily a capability. In order to address the question of capabilities that the mobile phone use enhances in young people, it is important first to recall the definition of agency as the ability to exert influence on one's life within the opportunities and constraints of socio-cultural and contextual circumstances. Furthermore, Self-Efficacy is a core component of agency. It is the belief in one's capability to complete tasks successfully. The next part of the research findings focuses specifically on Self-Efficacy as a proxy of Personal Agency (Bandura 2006; Hitlin and Elder Jr. 2007a).

7.7.1 Stating the research questions:

During the interviews with mobile phone users and non-users in the study were asked to articulate the extent to which they were able to be effective in one or more tasks as a result of the use of mobile phone. In response to these questions, participants explored their perceptions of Self-Efficacy as a result of use or lack of use of mobile phones and reported their own definitions of Self-Efficacy. As will be highlighted, a contrast appears in the values and behaviours ascribed to users and non-users of mobile phones with regard to the experience of efficacy. This will be highlighted by summarising the answers of the participants and rendering them in the form of models. The data highlighted the concepts of 'contactability', 'organizability' and 'de-restriction'. These capabilities are discussed since they emerge as the central characteristics of mobile

phone use by young people in order to exercise Personal Agency. Finally, the principal arguments and implications arising from the findings will be summarised.

Research shows that the daily affairs of young people are increasingly revolving around their ability to be available, reachable, mobile, contactable and so on. These abilities are heavily impacted by the ownership and use of mobile phones (Licoppe and Heurtin 2001; Taylor and Harper 2003; Urry 2003; Oksman and Rautiainen 2003; Goggin 2006; Ling 2004). More importantly young people see the mobile phone as a handy sociologic that empowers them to be efficacious in completing tasks. These tasks are the maintenance of relationships and the management of contingent situations. Therefore the research question was:

What is the extent to which young people use the mobile phone to influence events that occur in their daily lives?

The events referred to are the regular relationships of young people with parents and peers and the contingent situations are emergencies that they may encounter in daily life. The word 'influence' should be understood not as causing but as being able to adjust or regulate. Hence the central research question was divided into two separate parts for the sake of clarity as follows:

- (i) What is the extent to which young people use mobile phones to regulate the relationships with their parents and peers in their daily lives?
- (ii) What is the extent to which young people use mobile phones to manage contingent situations that occur in their daily lives?

7.7.2 Defining Self-Efficacy

According to Bandura (1997 cited in Marat et al. 2008, p45):

.....Perceived Self-Efficacy is concerned with people's beliefs in their capabilities to perform in ways that give them some control over events that affect their lives.

However in the context of this study, young people were asked to elaborate on their personal perceptions of 'Self-Efficacy'. Mobile phone users were asked what the influence of possessing mobile phones was on their efficacy, whereas the non-users were asked what the influence of non-possession of mobile phones was on their efficacy. This was asked in various ways. For example, participants were asked to explain with examples what influence possession or non-possession of the mobile phone had on their confidence in daily life situations and in emergency situations. They were also asked to narrate the differences the mobile phone had brought about in the lives. Furthermore they were asked to narrate instances when they were able to do things that they would not have been able to do without having the mobile phone. This approach aided a deeper reflection on Self-Efficacy accorded by mobile phone possession rather simply using a text book definition of Self-Efficacy. For the purpose of this study, efficacy was defined as the belief in one's ability to manoeuvre through regular and contingent situations.

7.7.3 Agency as task management:

7.7.3.1 Overall Model:

Thus when interviewees were asked to define effectiveness, Savio (NU,JC,17) defined it by blending concisely the various elements proposed by Bandura namely capability ("belief in their capabilities"), organizability ("ways that give them some control") and tasks ("events that affect their lives") in the definition mentioned above, and applying it to his concrete situation. This definition of Savio also pooled together the concepts that were generated in the opinions of the interviewees regarding Self-Efficacy. According to Savio, effectiveness is "when I am able to call my friend easily to encourage him when he is sick". Savio defined effectiveness in this way because he had a good friend. On the day of the interview Savio had gone along with his class for a science exhibition. His

friend had not come for the exhibition. However in the middle of the excursion, he was told by a student in the classmates that his friend had been taken ill suddenly and had to be hospitalised. The researcher happened to interview Savio after the excursion when he shared this event that had happened about which he was perturbed. Furthermore, Savio may be required to call his friend, at regular intervals. This implies that there was a necessity to be able to contact without being restricted by time. Savio expressed this in his words: “efficacy is when...in any emergency, I can call, immediately”. Not being restricted by time was another important requirement for efficacy afforded by the possession of the mobile phone that assisted in being of support to his friend. This snapshot of Savio’s life makes the definition that he gave of Self-Efficacy more relevant because he lacked the means by which he could be near his friend at this important time.

In Savio’s definition there were two additional elements namely, ‘Space and Time De-restriction’ and ‘situation’. Space and Time De-restriction was implied in the word “easily” and ‘situation’ was implied in the words “when he is sick”. These two elements were specific in relation to the mobile phone and hence were considered important. Thus Savio’s definition which contained various elements of mobile phone assisted Self-Efficacy and its implications were broken down into parts for the purpose of further examination. Each of these was considered as an important marker of mobile phone assisted Self-Efficacy and influences how users are able to maintain regular relationships and manage contingent situations.

These constituents are the principal markers of mobile phone assisted Self-Efficacy. In addition to identifying these elements and to providing support for them within the data, the extent to which they enable mobile phone users to exert influence on tasks, situations and relationships will be considered. Furthermore, the extent to which non-users of mobile phone find themselves restricted in exerting influence on tasks, relationships and situations will be dwelt on.

Given the detailed interpretation of Self-Efficacy emerging from the following data analysis, it is useful to refer firstly to Figure 7.1 regularly in the course of reading the

chapter, as it may facilitate an understanding of the characteristics of Personal Agency by mobile phone use. These characteristics may be viewed as the principal markers of Self-Efficacy of mobile phone users, the markers being ‘Contactability’ ‘Organizability’, and ‘De-restriction’ required to influence varied tasks. Figure 7.1 will also facilitate discussion as it focuses on the three aspects of Self-Efficacy by young people’s mobile phone use. These three aspects that are marked within the dotted line are: the individual’s ability to seek and allow access named ‘contactability’, the ability to address daily tasks by managing contingent situations and maintaining regular relationships named ‘organizability’, and the ability to negotiate restrictions named ‘de-restriction’. These three aspects underlie Self-Efficacy experienced by young people through mobile phone use. They enable young people to address tasks efficiently such as managing contingent situations or maintaining regular relationships.

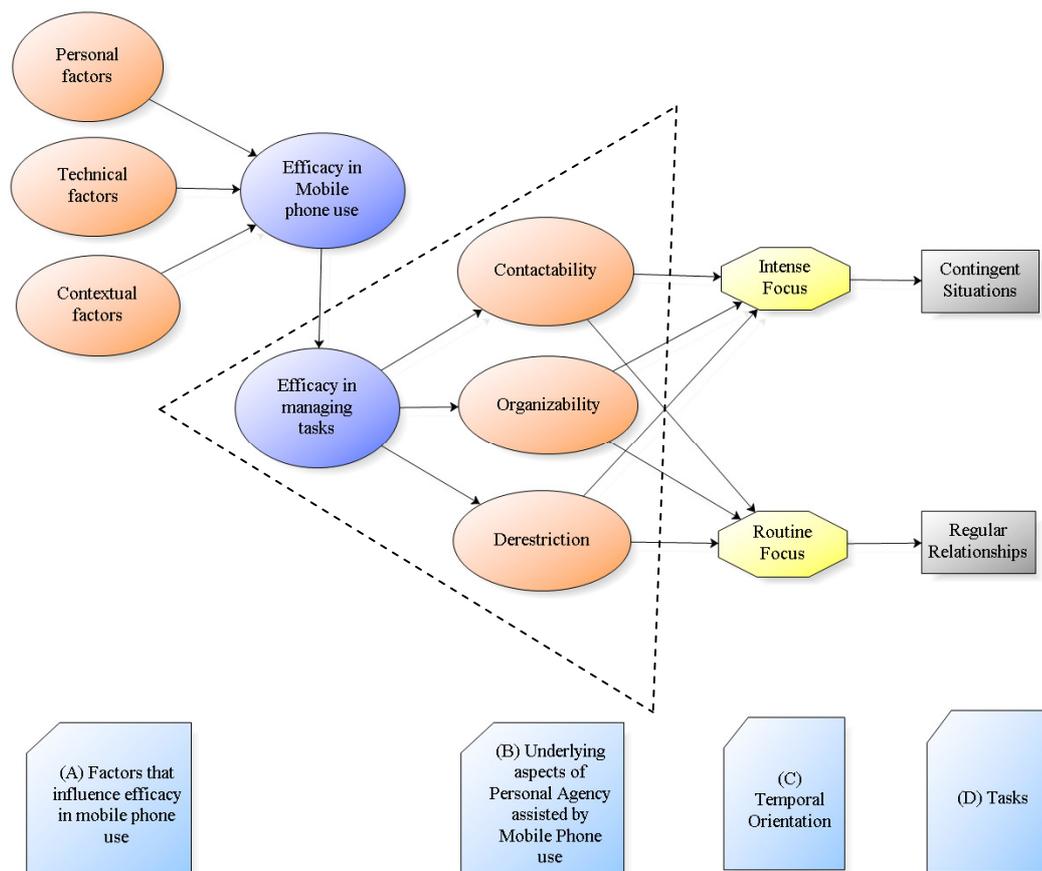


Figure 7.1 Mobile Phone Assisted Personal Agency

To manage contingent situations demands an intense focus; to manage regular relationships calls for a routine focus. The individual is assisted by the mobile phone in such tasks. Thus the mobile phone makes users more able than non-users. But this ability is not unlimited.

This model is a result of summaries of the answers that interviewees gave to questions shown in the interview guide given in Appendices F (Users), G (Non-Users), H (Teachers) and I (Parents). Questions asked will be mentioned wherever required and the answers will also be triangulated with node references and scoping evidence which is an important feature of NVivo8 and useful for validity as indicated earlier. The search and scoping tool used from NVivo8 as a technique to pool information together is useful for probing the data and enabling a deeper analysis.

7.7.4 Principal Markers of Mobile Phone Assisted Self-Efficacy:

Mobile phone users and non-users were asked what the influence of possession or non-possession of mobile phone had on the inefficacy in their daily affairs.

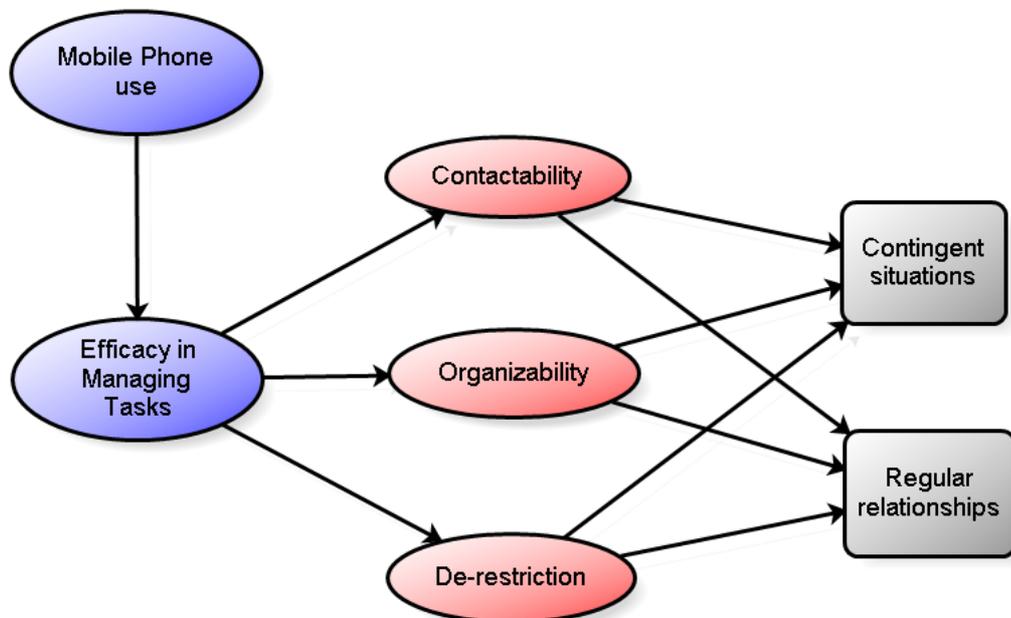


Figure 7.2 Principal Markers of Mobile Phone Assisted Personal Agency

Three themes based on the recurring ideas in the statements of interviewees emerged as principal markers of mobile phone Self-Efficacy which influenced addressing tasks such as shaping regular relationships and managing contingent situations. These three themes were also included in Savio's statement that was used to define mobile phone assisted Self-Efficacy for this study. These themes were then converted into a model indicated in figure 7.2. The model assisted in comparing and contrasting the statements of participants. Three statements from the data, two of non-users and one of a user were compared and contrasted. This was based on the idea that themes represent ways in which texts are either similar or different from each other. Glazer and Strauss (1967 cited in (Ryan and Bernard 2003) refer to this as the "constant comparison" method.

Referring to Savio's statement by which he defined Self-Efficacy:

When there is any emergency, say my friend is a struck with some illness, I can call him and encourage him, Yes...in any emergency I can call immediately. In that sense, others are more confident because they can call easily and immediately.

Efficacy consisted of the ability to call without delay when a significant other finds himself in a contingent situation such as illness. This definition was widened for the purpose of this study. The ability to call was abstracted to the ability to contact by summarising the varied ways in which interviewees contacted people significant to them such as by text, voice, missed calls or by physical presence. Some examples are provided in table 7.3

Similarly, sickness was abstracted to situations wherein an individual is helpless. It was named as contingent situations such as emergencies due to infrastructural breakdown (e.g. transport strikes), natural calamities (e.g. floods), health issues (e.g. sickness), navigational problems (e.g. being lost) or safety issues (e.g. bomb blasts, accidents, travelling late evening) etc. Some examples are provided in table 7.4

Table 7.3 Examples of different ways in which interviewees contacted people	
Mode of Contact	Examples of references relating to different modes of contacting
Call	“When you are outside and feel like talking to your friends, or in urgency you can call up your relatives or parents.” (Rajesh, MPU)
	“Because of the cell phone the students feel that they can call up anywhere when ever he is in a problem.” (Zainab, Teacher)
	“The child falls sick then we immediately call the parent and tell them so and so is the case.” (Crystal, Teacher)
	“I have to come down and the Public Call Office (PCO) is at a little distance away from the classes. I have to go there and make a call. That is a disadvantage for me.”(Rekha, MPNU)
	“I can contact anyone. I don’t hesitate. Even if I don’t have balance I can message them because I have free messages so it makes a difference.” (Goyal, MPU)
Text	“I can’t make a call, I can’t send a message.” (Amar, MPU)
	“When you can’t say something that is embarrassing and all then you have to text.” (Jasmine, MPNU).
	“I told him you are so mean, you are selfish, like you know, I abused him through a text message.” (Priti, MPNU)
Missed Call	“There were international calls I couldn’t make through a landline, we always had to go to a phone booth...But now even if I give a missed call they call up.” (Goyal, MPU)
	“All we are asking him that he should not use it in the corridors and in the class room. So if somebody gives him a miss call he can always walk out of the premises and call the parent.” (Zainab, Teacher)
	“If I feel I’m missing somebody I just pick up the phone, I just message them or call them up. Even a missed call would do if I don’t have balance.” (Goyal, MPU)
	“Those who have mobiles, they get missed calls.” (Roshan, MPNU)
Visit	“But in my case we have to go to our friend’s house, visit him, knock at his door, say ‘Hi we saw this and that’.” (Savio, MPNU)

MPU = Mobile Phone Users, MPNU=Mobile Phone Non-Users

Table 7.3 Examples of different ways in which interviewees contacted people

Table 7.4 Examples of Contingent situations during which mobile phones were used.	
Kinds of Contingencies	Examples of references relating to emergency use of mobile phones
Emergency	“If anything happens people can contact me or I can contact other people in case of emergency.” (Amar, MPU)
	“If there is in any emergency. I can just call and ask ok fine how to do this what to do now.” (Ruhi, MPU)
Accident	“If there does turn out to be an accident...I can like ring up anybody for emergency like that.” (Hasina, MPU)
Way loss	“Sometimes I get lost when I’m travelling. Most of the times I start dreaming I then I’m like...okay...now I’m lost...So immediately I make a call.” (Laban, MPU)
Flood	“When there was a flood and I was in FYJC and my parents were trying to contact me and all. That time I was lucky I had a phone.” (Rajesh, MPU)

Table 7.4 Examples of Contingent situations during which mobile phone was used.

Furthermore Savio also speculates about efficacy in regular situations. Citing an example of his visit to a planetarium with his class, Savio comments:

It feels good to tell everybody that ‘hey! Today we have come to the Nehru Science Centre and I have seen ‘this and that and the other’.

According to him, the mobile phone offers the user the pleasure of communicating one’s experiences (“It feels good to tell everybody”) and mere idle talk (“this and that and the other”) with peers. With this he adds another purpose for contacting namely, to share information and to talk aimlessly extending oneself to offer encouragement or to share joyful experiences or merely to spend time in talk. This alludes to building and maintaining relationships with the person being called in normal circumstances. Hence the efficacy for him was with reference to completing a task of building relationships in regular situation and solving problems in contingent situations. Some examples are provided in table 7.5

Furthermore, ‘immediately’ was abstracted to mean attending to situations without delay. Some examples are provided in table 7.6

Table 7.5 Examples of using mobile phones in regular situations	
Relationship building	Examples of references regarding of mobile phones use in regular situations
connectedness	“It’s just like a gadget where I can talk to my friends and family. I feel more connected to them using a cell phone. Like if I feel I’m missing somebody I just pick up the phone, I just message them or call them up.” (Goyal, MPU)
	“I use it to talk to my parents on the phone, message them.” (Priti, MPU)
Networking	“I have expanded my network through my phone.” (Goyal, MPU)
Sharing joyful moments	“They can share their jokes, laughter ...dreams any time whereas we would have to go to our friend’s house to do all that.” (Savio, MPNU)

Table 7.5 Examples of using mobile phones in regular situations

Table 7.6 Examples of immediacy	
Immediacy	Examples of references relating to quick use of mobile phones
Immediately	“Generally in colleges you exchange notes with your friends and if someone forgets something you can immediately tell your friend and complete his notes.” (Sayed, MPNU)
	“If you go out somewhere and there is an emergency then you can contact your family immediately.” (Sayed, MPNU)
	“In an emergency you cannot call immediately.” (Roshan, MPNU)

Table 7.6 Examples of immediacy

Implicit in the statement of Savio on effectiveness is the fact that communication with his friend from wherever he was to wherever his friend was, required that they were not prevented by their location. They could be anywhere, home, college, outdoor or mobile, and yet have contact between them. Emergencies can occur anytime and anywhere and it was an obligation on Savio's part to contact his friend "immediately" in his time of need. However his ability to contact his friend was restricted since he was outdoors and did not have easy access to a mobile phone, and in this sense his efficacy was hampered. Hence apart from contactability, space and time de-restriction is another important marker of Self-Efficacy which mobile phone users are equipped with. Some examples are provided in table 7.7

Table 7.7 Examples of Space-Time Restriction	
De-restriction	Examples of references about de-restriction that mobile phone accords
Space	"If you don't have a mobile phone, you have to make use of a PCO." (Roshan, MPNU)
	"If I want to say something to a very close friend of mine and I don't want to share it with my parents at home instead of using a landline I can always use my cell phone. I can go in any open space and talk about it." (Goyal, MPU)
	"In my house like we are free to use the phone anywhere and everywhere. If there is no network we can just walk out and take the phone and talk." (Ruhi, MPU)
Time	"When I am outside with my friends and my mom wants to contact me she can give me a call anytime she wants and if I am getting late I can give her a call back." (James, MPNU).
	"Because the mobile has music and radio you can pass your time by listening to music especially while travelling." (Rekha, MPNU)
	"They always have the restriction of not talking late in the night. They have always scolded me for it." (Goyal, MPU)
Free	"I can easily approach people with this device and people are more accessible, and I am more accessible to other people. Its...it's more like...more free." (Amar, MPU)
	"Independence yes. Anytime anywhere. You can speak to anyone." (Ranjit, GD)

Table 7.7 Examples of Space-Time Restriction

Furthermore, the measurement model of agency by Hitlin and Elder Jr. (2007a) depicted Self-Efficacy as the core of Personal Agency. It also showed competence in planning as the predictor variable of Personal Agency. Competence in planning is not a necessary variable for Personal Agency, but it can assist in strengthening Personal Agency. Hence in this research, the interviewees were asked to what extent the ownership and use of the

mobile phone influenced planning which would then reflect on Self-Efficacy of the mobile phone users.

The Competency in Planning in mobile phone studies is often spoken of in terms of the mobile phone users' ability to coordinate (Ling and Yttri 2002; Wajcman et al. 2009; Ling 2009) and be organized. Organizability, the ability to organize themselves that mobile phone users perceive is the third marker of Self-Efficacy. This will be dealt in detail with in the latter part of this chapter. Some examples of this characteristic seen among mobile phone users are provided in table 7.8

Table 7.8 Examples of Organizability promoted due to mobile phone use	
Organizability	Examples of references relating to use of mobile phones for being organized
Set Reminder	"If I have to do something important then I save the thing as a reminder. If I have to do something that day then the phone will tell me okay you have to do this so you have to be free at that time." (Laban, MPU)
	"Whenever there is an event and matches, I set a reminder and all that. Then if there are people's birthdays, all that then I save a reminder on my phone." (Rajesh, MPU)
Coordination	"Obviously those who have cell phones they can co-ordinate and schedule their timings better accordingly because anytime if they are planning a picnic and at any point of time the planning gets cancelled then they can immediately call each other and inform." (James, MPNU)
	"If everyone in your group is having a cell phone then you can call them up quickly or message everyone that we have a plan, that we want to go out somewhere and you can quickly do whatever you want to do." (Sayed, MPNU)
	"Since they have a mobile they can plan to go out anywhere, they can immediately call up their friends and all and plan up to meet somewhere." (Roshan, MPNU)

Table 7.8 Examples of Organizability promoted due to mobile phone use

In summary, it is contended that, the primary and fundamental constituent of mobile phone assisted Self-Efficacy is 'Contactability' i.e. the ability to be in contact. This ability to be contactable provided by the mobile phone is widely researched in mobile phone studies (Leung and Wei 2000). In the sample of this study, Savio (NU,JC,17) considered himself as ineffective because he could not be close to his friend in his time of need. He attributed this ineffectiveness a lack of the three principal markers facilitated by a mobile phone in various degrees in users. The mobile phone has the ability to provide immediate contact and interaction (Wei and Lo 2006). Hence Self-Efficacy in this analysis will be seen as the ability to be contactable and free from restriction so that relationships can be maintained and contingent situations can be addressed effectively.

Such an ability, it is contended in this study, is enhanced in the case of mobile phone users and restricted in the case of non-users. Each of these three markers will be now dwelt on in detail.

7.7.4.1 Contactability

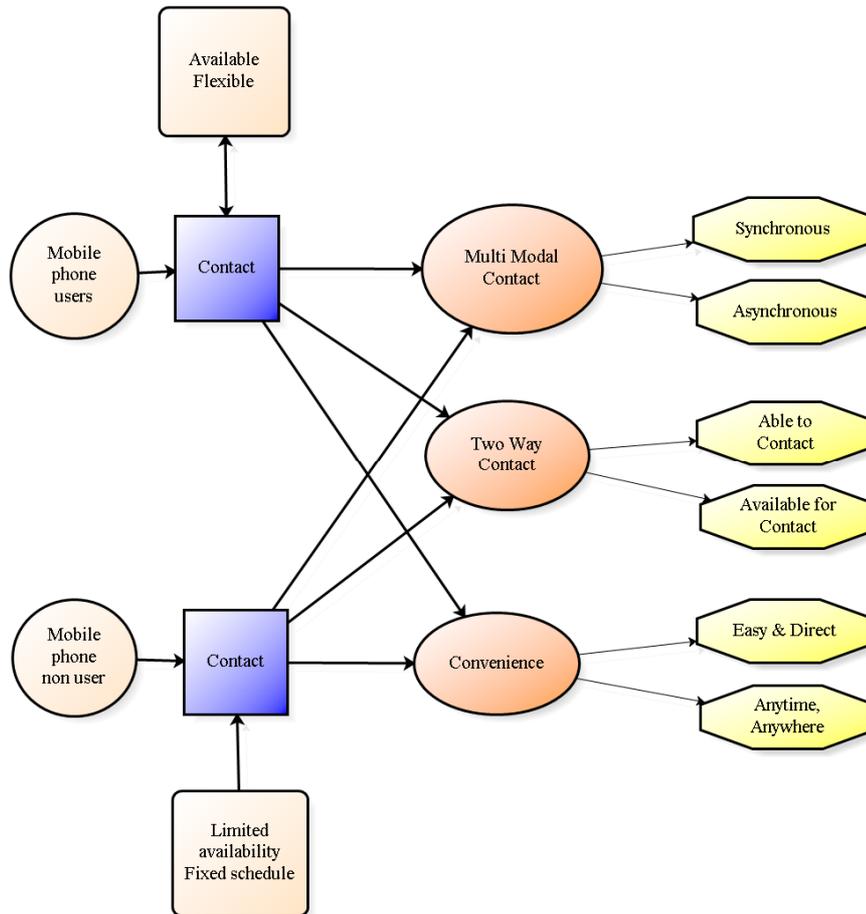


Figure 7.3 Dimensions of Contactability

‘Contactability’ represented a priority dimension of mobile phone assisted Self-Efficacy for the interviewees in this study. Their experience of Self-Efficacy was significantly shaped by their ability to be in contact. The fact that many interviewees used the construct ‘contactability’ as the basic way of depicting Self-Efficacy is not surprising, given that this ability is prominently highlighted in many mobile phone studies as

discussed in the review of literature. The participants' use of the ability to be contactable for defining Self-Efficacy underpins their regular use of the terms such as "being in touch", "be connected" and "perpetual contact". However a deeper analysis of these dimensions will assist in examining the extent to which it assists in managing situations faced in young people's daily lives. Engagement with the data suggests that mobile phone assisted contactability is underpinned by three dimensions: Multi Modal Contact, Two way access, and Convenience

These dimensions are explored to consider how they assist in exerting influence on managing situations and relationships in daily life. The summary model is represented in figure 7.3

7.7.4.1.1 Multiple Modes of contact:

The recent technological advances in digital mobile phone devices being introduced are creating the potential for multiple modes of contact including: text messaging, photographic and other attachment transmissions and web mail. In fact, 92 percent of wireless subscribers use a digital device and could potentially be contacted using one of these alternatives (Buskirk et al. 2009). Users and non-users make references to the multiple modes of contact which a mobile phone allows. The interviewees had made or observed young people make voice calls, text, give missed calls, surf the internet, listen to music, make and see videos, take and store pictures.

In the pilot interviews in Dublin, various modes of contact were used to 'keep in touch'. Peter¹⁷ (U, Leaving Cert, 17) remarked, "Like, if I want someone I'll give them a text or ring them to see where they are. I mostly text at night but generally I am ringing my parents, taking photos, listening to music. I was on the phone this morning with my ma, texting people last night. I haven't taken that many photos for about a week or so." Further he said: "sometimes there is no signal or the voice breaks." John in a pilot interview said: "I don't have to keep calling at home or calling my friends for letting

¹⁷ Participant from the Dublin pre-test.

them know where I am. I can just text my dad or ma to let them know I am ok and things like that”.

In Mumbai, Jasmine, user, said: “You can come to know sometimes only through the voice what the person actually wants to tell you, what the person actually wants to say. When you can’t say something that is embarrassing and all then you have to text.” Text was used by her for avoiding embarrassing situations. Missed calls instead aided in experiencing the presence of significant people by their side. Goyal, user, Mumbai: “I feel more connected to them using a cell phone. Like if I feel I’m missing somebody I just pick up the phone, I just message them or call them up. Even a missed call would do if I don’t have balance.”

Non-users are primarily dependent on calls since texting is not possible for them. In the excerpt below, reflecting on the lack of multiple methods of contact that non-users face. Sayed (NU,SC,18) remarked: “If I need to call up someone urgently like my family members or friends...If I had a cell phone then I can call them any time I want or even message them. Yes, messages also, because from landline you cannot message.”

7.7.4.1.2 Two Way Contact

James, non-user, speculates what the mobile phone could be useful for. According to him, he and his mother can reassure each other because of the possibility of two-way contact. He says:

When I am outside with my friends and my mom wants to contact me she can give me a call anytime she wants and if I am getting late I can give her a call back saying that I will be late I won’t be able to come home right now as I am with my friends.

Data analysis suggests that two-way mobile phone contact is manifested by: (i) Being able to Contact, and (ii) Being available for Contact.

7.7.4.1.2.1 Ability to make contact

There were references to young people making contact with their parents, friends and teachers and also information and entertainment services. Hasina (U,SC,19) said:

I am very bad at directions ...I don't know too many places so I always have to call up my sister and ask her...So for all these things ya it has sort of helped like you know.

Similarly, Manjit (NU,JC,17) explains:

The advantage is that if you have the time and you want to chat with anyone, you can chat. If you are getting late to go home then you can call and inform at home that I'll be coming late.

Goyal said:

It makes me more accessible and other people more approachable because in any emergency situation I can contact anyone. I don't hesitate. Even if I don't have balance I can message them because I have free messages so it makes a difference. It really does.

Information and entertainment services also were within the reach of mobile phone users. Ranjit (U,JC,17) said:

If he wants to listen to music he can listen to his radio or mp3player. You want to click a phone you click it from your camera phone, if you want to record a video go back to video recording.

7.7.4.1.2.2 Ability to be contacted

Young people are more accessible to others especially parents. As Amar, user, remarks:

the Mumbai floods...that time I called my mum to ask how the situation was. It was really helpful at that time.

Overall, the data provide compelling support for the idea that users perceive the 'ability to be contacted' as representing an important marker of 'accessibility'.

7.7.4.1.2.3 Convenience

Analysis of the data also indicates that users of mobile phone are likely to be more self-efficacious because they have the convenience of contacting people and services. They are also able to prevent inconveniences such as those typically faced by non-users.

Sayed, non-user, Mumbai, on inconvenience:

If I want to go to some place and if I want to call my friends it takes a lot of time because I have to go outside to the PCO to call them so that consumes a lot of my time.

Further Sayed said:

I feel very embarrassed that all my friends are having a cell phone and I don't have one.

In another interview, Roshan (NU,SC,18) says:

When I go out and there is a possibility of getting late, then I cannot contact the people in my house because I don't have a mobile. Since we don't have a mobile we have to go to a PCO and we have to search for the PCO. That becomes a problem and many a times we don't have change then we have to ask shopkeepers for change and sometimes they too refuse so in an emergency you cannot call immediately. If my friends have a phone then I borrow it sometimes or otherwise I use the PCO.

Furthermore, mobile phone users are able to access people individually, directly and conveniently. Jasmine said: "...people can call me on my own number". As Hasina, user from senior college, remarks:

when you're outside alone...its happened with me a lot...I am very bad at directions ...I don't know too many places so I always have to call up my sister

and ask her...when you have ease of access to all such things you probably can, like you know...go around much...

7.7.4.2 Organizability

Participants were asked what the influence of the mobile phone ownership and use was on the ability to organise themselves. Their opinions were divided into three sub-categories: Flexibility, Coordination, and Reflection. These were represented in the model depicted by figure 7.4

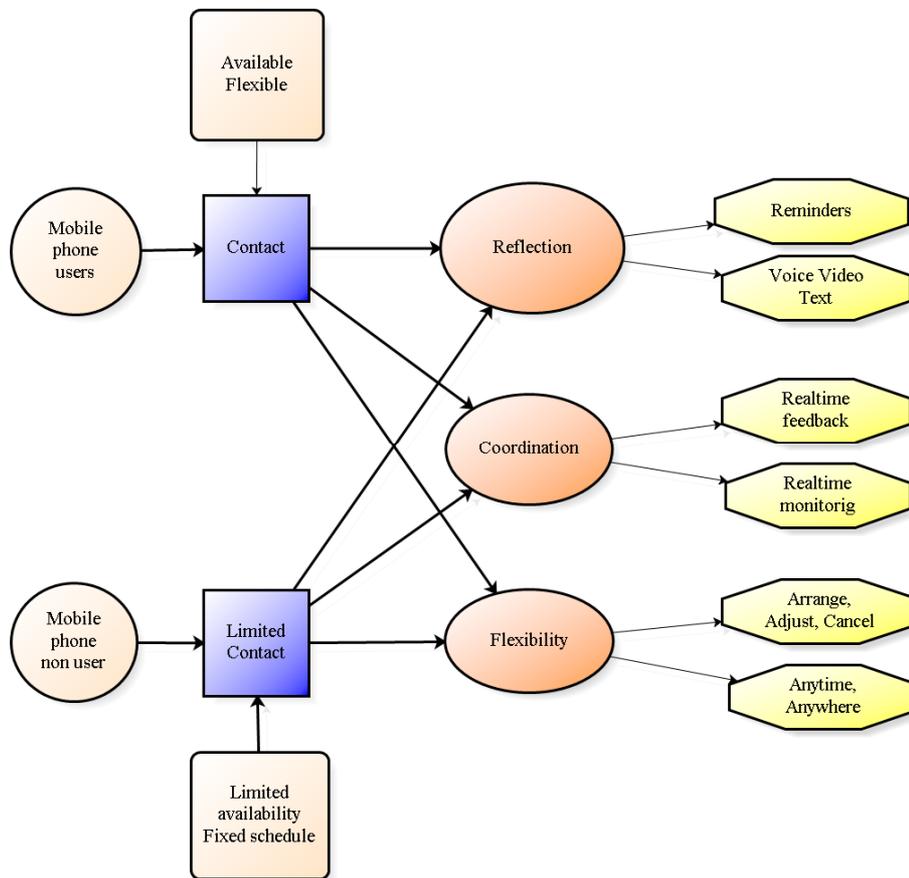


Figure 7.4 Dimensions of Contactability

7.7.4.2.1 Flexibility: Arrange, Adjust, and Cancel

Apart from arranging an activity, the mobile phone users in the sample rescheduled, adjusted, or cancelled the activities at any time leading up to the event or action. The non-user was not accessible for contacting and thus this was one of the reasons why non-users felt left out of the common activities of their peers.

James, non-user said:

Those who have cell phones they can co-ordinate and schedule their timings better accordingly. If they are planning a picnic and at any point of time the picnic gets cancelled then they can immediately call each other and inform that the picnic is being postponed, or would be coming late, but if the person doesn't have a cell phone how can you call him back. That person will be standing over there, so such things happen. So I think you can easily alter arrangements.

7.7.4.2.2 Co-ordination: Real-time Feedback and Monitoring

Some mobile phone users used its constant availability to facilitate coordination of their daily affairs. They followed up and reported about each others activities in real time.

Priti, a user, gave the example of one such activity. She said:

You can plan with friends what you're gonna do the next day, like you know in advance. I have already planned, like you know, we are going to do many things during the holidays or like ..I am going out on Monday...then we do keep calling each other, or telling each other what happened during the day and getting all excited...for the smallest of the things.

This characteristic of convenience in co-ordinating and contacting is an important aspect of the flexible nature of the mobile phone. It gives freedom to the user. Rekha (NU,JC,17) extols the possibility of coordination that the mobile phone allows. Talking about the mobile phone's ability to assist coordination she said:

They can really coordinate. If I have to tell my friend that she should leave house at this time then I 'miscal' from home but when I am out and about or from the

college I have to go directly to the tuition class, then I am not able to coordinate with her.

Having the mobile phone made coordination easy. It allowed access and widened the user's reach to more people at any point of time than was the case with non-users.

However, according to James, non-user:

Even without a cell phone I can be organized. But the only thing is...if I have a cell phone I will be coordinating with everyone and I will be able to speak to everyone. The communication gap decreases. You can speak to each and every person you want at any point of time.

Due to the lack of access to people anytime, synchronous and asynchronous exchange of information, real time coordination and monitoring, arrangement, modification and termination of events was hampered among non-users.

7.7.4.2.3 Reflection:

People do not go about their daily lives randomly. They do so in an organized way. They plan out their day reflectively and innovatively by setting reminders in various ways.

Setting reminders and alarms for events like sporting events, birthdays, or making the 'to-do-lists' was used by many users as an aid to think about the day's events. Rajesh, user said that he had:

a lot of 'to do's'...whenever there is an event and matches, I set a reminder. If there are people's birthdays, I save a reminder on my phone.

Laban commented:

If I have to do something important then I save the thing as a reminder then the phone will tell me okay you have to do this so you have to be free at that time.

By providing the users with a certainty of being reminded, it shifts the attention of the user to recall priorities of the day or schedules. This feature of the mobile phone was a plus point in benefiting the user to be organized. Goyal said:

There are some things that are really very important I put them on my cell phone so I am reminded of those things.

Hasina, user said:

If I have a lot of work and I am prone to forget then I keep notes or something like that.

7.7.4.2.4 Issues arising out of Mobile phone assisted Organizability

7.7.4.2.4.1 Relational divide

One of the participants spoke about the divide in his peer group created on the lines of those who had mobile phone and those who did not. Participants in a peer group in the sample of the study who had phones were able to co-ordinate their group activities closely. They contacted each other to make decisions regarding visiting places and pooling resources. Non-users who belonged to the same group felt left out and sidelined from these activities and were unable to participate in their peer group activities. Savio, a non-user shared his experience. He said:

We are seven friends in our group and two of us don't have phones. So the five of them who have phones make plans everyday. They make the decision that we will go here or there. We will pool in this much money. They don't communicate with us. They come to college and then tell us that yesterday we went to this park. We feel, 'hey, I was not asked at all.'

The ability to contact each other facilitated activities which further enhanced group bonding among mobile phone users. The non-users felt sidelined and uninvolved. Mobile phone users tended to naturally build deeper ties because of the possibility of contacting each other and being able to share and coordinate interests. They are well connected. They plan, let's go here or there. Further, Savio said: "they are able to co-ordinate and they become good friends."

By not having a mobile phone Savio found himself in a deprived position. The non-users were overlooked in the plans. Jasmine, non user too felt the same thing regarding project work with her friends. She said:

I need a cell phone for me because when I sit with my friends for any projects and all they get a whole idea of the project and I can't because they are in contact in each other and I cant contact them but the next day when I come to the college then I come next day to the college. At that point I come to know what is happening.

Furthermore, within this peer group a sub-group of users was formed of those who were more connected to each other than to the whole group. Thus the kind of co-ordination that a mobile phone made possible created a relational divide among the peer group by virtue of its absence among non-users. Roshan, non-user also shares this experience. He said: "If they have phones they can easily call up their friends and plan to go outdoor meet up somewhere." Sayed, another non-user, mirrored this opinion in another interview. He said: "If everyone in your group is having a cell phone then you can call them up quickly or message everyone that we have a plan, that we want to go out somewhere and you can quickly do whatever you want to do."

7.7.4.2.4.2 Flexible scheduling

First, the mobile phone which was deemed by some participants as a helpful tool in organizing themselves was also considered by Amar, a user, as not helpful. When asked if the mobile phone assisted in being organized, Amar said:

Actually more disorganized because if I didn't have a cell phone I would not have to keep a reminder or anything. I would have planned it in advance. But now since I have a cell phone, it's easy. I can easily call people. Like, recently I went for an interview...He called me up. I had just 15-20 minutes with me. So it's more like, it's not planned in advance.

According to Amar, having to keep a reminder excuses people one from exercising their memory and devising personal skills to remind themselves rather than be dependent on technological devices. Second, it prevents people from expanding their personal limits or

have foresight to arrange things in advance. Third, it absolves people from maintaining fixed schedules justifying a “plan as you go” attitude. In such an attitude, things are arranged at short notice, which may not be due to an emergency but to a lack of foresight.

7.7.4.2.4.3 Unbounded availability:

Amar’s example stated above showed that anytime availability afforded by the mobile phone created an expectation of people being available and willing anytime to participate in any activity whenever contacted. It promoted the attitude of expectation of instant readiness in people. It promotes an expectation of unbounded availability

In the above the data demonstrated that by allowing flexibility, co-ordination, and reflection, the mobile phone assisted users to organise themselves to a considerable degree. It also decreased communication gap between the caller and the sender and allowed any time contact. This is of assistance in case of emergencies and was useful for monitoring, modification and termination of plans. There was also evidence of support for its ability to support evaluation and reflection. However it may also justify disorganized activities among people and create an unbounded expectation of instant readiness among them.

Coupled with the construct of ‘contactability,’ the constituent of ‘organizability’ also emerged from the data as a compelling marker of self efficacy among mobile phone users. These supported managing tasks such as regulating relationships and addressing contingent situations. This was anticipated because the literature on mobile phone which speaks much on co-ordination and several authors have elaborated widely on it.

7.7.4.3 De-restriction of space and time

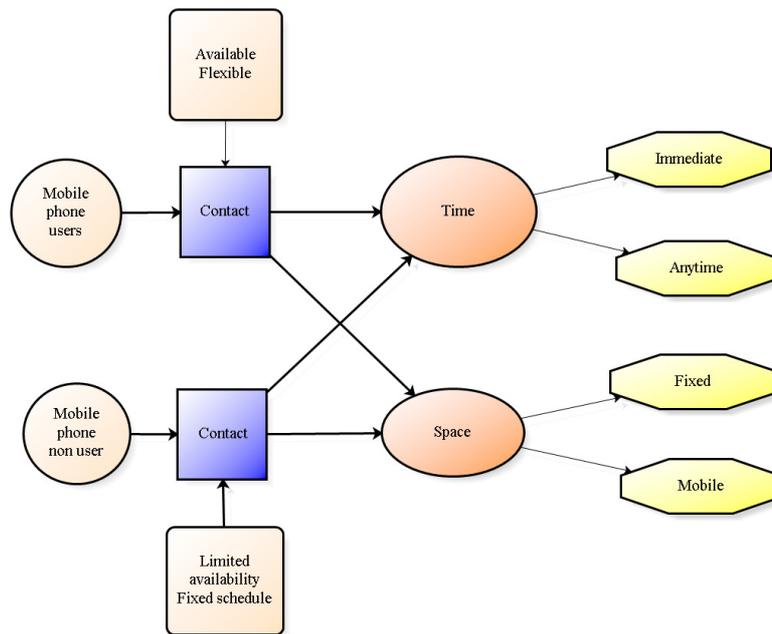


Figure 7.5 Dimensions of De-restriction

In continuing further with the analysis Savio's experience is again recalled. Savio explains the manner in which efficacy is restricted in his case as a non-user. Savio was upset about being unable to contact his friend immediately about a very enjoyable experience that he had during a visit to a planetarium. He said:

We have to go to our friend's house, knock at his door, say to him that we saw 'this or that'. This [calling from a mobile phone] is very easy and that [going physically to a friend's house] is tough. It takes a lot of time. The information [about the visit to the planetarium] will go now [in case of mobile phone users] but I have to give him the information after two or three days when I meet him.

Hence efficacy (being able to contact people in contingent or regular situations in a timely manner), from his perspective, was constrained in his case by two factors namely, physical strain ("we have to go to our friend's house, knock at his door") and delay ("I have to give him the information after two or three days when I meet him"). Going to search for a PCO was considered inconvenient as well as expensive and his family did not have a landline at home.

In contrast to Savio's experience, Rekha, another non-user, did not consider the non-possession of a mobile phone a restriction to her efficacy. Talking about completing her project work given by her teacher she commented:

The project that is given in college, I do it in college itself. I don't bring it home. Hence I don't feel any necessity to call and ask about doubts. And whatever I want to talk about with friends, I do it in the college itself.

Rekha disciplined herself to complete a task such as her homework at the location where she received it. Furthermore, she also had two fixed locations such as the college and home where she speculated she could complete the task given to her. She also made use of the resources such as her friends who were physically present with her and whose assistance she could garner if required in completing the task that she was assigned to do. Efficacy according to Rekha, was to complete the task that she received within the time she had at hand in the location where she received it.

However there are some differences that need to be highlighted in the experiences shared by Savio and Rekha. Savio was narrating a situation about an emergency in which he was not in control. He was outdoors and his friend had fallen ill. He felt it important to communicate with him at that time when he needed it. But in order to do so, he would have to be dependent on his friends present with him or search for a PCO. In contrast, Rekha was indoors, her friends were present with her and she was in control of the task of completing her project work. Furthermore she was in her college, a fixed location, whereas Savio was outdoors. Being in a fixed location was reassuring. Instead, Savio was en route. Being mobile unsettles human beings (Geser 2004) which is also seen in Savio's sentiments.

Different from Rekha, who did not own a mobile phone, Manjit, a self-professed non user student, preferred not carrying the mobile phone. She reasoned that since she had a regular route of travel between college and home, she did not need her mobile phone. Furthermore, she had not faced any major difficulties until then. However she recounted:

One day in front of college I had an accident and incidentally I had carried the mobile that day. I was injured. A few bystanders called up the police who instead informed my parents. I didn't call them because if I call them they will get worried. Then they called on my cell phone. When I spoke to them, they felt reassured. Then they demanded that I should carry the mobile everywhere.

Whereas Rekha had considered only stable dwellings, in her daily schedule, Manjit encountered the contingencies that can occur when one is in transition between two stable dwellings (Geser 2004) a situation similar to what Savio experienced. This heightens the importance of including contingencies that can occur when one is mobile. Manjit's parents by demanding from her that she carry the mobile phone every where assumed that the mobile phone will enable her to overcome the problems involved in being mobile, by being in varied kinds of spaces and by varied kinds of encounters one may experience in regular or contingent situations.

From the above analysis, three elements namely contactability, organizability, and de-restriction were derived as principal markers of mobile phone assisted self efficacy. These three elements assist in managing tasks, situations, and relationships. This may indicate that the concepts of contactability, organizability, and de-restriction are closely linked in students' minds where mobile phone assisted self-efficacy is concerned, or perhaps suggests that participants were more comfortable using these three constituents as vehicles for discussing mobile phone assisted Self-Efficacy.

7.7.5 Agency as Temporal Orientation

As indicated in the literature review, a sense of agency embedded within time is important in many theoretical treatments of the agency (Hitlin and Elder 2007). Different situations require different temporal orientation. Some situations are routine situations. They require routine and extended attention. In these situations individuals merely maintain their identity such as being a teacher, student, parent or child etc. But other situations are 'knife-edge' situations. They require intense attention and demand that individuals focus all their attention on the occurring situation at that time. Hence participants were asked to what extent mobile phones facilitated the required

orientations towards the two kinds of situations namely the routine situation and the contingent situation to be applied to different situations. It is worthwhile to look at figure 6.6 before the analysis continues further.

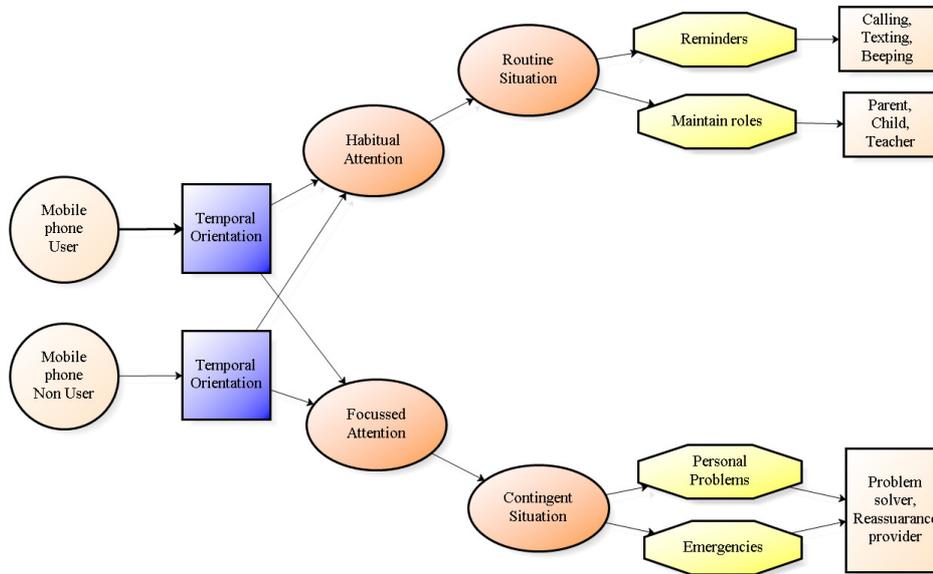


Figure 7.6 Agency as Temporal Orientation

7.7.5.1 Habitual Focus:

Individuals perform habitual actions according to their identity or role or to build ties. In these actions their orientation is a habitual focus on the situation. Data analysis indicated that the interviewees used the mobile phone to build ties in various ways

Rajesh viewed the mobile phone as offering the capability to stay in touch routinely with friends. “So I could stay in touch with my friends” was his reason for buying a mobile phone. James a non-user saw the advantage of the mobile phone in keeping the users connected to their near and dear ones. He remarked:

the advantage is that you can be connected with all your friends, family, relatives and everyone at anytime you want to, or when you are outside and feel like talking to your friends, relatives or parents.

The mobile phone was also useful in enhancing student-teacher rapport. Zainab, an educator, recounted how the mobile phone enhanced student-teacher relations beyond the walls of the educational institutions. She said:

With the mobile phone on the scene, the interaction is not just limited to the institution. Even when we are on a vacation, there is interaction with students because of the cell phone. So definitely yes, personal relationships are fostered.

An important feature in maintaining this connection was the 'missed call' or 'beeping'. Goyal used a missed call just to keep in touch with parents or friends. He said:

If I feel I'm missing somebody I just pick up the phone, I just message them or call them up. Even a missed call would do if I don't have balance.

7.7.5.2 Acute Focus:

Pragmatic agency refers to focusing intense attention on emergency situations and devising actions to address those situations. The data analysis showed interviewees addressing contingent situations such as emergencies, breakdown of infrastructures, scarcity of time etc. The mobile phone was deemed as a problem solver in various circumstances. Goyal said:

If there is any problem I can just pick up the cell phone and call somebody so there is no negative feeling in me.

It served him as a way to share his feelings when he was depressed and needed to talk to someone about it. It acted as a link to some help during times of emotional upheaval.

Children often argued with their parents that the mobile phone could be useful when infrastructure breakdown occurs, Savio, a non-user, in an interview commented:

Some of my friends come from Kalyan. In Mumbai now it is election time. Any time, any where a violent incident is likely to happen, any time the railway may stop, anytime the buses may break down. So those who are travelling long distances, they should have mobile phones. They can call their mom, 'I will be late today, don't worry'.

Interviewees also used it in time of natural calamities. Amar, user, recounted during the Mumbai floods:

I called my mum to ask how the situation was. It was really helpful at that time.

It has often been found useful as a safety device. Priti recounted the incident when she was separated from her friends and did not know where to meet them. She said:

There was a time we were in a train and my friends and I were going to Vidya Vihar. At the station I got into one train and my friends were left out and...and I was so nervous because I hadn't travelled in the train before. And em...I reached the next station and I didn't know what to do. And then I was like, okay, my phone was with me. And I called up my friends 'what should I do...should I carry on and meet you'll at the next station or what, I don't know the place at all'. Then they calmed me down, 'don't be tense, we'll meet you at the next station'. Then I was so, so, thankful, I mean, like, I have the phone with me. I was not like alone. I could contact my friends.

It was also found useful in saving time. Laban, a user, carries it everywhere especially during preparation for certain important events such as examinations. Laban said:

For the past two weeks, exam week, I was roaming round with the phone. If I needed to search for some subject matter, instead of searching the entire book for it, I call someone and like...'where is this, you have any idea?' and they'll tell where it is instantly. And basically if its not there then I will have to actually search for it myself, go to the landline, call the person up, or actually work it out myself.

Roshan, non-user, sees an advantage the users have over non-users since:

if they get into any kind of trouble anytime then they can easily contact their friends or their parents or at home. In this way they have an advantage.

However a non-user like Roshan sees other avenues to offset the non possession of mobile phones. He said:

I use the PCO or else if my friend has a phone then I have to borrow it from them and call home.

Hence from the perspective of temporal orientation, the mobile phone provides the possibility of channelling different orientations required to attend to different kinds of situations people face in their daily lives. In case of emergency situations, the mobile phone is available with the user to address emergency problems and its characteristic of immediate and direct reach enables emergency problems to be addressed in a timely manner. In the case of routine situations the mobile phone is always available merely to chat or to assure significant people of one's wellbeing.

7.7.6 Summary:

Thus the data demonstrated two ways in which the mobile phone was used by young people to exercise Personal Agency in contingent and regular situations. In regular situations young people used it routinely to manage their roles and relationships (identity agency) and in contingent situations they used it to address emergencies and problems. Thus the data showed the Mobile phone as a useful and effective tool in situations that occur habitually as well as in situations in which time is a scarce commodity, situations in which an individual requires an extended temporal orientation. It supports such temporal orientations that may be required in different situations of daily life and in being able to employ such orientation they exercise agency.

Data analysis also brought to the fore three principal constituents namely contactability, organizability and de-restriction, that interrelate in order to assist young people to exert influence on tasks and relationships in regular and contingent situations.

7.8 Bounded Agency

Having focussed on these three factors, the remainder of this chapter explored some factors which limit the use of mobile phone by young people having a bearing on their exercise of Personal Agency. In this sense Personal Agency assisted by the mobile phone is bounded. Emphasis will be placed on the socio-cultural and contextual factors that impinge on mobile phone assisted Personal Agency on which the study focussed. Thus in the final part of the qualitative data analysis the question asked is:

- (vi) What are the socio-cultural and contextual factors that limit the use of mobile phones by young people?

7.8.1 Introduction:

Data analysis demonstrated that the agentic use of the mobile phone was apportioned blame for the dilution of dedication to studies and parental authority. A case will be also be made to show gender discrimination in mobile phone possession and use. Each of these issues will be dealt with in this part of the chapter.

To evaluate the boundedness of mobile phone assisted Personal Agency the researcher asked the question: what were the restrictions that young people faced in using the mobile phone? While restrictions were many related to technical (network, battery), governmental regulations (age eligibility), and financial (recharge), this study dwells on three restrictions present in the context that were prominently mentioned across the interviews from three socio-cultural and contextual factors namely educational institutions, parents, and gender which young people negotiate in their daily lives.

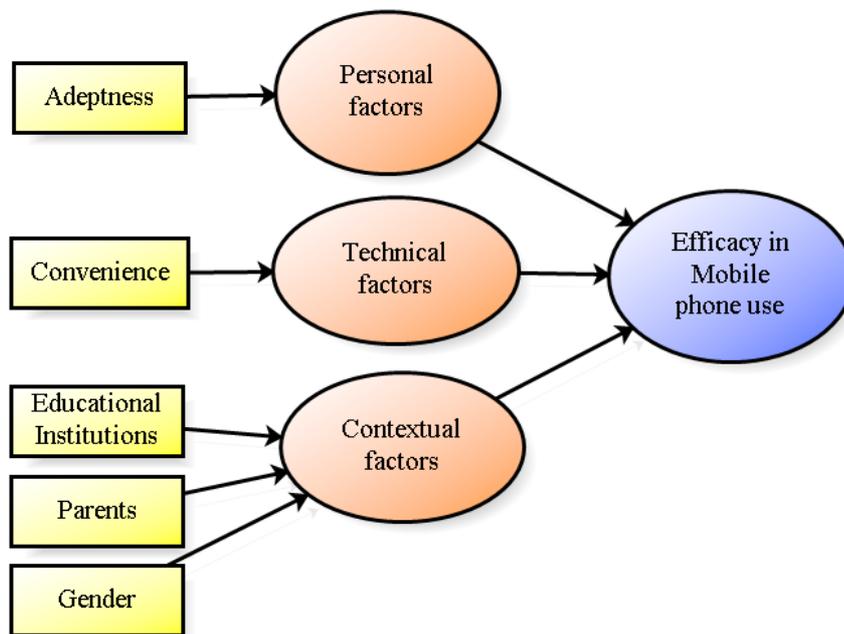


Figure 7.7 Factors Bounding Mobile Phone Assisted Personal Agency

7.8.2 Personal Factors:

As seen earlier, adeptness was observed in the interest that young people demonstrated in technological features of the mobile phone, the comfort with which they used it, the curiosity they had in exploring the features, services and functionalities that the mobile phone has, where and how the phone is placed for efficient use, and how frequently it is used. These characteristics benefit the young person in using the phone in an efficient and timely manner. It placed the young people in an advantageous position with respect to adults. Hasina, user, observed:

I think with the increasing developments in technology youngsters are using it way more to its maximum. Elders don't use it as much. As far as I have seen my parents use it for calling or for messaging at the most. They don't bother for music into it or nothing, nothing into the technology part of it. It's the youngsters definitely who use it more.

In contrast Karam, a parent, when interviewed said:

I wouldn't say I'm very savvy with it. I know I am comfortable with it. The basics I know.

Hema, another parent, said:

Whenever I have to make a call or receive a call I use it. I use it whenever I am in need of making a call, or say for receiving or for calculation also and sometimes for messages.

7.8.3 Technical Factors:

Many studies have been done on this subject as mentioned earlier. In this study, participants spoke of various technical factors which were a cause of concern such as the effect of mobile phone use on health. Jasmine voiced her concerns:

I have heard about that it causes cancer and all. Like not to keep it near your pillow when you are sleeping or when it vibrates in pockets it's not good for your health.

There was disappointment over the shortness of battery life. According to Rekha, the aspect of being able to call anytime and from anywhere lacked strength where the battery life was concerned. She remarked:

Though we can call anytime and anywhere yet due to the limits of battery we can't actually call anytime anywhere.

The inconsistency of the network signal was another technical problem faced. "The network coverage is always a problem" said Goyal.

7.8.4 Socio-Cultural and Contextual Factors:

Three contextual factors are studied namely, restrictions from educational institutions, restrictions from parents, and restrictions on account of gender.

7.8.4.1 Restrictions from Educational Institutions

7.8.4.1.1 Kinds of Restrictions:

7.8.4.1.1.1 Warnings:

Data showed different restrictions that educational institutions introduced to discourage students from using mobile phones on campus. Some Junior Colleges and Senior Colleges warned the students at the outset. The code of conduct and college regulations of HR College in Mumbai stated in their admission prospectus for the year 2009-2010:

Use of cell phones is banned inside the college premises. Defaulters are liable to be punished (HR College Prospectus 2009, p12).

In another school Crystal (U,T,33), said:

We tell them that if we see them using cell phones in the college, we will confiscate it. 'You won't get it back.'

Still others had a warning written at one corner of the black/white board facing the students.

7.8.4.1.1.2 Confiscation:

However Zainab's school advocated confiscation of mobile phones. Zainab, teacher, said: "We have a rule that if the students are found using cell phones in the class room or the corridors the cell phone is confiscated for fifteen days."

Savio a student told about his experience adding,

My friend was caught in college. It was a very nice piece. Not unless his father or mother rescues it from the college authorities will he now get the mobile phone back. It is confiscated by the college.

However teachers refrained from using this strategy to avoid their reputation from being maligned. Crystal teacher said:

Warnings that the cell phone will be confiscated if they bring their cell phones to school make them think that the teacher is rude, and that she wants to take the cell for herself. Such weird ideas they get.

To counter this some schools keep an inventory of confiscated items in school.

7.8.4.1.1.3 Fines and summons:

Some schools also resorted to levying fines. Zainab also informed:

Earlier we used to give back the SIM card to the students then we found out, that is what they want. They want to dump all their old pieces in the college. So now we do not give back the SIM card also. The phone and the SIM card remain with the college for fifteen days and after fifteen days it is returned to the students after taking a fine of 500 rupees (approximately 8 euros) or one thousand rupees (approximately 16 euros) for the camera phone. After introducing this rule, to some extent, we have been able to curb the use of mobile phones in college.

As Savio mentioned earlier, another method used by schools was to summon parents to meet the teacher and in the very serious cases of misconduct, the principal of the school. This is considered very embarrassing and highly disciplinary.

7.8.4.1.1.4 Permission to use in common rooms:

However some institutions take a more student oriented stand and allowed the use mobile phones in designated areas such as the common rooms. Zainab informed:

Some colleges provide places like the boys' common room¹⁸ and the girls' common room where students are allowed to use the cell phones in those particular allotted physical areas.

¹⁸ A common room is a room allotted in the college premises for recreational activities and meetings. Boys and girls have separate common rooms allocated in different areas and apart from each other.

7.8.4.1.1.5 Ban:

The ultimate measure taken by educational institutions is to ban the use of mobile phones on the campuses. Zainab informed that the Mumbai University had asked the colleges to ban cell phones in college premises. In other cities like Chennai, Anna University banned the use of mobile phones on campuses in 231 engineering colleges that fall under the university's purview (Anand S. 2005; Raghupathi, Hemalatha et al 2010). Such measures were often resisted by students and confronted by protest marches and legal suits. However by placing legislation to ban the use of phones in educational institutions the universities send a clear warning to education authorities and students that phone use in the premises of educational institutions is detrimental to the learning environment.

7.8.4.1.2 Reasons for placing restrictions:

Mobile phone use was restricted within educational institutions primarily because it was seen to interfere with dedication to studies and to introduce indiscipline which violated the learning environment of the institution. There was concern regarding the academic performance of students (Kushchu 2003). Other reasons also included circulation of indecent MMS among students, bullying, disturbance during class time, playing games during lectures. For example, students misuse mobile phones by browsing online or playing games while they are in class and some of them even become too addicted (Cui and Wang 2008). Table 7.9 offers some examples regarding how mobile phone use disturbs the academic environment in educational institutions. Hence like hospitals (Lawrentschuk, Nathan and Bolton 2004), schools and institutions had their reasons to worry about cell phone usage on campus and needed to have a reasonable course of action to legislate or restrict phone use.

7.8.4.2 Parental restrictions

The data also showed that parents set some parameters within which the mobile phone use of their children was permitted. The prominent kinds of restrictions that parents resorted to are enumerated as the following.

7.8.4.2.1 Kinds of restrictions:

7.8.4.2.1.1 Permission to possess a mobile phone

Table 7.9 Examples of erosion of academic rigour among students due to mobile phones use		
Quotes	Sub-category	Core category
"They send SMS' and their attention towards the lectures is diverted." (Crystal, educator).	Attention diverted by mp use	Attention diverted from studies by mobile phone use
"While studying they do get calls so their attention quickly gets diverted and because of that they get distracted, whatever, for one minute or ten minutes. But whatever they have studied, their concentration is lost, they forget." (Sayed, non-user)	Attention diverted by mp use	
"And there is a problem of diverting attention as far as students are concerned... I mean just like students getting addicted to computers, video gaming, some of them get addicted to sending messages, playing games on the cell phone, talking to people for hours, in that sense yes, students are distracted from education." (Zainab, Educator)	Attention excessively devoted to mobile phone than studies	
"My friend was... reprimanded because of using headphones when the class was on. Actually he got a call and he picked it. Teacher saw it and scolded him. The punishment was that parents were called to talk to the principal". (Savio, non-user).	Inclination to use mobile phone despite class regulations	Inclination toward indiscipline owing to mobile phone
"Their cell phone rings when the teacher is teaching and they pick it up. It is not allowed. A reminder is also written on the blackboard that you are not allowed to use it. But they are not bothered. They pick it up". (Manjit, non user)	Inclination to break rules about mp use	
"Students show off their cell phones to flaunt their wealth, their status. This creates problems in the student community". (Zainab)	MP encouraging discrimination	Expensive mobile phones in college invite stealing
"Some other students buy mobile phones worth 20 to 30 thousand rupees...It may tempt students to steal. It creates a disciplinary problem". (Zainab)	MP cost encouraging stealing	

Table 7.9 Examples of erosion of attention to studies among students due to mobile

At the outset, possession of mobile phone was subject to permission from parents who in many cases only allowed their children to have a mobile phone only after they finished

their std 12th examinations. The primary concern was that excessive use of the mobile phone might distance young people from their studies. Roshan commented:

I don't have a phone because I don't have permission from my home. My dad is against it as he says, 'if you own a mobile you won't study and you will just waste your time on the phone and you will keep talking on the phone'.

7.8.4.2.1.2 Financial control:

One of the prominent restrictions was to control the amount given to them for refilling the talk time on their phone. Goyal said:

When I had just got my cell phone. I used to get very less pocket money. I used to go to them and ask them for it and refill the card. So the restrictions were...like...why are you talking so much? Why are you using your cell phone so much?

There were often conflicts over spending heavy amounts on calling. Laban, user, said:

On one occasion when the bill went too high, but then that only happens very rarely, they were basically shouting and asking me how the hell did your bill go so high and reach such an amount...make sure the bill doesn't go that high again.

Parents saw placing financial restrictions as one way to prevent incessant use of mobile phones. Hema, parent said:

Somehow he would manage with the amount we gave him. May be he would have to pay the additional charges from his pocket money.

To counter this restraint young people search for deals that are more economical for their use. Goyal added:

I realized that there are many service schemes where I can reduce the cost and increase the talk time and the messaging.

Some services providers devised schemes that provided young people with varied options to be economically efficient such as free texts or groups calls or indeed reduced prices for late night calls.

7.8.4.2.1.3 Time boundaries - Late night calls:

However young people were discouraged from making or receiving late night calls at home. Hasina tells of her experience:

Actually sometimes late night calls do come and that happens because late night you're just bored or something and then you might just ring up somebody and speak. I don't live with my parents right now, I live with my grandmother. But she is sleeping so she does not know. My sister is with me but she doesn't mind 'cause she is pretty much the same age so she knows the whole thing. So it's okay at the minute because elders are not around. But if elders are around and they know about it I think they will have a problem.

Children respond in various ways to restriction from parents about talking late at night. Speaking of his sisters, Rajesh said: "I have got two sisters and they talk late in the night. And it's ok."

Some don't give undue attention to the messages arriving at night. Priti, user, said:

I don't use my cell phone in the night unless it's very urgent and I really need to talk to someone. I get messages in the night. I don't really reply because I'm so tired. I reply to it only in the morning.

Whereas Peter during a pilot interview said, "I mostly text at night", Ruhi and her sister decided not to talk on phone late nights. She said:

They haven't kept any restrictions about talking late night but me by myself and my sister by herself, once the lights are gone off we don't use the cell. I have always told my friends that ten is the limit. That is the time I go to sleep, don't message me and if something is very important you can call me on my landline I will pick up that. That is the way I divert.

Talking late nights is considered by parents as a corrupting influence. Goyal said:

They always have the restriction of not talking late in the night. They have always scolded me for it. They get different thoughts about what is going on in my life. They feel there's something wrong going on.

Lucky agrees: "If we talk at night, the parents assume that some romance is building up."

7.8.4.2.1.4 Parental Surveillance:

Parents exercised surveillance in order to know where their children were and what they were doing. Hema, parent said:

At least I know that if I call him up I know he will reply back or I know where he is. Most of the time it would come busy and after that he calls and asks yes mama what happened or you were calling up. Then I tell him what time he is expected back or where he is and things like that.

They were surveillant in order to feel a peace of mind that their children are safe, not roaming about aimlessly or engaging in romantic behaviour. This form of restriction was often used. However it is resisted and often gives rise to conflicts between parents and their children. Priti, student, user:

I sometimes don't pick up my mama's call because it's on silent and my parents get really angry with me. They like, why don't you pick up the phone?" What is the phone for? to pick it up...like 'mama it was on silent'. 'But you are not supposed to keep the phone on silent...you supposed to keep it loud'... 'no, but it rings too loudly and people all around look at me like'. Then my mom, like 'no, the cell is given to you so that...we can contact you...not for your use'. So then I say mom 'now please...mama please'. Like 'the phone is given to you for a purpose, for a reason that we can get contacted to you' and some times my mom is like, 'yeah, if you don't pick up the phone, I am going to take the phone away from you'. And then that's when I get all scared and I keep calling her up when I am out and about, 'mom I will come back in 10-15 minutes'.

To counter parental surveillance children respond by not picking up parents' calls. One of the group discussions went as follows:

Lucky: "Most of the time we are with our girlfriends or boyfriends. Parents call, 'why are you late, children say this was the problem'. Then they don't pick up calls. Students sometimes keep their parents name as 'danger' on their phone so it shows that they really do not want to attend to their parents' calls. Many of my friends have saved their parents name as danger. So the mobile phone in an occasion for disrespecting parents.

Ranjit: Sometimes they tell others to pick up calls. They say that you pick up the call. I will not talk.

Jyotsna: We don't like attending our parent's calls because they keep harassing us and when we go home we give them an excuse that we did not hear it ringing or something like that.

Along with using the mobile phone to indicate who is trying to get in touch with them and avoid those whom they do not want to talk such as parents when they are out and about, the mobile phone also allows negotiation of terms and circumvention of limits placed by them.

7.8.4.2.2 Reasons for placing restrictions:

7.8.4.2.2.1 Concern for children's academic performance:

In India, young people are expected to seek permission from the parents for their activities when they are out and about with their friends. However some take liberties once they are out and about and change their schedules and plans at will without informing their parents. With the mobile phone they can contact their friends and modify their plans at short notice. Modifying their schedules without informing their parents adds complexity for parental surveillance. Such use of technology and social networking in organising gatherings was not experienced by the previous generations. With very short notice, plans can be made or changed; and parties can be arranged or shifted. Without the kind of planning required of past generations, spontaneous gatherings arise, and parent's fear their children could be in inappropriate places or mixing with groups which may be detrimental to their moral character. Roshan, non-user told about his friends:

They have a mobile they can plan to go out anywhere, they can immediately call up their friends and all and plan up to meet somewhere and go here or there. When they are out they decide there and then out and out that we will go out for food or go out to roam somewhere. They don't inform at home.

Ruhi told about how their parents exercised their authority in relation to their children's time management. She said:

They just tell me that at least one hour when you are studying keep it aside let it ring, let it bang let it do anything but don't go and touch it. After that one hour finishes, after you finished focusing on your studies then you go and touch it and then you sit with it and do whatever you want but till then you be with your studies only.

Sayed, non user spoke about his friends:

While studying they do get calls so their attention quickly gets diverted and because of that they get distracted, for 1 minute or 10 minutes. But whatever they have studied, their concentration is lost, they forget.

7.8.4.2.2.2 Concern over entering romantic relationships:

Another reason for the restrictions is the concern that parents have over their children entering romantic relationships. One of the participants shared her experience about a message from her boyfriend accidentally landing on the mobile phone of her mother which led to a bitter argument. The parent warned the participant that she should not mix with her friend. Another participant spoke of the gossip that begins on seeing a girl talking on phone for long in public places assuming that it is related to a romance. Young people are challenging the authority of parents by using the mobile phone for romance. Young people are dating via the mobile phone – where a relationship is initiated and sustained through text messaging and voice calls with a face-to-face meeting not taking place for several months – has also become a common feature of mobile phone use among young adults (Law and Peng, 2006; Bowen et al. 2008; Wei 2007a). In using mobile phones to autonomously establish intimate relationships, young

migrant women in particular challenge parental authority in such decisions (McCrinde 2010).

7.8.4.2.2.3 Addiction to the use of mobile phones:

Another fear parents have is that the child may get addicted to mobile phone use. Excessive attachment to mobile phones was observed in many opinions expressed by the young people during the interviews. Jasmine said, "If I loose my mobile phone everything is gone." Ruhi, laughingly remarks that if she forgets her mobile phone at home, she would "go back to the house and get it." Manjit non user student:

They are habituated with the mobile. As soon as the phone rings they pick up the cell phone. They get upset if it is not picked. 'Hey cell phone is not picked up. Where is it, where is it?'

Ruhi, user shares her experience of being overly occupied with the mobile phone:

First I used to like crave for one phone and now that I have it I feel I am too addicted to it that I cannot focus on other things, like my studies. Sometimes when my mobile rings I think oh heavens my mobile is ringing someone is calling so my attention gets diverted from my studies. Or like, if someone else is speaking on the phone my attention gets diverted, oh my message will be coming; my call will be coming if they get to see so in that way.

7.8.4.2.2.4 Shortening of family time:

Addiction to being on the mobile phone has led children to spend less time with their families and more time in isolation. Parents would prefer that children spent more time with the family rather than talking incessantly on the mobile phone. However time spent with the family is shortened due to reasons that emanated from parents behaviours as well. While children were prone to talk continuously with their peers on the phone, parents spent much time working. This was seen among two income families. Radha (U,T,32) said:

Both parents are working and hence there is a more influence of the outside world on the children than the parents.

She further said:

Parents should reflect, that 'we should spend more time with the children'. It will be like a future investment. Today if you make time for your children, tomorrow your children will make time for you.

Parents were seen to be spending shorter time in the physical company of their children. Therefore mobile phone contact with them was seen as a compromise.

7.8.4.2.5 Friendly Advice:

However the above mentioned restriction placed by parents was also complemented with friendly advice. For example, Hema said:

...as far as possible I used to say that limit your talks because the bills also had to be paid by us so that was one thing I would say. But somehow he would manage with the amount we gave him. May be he would have to pay the additional charges from his pocket money.

Goyal responded in a positive way when invited to be responsible for the appropriate use of the mobile phone. He said:

It was long ago when I had a girl friend but it was against my mom's rules. So yes I did misuse my independence for quite some time with regards to the cell phone. But that time it wasn't my cell phone it was my moms cell phone but still yes she had given me the independence to use her cell phone and I let her down then.

However while sometimes friendly advice was offered in order to appeal to their sense of responsibility, at other times there was a stern reprimand as seen earlier with Priti, who was told that if she did not call her parents regularly when she was out and about, her phone would be taken from her.

However parents faced a dilemma of alienating their children by laying down boundaries and possibly trigger inappropriate behaviour from them. Crystal, Educator, speaking of her experience as a parent, thought that placing harsh restrictions may lead the child to the wrong means of appropriating a mobile phone such as stealing money. She said:

The parent has to think about both the sides now so that the child does not take to inappropriate methods just to gain something like that.

Hence often parents resorted to relax boundaries and be “peerants” (McCordle 2010) rather than parents. They yielded to permissive parenting, abandoned emphasis on personal responsibility, and provided children with too much freedom too early (McCordle 2010). A common fear among parents and school authorities is that as the younger age cohort grows older, their level of usage may increase, as they become more dependent on the benefits their phone can provide and more services such as those provided via the internet become available (Lamble et al. 2002)

In line with this, Zainab, teacher talking about her students said:

...Some of them get addicted to sending messages, playing games on the cell phone, talking to people for hours.

These are passionate users who are almost addicted to their mobile phones. Such people use all the handset’s features and make frequent calls, using their phone for both voice communication and text messaging. They are much younger than the average (Antoine 2004).

7.8.4.2.2.6 Avoidance of boundary setting:

The avoidance of boundaries setting and a failure to emphasize personal responsibility can create a context where there are choices without an understanding of consequences. Far from instilling independence and maturity, too much freedom too early, may lead young people to worry less about the risks of their behaviour and they are more likely to

circumvent restrictions if they are placed (William and Williams 2005). In this study it was seen that Jasmine used the following methods to overcome restrictions. Jasmine said:

I use headphones and talk. I go to the toilet and talk. And yeah, keep the phone on silent so that no one comes to know that the calls are coming. At other times, I pretend as though I'm clicking photos, but am actually sending messages (laughs).

Some play on the emotions of parents. Priti enacted how she pleads with her mother to give her more time to talk on the phone. She said:

I like... 'mom pleeeeeease, little more pleeeeeease, and then she'll be like, 10 minutes, that's it'. So she gives in to your pleading.

The consequence of this is the erosion of parental authority over children. The inability of parents to exercise their authority was evident in the way young people used the mobile phone in relation to their parents. According to Garg and Parikh (1993), familial values such as obedience to parents, conformity, self-denial, and fulfilment of parental expectations are at the crossroads in the urban middle class Indian families. There was a desire among the young people to be allowed to lead their own life and at the same time retain a sense of emotional continuity through the observance of role obligations (Verma 2004).

However the parents are expected to be in a position to protect children from influences external to the family because they are expected to make the primary impression on the children followed by teachers or their friends who come later in their lives. The habit that parents inculcate will be the ones which will last in the lives of children (Whiting and Edwards 1992; Verma and Larson 2002).

7.8.4.3 Gender restrictions:

Participants were asked if possession and use of mobile phones was influenced by gender. There were varied opinions about gender restrictions regarding possession and

use of mobile phones. Some participants did not face restrictions in their homes regarding possession and use of mobile phones. Gayatri (U,T,36) said: "I was the first one to buy the mobile phone in my family." Reshma (NU,SC,16) said:

In my house there is complete freedom. I talk freely on the phone. My mama has no problem, my dad has no problem.

Hence there was no opinion that signalled extreme restriction on mobile phone possession and use on either boys or girls. However there was evidence of girls experiencing restrictions. Jessy (U,T,34), in a group interview, said:

...Some families may not mind a girl having a mobile phone if they believe in freedom to all.

However equality cannot be judged on the basis of mobile phone use according to Reshma, non-user, in group interviews of students, said:

Equal we say, but whatever kind of modern family it is, regarding girls, somewhere their thinking is the same. They are still traditional....However modern the family is, will they send their daughter out at nights? No. What ever happens they will definitely get her married. Will they let her sit at home like their Son? Why not then? If you consider both equal, then why don't you speak the same language with girls? No. They still discriminate. It has been happening from earlier times, and it will still happen.

With regard to possession of mobile phones, even though parents may wish that there would be no discrimination as regards mobile phone possession, when there is a financial crunch, they would prefer giving it to their son than to their daughter. In a group discussion of teachers Taslim (U,T,37) said:

In case the parents have a financial problem or they don't have so much money that they can give a mobile to each child then they will still prefer giving the mobile phone to the son.

Radha, educator, felt that though finance may be an important factor in deciding who among the sons or daughters may be preferred for mobile phone possession, in practice,

in these situations, it is usually the son who is given preference. In a group interview she said:

You tell the boys they will not listen. Parents will have less control on a boy than on a girl. They will have control over the girl that you cannot go out. If the boy and the girl both decide to go out for a party, they will send the boy without asking any questions, but the girl will be told no, you cannot go, or you have to come back at this time.

When a boy spoke on phone for a long time it was perceived to be normal behaviour whereas in the case of girls it was tagged as ‘having an affair’ or romantic liaisons.

Ranjit, user, agrees:

If the child talks too long on the phone at home the parents assume that she or he has an affair. That is the reason she or he is stuck to the phone.

Romance is frowned upon in Indian culture and the gossip about it travels through human networks of aunts, friends, relatives or acquaintances. It has a bearing on the status of the family and the marriage prospects of the girl. Being seen talking for long duration over the mobile phone is presumed to be related to romance which may not be the case (Hannah 2007; Rai 2009). Societal pressure forces parents to impress upon girls to be culturally aligned to social mores.

7.8.5 Conclusion:

This chapter of research findings explored the personal, technical and contextual factors which limit the use of young people’s use of mobile phones which has a bearing on the exercise of Personal Agency. The features of each kind of factor were deliberated on and the reasons for the restrictions were explored and analyzed. These factors bring to light the fact that mobile phone assisted Personal Agency is bounded. Young people have to steer their way through these factors while using the mobile phone to exercise Personal Agency.

Section IV

Chapter 8

CHAPTER 8

Discussion

8.1 Introduction

This research was aimed at exploring the use of mobile phones by young people to exercise Personal Agency in Mumbai, India. It particularly explored the differences in the exercise of Personal Agency among participants who were mobile phone users and non-users. It further explored the characteristics of Personal Agency exhibited by mobile phone use. These characteristics were named as contact-ability, organize-ability, and de-restriction. These three inter-related factors rendered a higher sense of Personal Agency to a mobile phone user than a mobile phone non-user in the sample of this study.

Thus the exploration demonstrated that Personal Agency of a mobile phone user was higher than the Personal Agency of a mobile phone non-user. By exploiting these characteristics of the mobile phone, young people in this sample perceived an enhanced sense of Personal Agency. By using these characteristics they exerted influence on the tasks that they encountered in their daily lives. The tasks were the management of contingent situations and maintenance of relationships they encountered in daily life situations. The tasks also involved the circumvention of boundaries to achieve their aims.

8.2 Data analysis within Mixed Methods designs:

This research study used a Mixed Methods research approach, involving a quantitative questionnaire, and qualitative semi-structured interviews and group discussions. Having adopted the concurrent triangulation design for this study, the quantitative and qualitative data was initially gathered and subjected to analysis separately. Being a triangulation study, the two set of results were then merged for a complete picture to

develop. The merging of data allowed the researcher to answer the mixed method research question of the study namely:

To what extent do quantitative and qualitative data complement and validate each other with regard to the exercise of Personal Agency among mobile phone users and non-users?

The analysis consists of comparing and examining the similarities and differences of the quantitative and qualitative data results through a discussion. This chapter discusses the main findings as a result of the mixing of the two results. It refers to the results of the quantitative data and qualitative data and follows it up with specific quotes or information that confirms or refutes the results. This approach is frequently used in Mixed Methods research (Creswell and Plano Clark 2007).

8.2.1 Validity of the data within a mixed method design:

The act of combining qualitative and quantitative approaches raises additional validity issues. Validity, within a Mixed Methods context, is:

the ability of the researcher to draw meaningful and accurate conclusions from all of the data in the study (Creswell and Plano Clark 2007, p146).

In order to address the validity of this Mixed Methods study the researcher ensured that the validity was discussed separately within the context of both quantitative and qualitative data analysis. Moreover:

an overarching validity can follow if the researcher draws evidence from different datasets that provide better results than either dataset (quantitative or qualitative) alone. It is called “triangulation validity (Creswell and Plano Clark 2007, p146).

Hence while addressing “triangulation validity” of this study, the researcher also discussed the potential threats to validity that arose during the data collection and analysis and addressed how they were minimized. The researcher minimized the confirmation bias by presenting rival explanations and either reduced or eliminated them (Johnson and Onwuegbuzie 2004). To ensure descriptive validity, the researcher gathered and presented as much descriptive as possible information to ensure accuracy. The researcher also ensured that the interpretation accurately portrayed the participants’ meaning about what was being studied. Furthermore, the researcher ensured that theoretical explanations developed by him fitted the data by cross checking explanations, reflexivity, analysis of negative cases and triangulation. (Johnson and Turner 2003).

8.3 Discussion of the main findings

This study explored the exercise of Personal Agency by the use of mobile phones by young people in Mumbai. It did this by examining the difference in the level of Personal Agency between mobile phone users and non-users who were 16 to 19 years of age. The city of Mumbai was chosen for this study because it has a large middle class population. Being a business capital it also has a consumerist outlook and a widespread adoption of mobile phones. It also shows a harmonious blend of a traditional and western outlook.

Firstly, this study investigated the influence that demographic variables, such as gender, religion, academic qualifications, socio economic status, duration of mobile phone possession, and frequency of its use, had on the exercise of Personal Agency by mobile phone users and non-users. Secondly, it explored the characteristics of the exercise of Personal Agency that are seen in mobile phone users and found deficient or dwarfed in non-users, adversely affecting their Personal Agency in some situations of daily life. In doing so, the study also raised some of the pertinent issues related to this study.

This discussion did not highlight all the quantitative and qualitative results indicated earlier but focused on the main findings of the study. Firstly it highlighted some of the pertinent attributes in the profile of mobile phone users in this study because of the focus

of the study on them. Secondly, it discussed the influence that demographic variables, such as gender, religion, academic qualifications, socio economic status, duration of mobile phone possession, and frequency of its use, had on the exercise of Personal Agency by mobile phone users by comparing the quantitative and qualitative results. Thirdly, it explored the characteristics of the exercise of Personal Agency that are seen in mobile phone use and found deficient or dwarfed in non-users.

8.3.1 Profile of mobile phone users:

The sample of mobile phone users in the study exhibited five distinctive attributes. First, the board exams were considered as a more likely threshold point beyond which mobile phone acquisition and use was permitted by parents for their children. The acquisition of the mobile phone was regarded by parents and participants as a symbol of maturity and entry into adulthood.

Second, the mobile phones were more likely to be given as gifts for special occasions in the lives of young people such as important birthdays. More frequently they were offered as rewards for successful completion of board exams. These were gifted or rewarded by their immediate family members such as parents and elder siblings, or extended family members such as uncles. It indicated that mobile phones were considered as highly valued items since they were gifted or rewarded on special and important occasions. Due to their high value young people tended to flaunt their mobile phones as status symbols.

Third, the participants did not obtain mobile phones of their own accord. They were given to them by someone from within their immediate or extended family; and their request for a mobile phone could be turned down by parents who had the ultimate authority to permit its acquisition. It was also considered the parent's responsibility to ensure its appropriate use by their children.

Fourth, the participants did not have the power and independence to initiate the

acquisition of the mobile phone for themselves. They were permitted to acquire it or were provided one. Even if their relatives gifted them a phone, they were allowed to use it only if permitted by their parents. The parents held an influential gate-keeping role.

Fifth, the participants saw many reasons for acquiring mobile phones. The most common reason to warrant a mobile phone was its usefulness in matters related to their studies such as starting a professional course of studies, going for tuition classes, requiring 'to be in touch' with project members, and coordinating group work. Such reasons were favoured by parents for acquiring a mobile phone. Another reason that parents allowed the acquisition of mobile phone was 'to keep a watch' on their children for their safety as well as to keep surveillance over the behaviour of young people when they were not present with them. Reasons that young people provided to parents such as "wanting to be in touch with friends" or "all friends have it" or "it is a trend" were not considered sufficiently convincing for parents to permit young people the acquisition of a mobile phone. Another reason important to the participants was peer pressure. Due to peer pressure, participants insisted on acquiring a mobile phone, at times, even when their parents were not in a financially sound position. For example, Ruhi said:

I used to always tell my dad 'don't bring this one, bring me some new model' so he used to say 'ok fine I will give it to you but you wait for sometime, I don't have that money right now.'

These attributes highlighted the fact that the acquisition and use of mobile phones was closely monitored by parents. They also highlighted that there was also agreement between parents and young people on some motivations for acquisition of mobile phones such as safety and studies, and conflict on some other motivations such as 'to be in touch' with peers and because 'all have it'. When faced with such contextual restrictions and conflicts, young people were likely to acquire and use mobile phones in an inappropriate way in order to fulfil their adolescent aspirations. Recognizing this fact as well as the need to lay down suitable boundaries, Crystal, Educator, recognizes the dilemma for parents saying:

The parent has to think about both the sides now so that the child does not take to inappropriate methods just to gain something like that.

8.3.2 Influence of demographic variables on Personal Agency:

On highlighting the pertinent attributes of the sample involved in this study, it discussed the influence that demographic variables, such as gender, religion, academic qualifications, socio economic status, duration of mobile phone possession, and frequency of its use, had on the exercise of Personal Agency by mobile phone users and non-users. This question was discussed by comparing the quantitative and qualitative results.

8.3.2.1 Academic qualifications, religion, and duration of mobile phone possession:

In order to identify the influence of variables such as gender, academic qualifications, religion, socio-economic status, duration of mobile phone possession and frequency of mobile phone use on the exercise of Personal Agency by mobile phone users and non-users, the quantitative results revealed that academic qualifications, religion, and duration of mobile phone possession did not have a significant effect on the exercise of Personal Agency of mobile phone users as indicated in tables 5.2, 5.3b, and 5.5b.

8.3.2.2 Gender:

When considering gender, the quantitative and qualitative results showed some amount of disagreement. The survey results indicated that the mean of Personal Agency between male ($M=3.26$) and female ($M=3.32$) users was not significant ($p>0.05$), as indicated in table 5.1, demonstrating that gender did not influence the individual's exercise of Personal Agency significantly.

During interviews, when participants were asked how girls and boys were treated with regard to mobile phone use and possession, there was a general agreement among them, as well as educators and parents, that both were accorded equal treatment. However on further probes during the interviews with participants, it became clearer that there

existing some discrimination based on gender. Furthermore as indicated in the literature review, in the Indian society, females were known to be discriminated against in many aspects of their personal and social lives. This constrained their ability to make personal choices in their lives. For example, the qualitative results indicated that females were perceived as involved in a romantic affair if they were observed talking on the mobile phone in public places for a long duration. Such behaviour did not cause much concern when a male engaged in it. Furthermore, there was a marginal perception among participants that females from some religions in India were prevented from the use of mobile phones. But this perception did not emerge in the majority of the participants. Moreover, some participants indicated that if there is a financial crunch in the family, the mobile will be acquired for males first.

Matanhelia (2010) in her recent study on mobile phone use in Mumbai noted that the socio-cultural environment of India provided greater freedom to males to use mobile phones while females had to use it cautiously in order to prevent incurring parental sanctions and curbs on their freedom. Furthermore males and females could not socialize either at home or in public places without the risk of being seen to violate social conventions. They socialized with each other on the mobile phone exchanging numbers and speaking to each other in privacy. This indicated that young people used the inherent possibilities of the mobile phone—the possibility of privacy—to circumvent socio-cultural controls and conventions. The mobile phone provided young people with the ability to circumvent those conventions that curtailed their choices and dampened their adolescent aspirations.

8.3.2.3 Socio-economic level:

Furthermore, the survey results indicated that the level of Personal Agency of mobile phone users differed significantly between the different socio-economic status categories as indicated in table 5.4b. Thus, the survey results showed that the mean of Personal Agency for medium (M=3.36) and high (M=3.37) socio-economic status categories were nearly the same as indicated in table 5.4a. Scheffe's Post Hoc test as indicated in table

5.4c and Homogenous subsets as indicated in table 5.4d revealed that these two categories could be merged into one. On merging these categories, the researcher named the merged category as 'higher' middle class category. However the mean of the low (M=3.16) socio economic status category was significantly different from the merged socio-economic status category ($p < .05$) as indicated in table 5.4b. The researcher named this category as 'lower' middle class category. Dividing the middle class into two as lower and upper middle class is supported in literature (Joshi et al. 2009).

Thus, the survey result indicated that the exercise of Personal Agency significantly covaried with SES. This result was relevant because mobile phone use is closely related to the availability of financial resources. Higher middle classes are known for higher spending power. Hence young people belonging to this class were more likely to get adequate financial resources from their parents to use mobile phones more frequently than those who belong to the lower middle class category. However mobile phone literature indicates that even those who belong to the poorer classes showed considerable ability to use the mobile phone to achieve economic gains (Plude and Taske 2010). This is possible because those who belong to the lower socio-economic category made use of offers and promotions that the service providers advertised in innovative ways to maximize the amount of money they put in the mobile phone refills, and to get the most from the mobile phone experience. Hema, Parent, talking about her son said:

"Somehow he would manage with the amount we gave him. Maybe he would have to pay the additional charges from his pocket money."

Goyal, looking out for promotional offers that were economical said:

"I realized that there are many service schemes where I can reduce the cost and increase the talk time and the messaging."

Young people used promotional offers such as free weekend calls or a certain number of free texts if one recharges with a certain amount.

8.3.2.4 Frequency of use:

Survey results also indicated that Personal Agency was significantly higher for greater frequency of mobile phone use. However firstly, the qualitative data results indicated that there were conflicts over the payment of high mobile phone bills as a result of frequent use. Secondly, qualitative data results also revealed that parents were concerned about the health of their children due to the frequent use of mobile phones. Even though it was not conclusive (Gizmag Team 2010), there were studies that related ill health and lack of well-being, biological, psychological, behavioural, cognitive (Chia, Chia and Tan 2000), to mobile phone use. Hence parents restricted the mobile phone use among their children. Parents also used the reason of ill health in order to restrict the use of mobile phones.

However, parents also acknowledged that mobile phones were a necessity because they helped their children consult their friends for school projects and for safety reasons as their children travelled for tuition classes. Hence they looked out for the “right time” (Ling 1999), to give them a mobile phone which mostly occurred after they finished their 12th standard board exams.

8.3.3 Characteristics of the exercise of Personal Agency by mobile phone use

On discussing the influence of the demographic variables on the exercise of Personal Agency, the following section elaborates on the characteristics of the exercise of Personal Agency by mobile phone use.

The qualitative results in section 6.3 indicated evidence to show enhanced sense of Self-Efficacy among mobile phone users as they used mobile phones to address tasks such as managing contingent situation and maintaining relationships. Young people with mobile phones were able to do this because mobile phones facilitated the ability for a two-way contact i.e. contactability; it gave them the ability to be organized i.e. organizability; and

it provided them the ability to circumvent restrictions i.e. de-restriction. Their enhanced sense of self efficacy was seen in contingent and regular situations.

Comparing it with the quantitative data results, table 5.15a indicated that the difference in means for the factors of contactability, organizability, and derestriction were higher for users (3.50, 3.01, and 3.30) than for non-users (2.39, 2.82, and 2.59) respectively, and these differences were significant as indicated in table 5.15b.

This result is in line with the qualitative data results which provided evidence from non-users regarding how contactability, organizability, derestriction are dwarfed and hence how Self-Efficacy is stunted. This had an influence on the performance of tasks such as managing contingent situations and maintaining relationships. However non-users were not seen in a helpless situation. Qualitative results indicated that they used strategies that helped them to overcome this drawback. For example, Rekha, a non-user does her projects given in college within the college premises itself after classes using the resources such as friends and college space available at that time. This assisted her in learning how to use resources efficiently and effectively to achieve her goal. However it did not allow her to make provision for the contingencies of the external circumstances such as problem of transport due to which she has to leave the college early, or the non-availability of college rooms to do her work. The users of mobile phones had more flexibility to address such changeable situations and more flexibility in order to do their work either in college or at home without losing contact with their friends whenever they needed them.

However, Rekha, non-user, could contact her friends from home too by using a traditional fixed telephone, but apart from it being out-moded in the eyes of their peers, it is was also expensive to call mobile phones from the fixed phones. Furthermore people were not generally available always near their fixed phones (Ling and Yttri 2002). Furthermore, fixed phones are not known to be occupied for long durations in families as they are for common use by all. Other studies (Ishii 2004, Ling and Yttri 2002; Rice and Katz 2003; Katz and Sugiyama 2006; Leung and Wei 1999; Davie,

Panting and Charlton 2004) indicate the advantages that mobile phone users have in dealing with different situations of daily life than non-users.

Having indicated from quantitative and qualitative data that users experience higher Personal Agency than non-users, the discussion moves forward to the three factors that were indicated in the quantitative as well as qualitative data results as characteristics of Personal Agency by mobile phone use. These characteristics were contactability, organizability and de-restriction.

8.3.3.1 Contactability:

In the quantitative results, the five items of the factor named ‘Contactability’ indicated in table 4.10 had a reliability score of 0.80 as indicated in table 4.9. These items measured the ability of the mobile phone user to keep access and themselves accessible to their parents and friends, people whom they considered important to them.

In the evolution perspective offered by Geser (2004), the ability to be accessible and to be in communication was diminished due to mobility and distance. However the mobile phone empowered human beings to be accessible and to engage in communication free from constraints of physical proximity and spatial immobility. Hence the items in the quantitative survey tapped the ability of the mobile phone users to be accessible and in contact “whenever” and “wherever” they were required by others even in emergency situations. In this context, the qualitative data indicated that emergencies were a cause of concern among young people as well as parents. Even though an individual’s safety cannot be assured by the mere possession of a mobile phone, it ensures parental peace of mind (Matsuda 2009) and operates as an extended “umbilical cord” (Ling 2009) for young people by which they are always connected. Not only are they able to keep themselves accessible to others, young people are also able to access others in regular as well as in emergency situations. This type of control over accessibility is not possible with traditional landline telephony. This belief in one’s ability to access and be

accessible, namely ‘contactability’ is Self-Efficacy by mobile phone use. Such Self-Efficacy is provided by the mobile phone to the mobile phone user.

The questionnaire items for ‘contactability’ in the PAoMPUQ also tap the aspect of ‘certainty’ items of the ability to be accessible, as well as to accessibility in regular and in emergency situations. ‘Certainty’, in this study, is a form of optimism where the individual feels confident of the near future that should the individual encounter a contingent or a regular situation, the individual will be able to address it confidently because of the availability of the mobile phone. Even though not highlighted, there were ample examples in the qualitative data that indicated that young people carried mobile phones when they left home because it would be of help should any emergency befall them or should they encounter an unsafe situation, or just to have it near if they were bored in the near future. Optimism is the temporal dimension of agency (Hitlin and Elder Jr. 2007a).

Thus in the quantitative data Self-Efficacy and optimism are integrated in the factor that measured ‘contactability’. This is the form of agency that the mobile phone facilitates in its users. This is tapped by the first factor of PAoMPUQ.

8.3.3.2 Organizability:

The five quantitative items in the second factor ‘organizability’ reflected the ability of mobile phone users to organize themselves in the midst of regular or contingent situations. Qualitative results showed that Mobile phone users organized themselves by accessing information through people and services and by coordinating events in their daily life. For example, participants called each other to plan outings or project work. In this way the mobile phone enhanced the user’s ability to be organized themselves and to organize external events. They prioritized tasks by using mobile phone calendars, reminders, and navigational maps. Furthermore, it also enabled them to organize the priorities of the day. It also promoted the ability to plan budgets (using money saving

promotional schemes and get value for money out of them). Moreover it also gave the users the ability to plan for flexibility, to handle changes and coordinate with peers.

Not only did the mobile phone provide users with quick access to the services, it also drew people to pause and reflect on their words, verbal or written. For example, participants spoke of the mobile phone enabling them to express their thoughts clearly by carefully choosing the words they needed to speak or to key text on the mobile phone. However the mobile phone is also considered by participants to be addictive to the young generation and to impair their ability to plan (Kurniawan 2008) because users often flexibly make and change plans.

It should be noted that the Personal Agency model of Hitlin and Elder Jr. (2007a) placed 'Planfulness' as a causal predictor variable of Personal Agency. However, in the factor analysis of the survey data in this study, 'the ability to be organized' was one of the three factors that influenced Personal Agency by mobile phone use. These three factors interact with each other and complement each other.

8.3.3.3 De-restriction:

In the survey, the factor of 'de-restriction' had two items, one reflected a general sense of freedom and the other reflected the ability of the mobile phone users to negotiate with their parents the time of returning home when they were out and about with their peers. Negotiation between parents and children was measured here as the freedom from being restricted by authority and rules—an aspiration which is typical of the adolescent stage of life. The survey results for this factor indicated that the reliability of this factor was 0.56 which was low. This was because this factor had only 2 items.

Moreover, Hitlin and Elder Jr. (2004) find that autonomy, as measured in their empirical model of agency, was significantly less important as a factor in agency, than the other constituents of agency in that model. However the goodness-of-fit statistics for the model including autonomy was vastly superior than leaving the autonomy variable out

of the model. Hence they included it in the model. However future work in order to explore this relationship was recommended. Agency stemmed from both, the ability individuals perceived that they possessed, as well as the perception of socially structured opportunities to enact such capabilities. For the young people in this study, a general sense of freedom and the negotiation they were able to enter into with their parents whenever required, and thus make choices of their own, was provided by mobile phone use.

In the three factors that emerged in the current research the factor of de-restriction emerged as one of the factors. In mobile phone research, independence and freedom provided by mobile phone use is an often researched theme (Oksman and Turtiainen 2004). However qualitative data indicated that over and above a general sense of freedom, the items tapped a sense of not being bound by space and time as well as by cultural and conventional regulations. The qualitative data results showed that non-users of mobile phones were restricted in their ability to complete tasks at hand as indicated in the examples cited earlier. However some non-users felt they could work within the restrictions that they faced due to non possession of mobile phones. Other non-users indicated that while such an attitude was suitable during regular times, it was during emergencies such as accidents that they were rendered helpless.

Thus the three interrelated characteristics namely contactability, organizability and de-restriction represented the notion of 'Personal Agency by mobile phone use'. The further section discussed another important aspect of agency namely, Social Support.

8.3.3.4 Social Support:

One important observation was that while self efficacy, optimism, planfulness, and autonomy emerged as important factors in the PAoMPOUQ, the items referring to social support did not emerge as a separate factor in the final quantitative instrument after the factor analysis of the quantitative data. That was because the concept of social support that the items in the social support subscale reflected were also included in items of the

'contactability' and 'organizability' factors. Since the items of social support were confounding with other more relevant items when considered separately, they were deleted from the questionnaire. According to Hitlin and Elder Jr. (2004), "emotional valences can be theoretically captured with notions of optimism, the extent to which individuals feel their futures will be positive." The aspect of optimism was tapped by some items in 'contactability' and hence the items of social support were considered unnecessary to be included.

Furthermore, the qualitative results showed that mobile phone users used the multi-modal possibilities to contact their parents and peers and they could be "in-touch" with them from anywhere and at any time. The non-users depended solely on voice calls from fixed locations. Moreover, a two-way contact was difficult when mobile phone non-users were in public places and hence social support, especially when the individual happened to enter into contingent situations, was difficult to provide.

8.3.4 Bounded Agency:

While the quantitative PAoMPOU explored boundaries such as legal consequences of inappropriate use, restrictions from educational institutions, technical problems, gender restrictions and parental restrictions, the qualitative interviews focussed on restrictions emerging from educational institutions, parents and gender because young people's lives were more closely related to these domains than others.

The survey results showed as indicated in figure 5.3 showed a positive correlation between PAoMPOU and boundaries. The significance of the correlation was also less than 0.05 indicating that this correlation was significant. Hence it was inferred that Personal Agency of mobile phone users increased as the boundaries increased. This was possible because with the enhancement of Personal Agency in regular situations, the frequency of contact and communication especially with peers as well as other services increased, making it necessary for parents to introduce boundaries.

Qualitative results indicated that boundaries were placed due to moral panics that parents and educational institutions perceived out of concern for young people's academic performance and to prevent dilution of attention to studies, concern for their sound character development, and concern for maintaining their *dharma*. Qualitative results also indicated that parental authority was affected due to several reasons such as disregard for parental authority observed in negotiation about the time to return home (Williams and Williams 2005). Furthermore, parents in this sample also avoided setting boundaries in order to be perceived as "peerants" (McCrindle 2010). Hence their moral ascendancy over the children eroded. Furthermore, parents also saw their children as more knowledgeable and adept regarding use of technologies especially the mobile phone. They often required their children to teach them the use of such technologies.

The quantitative subscale of Bounded Agency also referred to a personal sense of appropriate behaviour related to mobile phone use. The aspect of moral agency also emerged in the qualitative results. Participants, especially non-users, voiced concerns about inappropriate use of mobile phones for pornography, bullying, and disobedience to parents. The inculcation of moral agency was considered important and relevant for the present times by parents as well as teachers wherein young people are required to have well grounded moral standards founded on sound human, social and spiritual principles. Since boundaries placed by external sources can be negotiated by technology, one's moral, social and spiritual principles were considered to be a source of strength especially in following one's *dharma*.

8.3.5 Erosion of *Dharma*:

One of the pertinent issues raised in this exploration was about the erosion of *dharma*. *Dharma* is a sociomoral principle consisting of righteous action and adherence to a natural and moral order. The basic rule of *dharma* is to perform the duties that pertain to one's station in life (Prathikanti 1997). The erosion of *dharma* is seen in young people's dilution of dedication to studies, and in the distancing from cultural values such as obedience to parents.

8.3.5.1 Dilution of dedication to studies:

Qualitative results indicated that young mobile phone users were prone to be distracted from studies on account of the constant availability of the mobile phone. For example, young people broke school regulations by using mobile phones in classrooms, sending texts, listening to music during class, disturbing the teacher while taking class, and bullying other students by circulating inappropriate texts or photos. The national newspaper 'The Times of India' reported recently that some students sent pornographic MMS to their teacher in the middle of the night "to play a prank with him" (Konar 2010).

At home, young people often placed the mobile phone on the study table to attend to incoming calls as and when they came. This made parents advise them or insist that the mobile phone be kept away during study time. At other times they placed restrictions ranging from friendly advice to confiscation of the mobile phone. The school also placed restrictions ranging from allowing use of mobile phones in common rooms at certain times to a complete ban of mobile phones on the premises of educational institutions.

Moreover the dilution of dedication to studies is also considered a dilution of the *dharma* of the student's life. At this stage of life, the young people are required to dedicate themselves completely to their studies. The mobile phone therefore is seen as a temptation that distracts them away from living a dharmic life i.e. fulfilling the duty of their stage of life as students.

8.3.5.2 Erosion of cultural and conventional values:

Another example of the erosion of *dharmic* values is the distancing away from obedience and respect offered to parents, which is upheld strongly as one of the central cultural values in India. While young people asked permission from their parents to acquire mobile phones, some of the ways they used it were considered inappropriate according to the principles of *dharma*. For example, young people made late night calls

often to the dislike of their parents who considered it as an inappropriate behaviour. Furthermore, young people also avoided answering calls from their parents when they were out and about with their friends in public places. One of the participants had marked the mobile number of his parents as “danger”. Furthermore, the qualitative results also showed that young people negotiated with their parents regarding their time to be at home. This indicated a loss of parental ascendancy over their children and the mobile phones facilitated such a dilution.

Parents were also concerned regarding the use of mobile phone to contact and carry on long conversations with the opposite sex.

As the *dharma* of young people is to obey their parents, according to Indian culture, it is the *dharma* of the parent to teach the child to be cognizant of parental wishes, and to offer them protection and guidance. To neglect or circumvent these duties deliberately is considered tantamount to avoidance of fulfilling one's *dharma* in life.

8.4 Theoretical Implications

The researcher drew from three theoretical perspectives in this study to explore the exercise of Personal Agency by young people's use of mobile phones. Firstly, the study used the Mixed Methods research approach (Creswell and Plano Clark 2007) to draw the worldview and the method to explore the objectives of the study. Secondly, the study used the theoretical perspectives of contact to explore the nature of Personal Agency by mobile phone users. These perspectives assisted in exploring how young people innovatively drew out the inherent possibilities of the mobile phone as a socio-logic despite its limits as a material gadget. The characteristics of contactability, organizability, and de-restriction were especially indicated by the data as core elements of Personal Agency that the mobile phone accords to its users. Thirdly, the Empirical Model of Agency (Hitlin and Elder Jr. 2007a) was used to draw out the constituents of agency, to lay a foundation on which the theoretical framework for this study could be constructed, and to develop the questionnaire and interview guides. Fourth, the

perspective of 'Agency' in the Social Cognitive Theory (Bandura 1989, 2006) and Self-Efficacy (Bandura 1982) as well as the 'Capability Approach' (Sen 1999) and Domestication theory (Berker et al. 2006; Silverstone and Hirsch 1992) and the concept of 'Appartgeist' (Katz and Aakhus 2002) were used to buttress the insights gained in this study.

8.4.1 Mixed Methods Research Approach:

The first theoretical perspective that the study used was the Mixed Methods research approach (Creswell and Plano Clark 2007) to draw the worldview and the method to investigate the exercise of Personal Agency by mobile phone use. As per the definition provided earlier, this study included the philosophical assumption of pragmatism as well as methods of inquiry such as the two-phase design adopted in this study. This approach allowed a pragmatist worldview to be used in mixing the quantitative and qualitative data into a single study. The Mixed Methods research approach enabled the researcher to utilise the strengths of each research method in order to derive a more complete picture of the phenomenon under study. This research design consisted of two phases where the first, quantitative phase, enabled the researcher to construct a scale to measure the difference in the level of Personal Agency of mobile phone users and non-users. The second phase was a triangulation phase where the quantitative and qualitative data was collected and analyzed concurrently. The research involved dedication and rigour in being aware of the procedures appropriate to the type of the concurrent design used in the study and the detailed reporting of the quantitative and qualitative procedures as seen earlier. The researcher showed sensitivity to some of the challenges of using this design. For example, the question of having a different number of participants in the qualitative and quantitative data collection was brought up and discussed earlier. Further the design too posed some challenges such the length of time involved in research, the expertise required for each method, the ability to structure the presentation clearly and lucidly for the readers.

8.4.2 The Theoretical Perspectives of Contact:

The second perspective, the perspective of ‘Contact’ explored how young people innovatively drew out the inherent possibilities in the mobile phone within the limits that it places on people. The characteristics of contactability, organizability, and de-restriction were especially considered as core elements of Personal Agency that the mobile phone accords to its users and which non-users find themselves deficient in, because of the absence of mobile phones with them. The study found ample evidence to support the assumption that mobile phone users used the possibilities of contactability, organizability, and de-restriction in innovative ways. This promoted in them a higher level of Personal Agency as compared to non-users. The participants in the study also used these core characteristics of Personal Agency promoted by mobile phones to circumvent boundaries. Thus they managed contingent situations and maintained relationships. This perspective of contact allowed the possibility of potential innovations and innovative uses by young people in order to maintain constant contact such as ‘missed calls’. However, the mobile phone, being a personal communication technology, is known to be extensively focussed on individual contact and individual empowerment, often shutting out the presence of the other. This does not easily gel with the communitarian culture of India.

8.4.3 The Empirical Model of Agency:

The third perspective, the Empirical Model of Agency (Hitlin and Elder Jr. 2007a) was used to draw out the constituents of agency and to develop the questionnaire and interview guide. While the researcher formulated the quantitative survey and the qualitative interview guide on this model, he also used the aspects of Bandura’s (1982, 1989, 2006), thoughts on agency and self efficacy in relevant areas of this study. In comparison with Hitlin and Elder’s empirical model of agency showed Self-Efficacy as the core constituent, optimism as the temporal dimension of agency related to Self-Efficacy, planfulness as a predictor variable, social support and autonomy as its supportive variables. In comparison with Hitlin and Elder Jr.’s model, the model derived

by the researcher from the data gathered the model derived with regard to Personal Agency by mobile phone use, there were three interrelated characteristics namely contactability, organizability and de-restriction. The core of this model was the ability that the mobile phone accords to the user to be in contact, to be organized and to be de-restricted. The aim of this research was to explore Agency as the ability to exert influence over one's own life. The three characteristics of Personal Agency by mobile phone use offer practical as well as conceptual category by which individuals are able to exert influence on their lives and the daily situations they encounter.

Section V

Chapter 9

CHAPTER 9

Conclusions, Limitations and Recommendations

9.1 Introduction

This chapter reflects on the overall study. It reviews each of the preceding chapters, discusses the contribution of the study to existing knowledge and evaluates the research in relation to the proposed theories and models. Following this, specific recommendations for future research are made before drawing some final conclusions.

9.2 Review of Chapters

This study has quantitatively and qualitatively explored the use of mobile phones by young people to exercise Personal Agency. It has focused specifically on young people from high schools and colleges in Mumbai city who belonged to the new middle class socio-economic category given that mobile phones are widespread among young people in this category. A Mixed Method research approach was used in this study. Hence quantitative surveys, qualitative interviews and group discussions have been used to collect the data. The overall research process, including the final thesis, has been heavily informed by the use of a pragmatic worldview.

The dissertation was divided into five sections. The first section was the introductory section and contained the first three chapters (1, 2 and 3).

Chapter 1 introduced the study. It established the background to the study. The background outlined the clash between the collectivist Indian culture, and the introduction of the values of independence and privacy through the adoption of the mobile phone by young people. It also outlined the lack of control experienced by young people in India over their daily personal and social life aspirations. This was compensated by mobile phone communication and by maintaining the balance between

dependence on parents and negotiation of boundaries set by parents. Using the theoretical perspectives of Contact, the Empirical Model of Agency and equipped with Mixed Method research approach, the objectives and the research questions of the study were chosen. This chapter also presented the context where this study was conducted namely Mumbai which is a city with a mix of the traditional culture and a western lifestyle. The chapter ended by stating the objectives, scope and the significance of the study and outlining the overall structure of the thesis.

Chapter 2 focused on the review of literature. It dwelt on the theories that were considered relevant with respect to Personal Agency and mobile phones in this study. Deliberating on the theories of Technological Determinism, SCOT, and Domestication, this chapter demonstrated that the mobile phone was more than a material object. It was a technology that was shareable, and which facilitated de-restriction and supported reflection. Thus, it gave the user the ability to be in two-way 'contact'.

This chapter moved forward to consider agency from the point of view of social psychology. It qualified agency to make it relevant to this study. As such Agency was taken to be a capability. Moreover, Agency was also seen as exercising the capability that the individual possesses. It has a task or an outcome in view. However this research also considers agency in relation to socio-cultural and the contextual factors which bear on it. Hence the concept of Bounded Agency was drawn in to demonstrate that agency is enacted within the structure of contextual and socio-cultural factors. Furthermore the concept of agency is considered not in an abstract sense but, by using the Empirical Model of Agency by Hitlin and Elder Jr. (2007a), it is considered in measurable terms. This model empirically provides the components of agency namely Self-Efficacy, optimism, planfulness, social support and autonomy. Self-Efficacy is the core constituent of agency, optimism the temporal dimension of Self-Efficacy and planfulness, social support and autonomy being its supportive variables. Each of these components of agency was studied individually in relation to mobile phone use. At another level agency was also considered from the point of view of sociology where the individual adjusts his/her temporal orientation (a kind of attentional focus) as required in

different situations. Thus pragmatic agency is where an individual provides intense attention to manage emergency and 'knife edge' situations, identity agency is where an individual provides a routine and regular attention to maintain roles and relationships in regular situations.

Furthermore this chapter considered the context in which this study was conducted. Therefore India and the particular characteristics of the Indian culture that were problematic in relation to the values that mobile phone use embodies were considered. As such minimization of self-differentiation, restriction of choice and inequality of gender are considered as permeating the Indian culture. Particularly the New Middle Class category of young people is focussed on in this research and the phenomenon of mobile phone use particularly in Mumbai is brought into the picture. Thus this chapter contextualised the study by highlighting each of the relevant concepts considered in this study. It concluded with the formulation of a theoretical framework for guiding the study.

In Chapter three the methodological approach was discussed in detail. This included an in-depth examination of the nature of a Mixed Methods research approach. It outlines the worldview and design that was chosen for this study. A pragmatic worldview was considered most suitable to address the research objectives. It also presented the procedure for identifying and recruiting participants, as well as detailing the concurrent process of data collection and analysis. Thus the methodology consisted of two phases. In the first phase, called the exploratory phase, the quantitative and qualitative data collection instrument was developed and validated. The data collection was then carried out. This stage ended with the analysis and validation of the quantitative and qualitative data thus collected. The second phase of the design was the mixing of the results of the data by triangulating both in the form of a discussion in a convergence model. The second phase was presented in chapter 8.

The second section was part of the first phase of the research design. It was an exploratory phase and consisted of the exploration of the quantitative research questions. It consisted of two chapters (4 and 5).

Chapter four described the four steps of developing a new quantitative instrument namely item generation, questionnaire administration, item reduction and the confirmatory factor analysis. In this process initially the instrument was developed and its content was validated following which it was administered and data was collected. At this step the newly developed quantitative instrument was validated by an exploratory factor analysis. Since the intention of this research was to explore the phenomenon under consideration and not to replicate the instrument, it does not go further to do a confirmatory analysis on the developed instrument. The Cronbach's reliability scores were considered sufficient to ensure reliability. Most importantly, three factors of Personal Agency by mobile phone use emerged. These three factors namely, Contactability, Organizability, and De-restriction, were considered the basic factors on which a model of mobile phone Personal Agency was built.

Chapter five presented the analysis of the quantitative data and the research findings. It began by formulating the hypothesis for the influence that gender, academic qualifications, religion, socio-economic status, duration of mobile phone possession and the frequency of mobile phone use, had on the exercise of Personal Agency by mobile phone use. It indicated that the exercise of Personal Agency was associated significantly with socio-economic status and frequency of the mobile phone use. On testing the influence that the interaction between socio-economic status and frequency of mobile phone use had on Personal Agency, it was found that the interaction did not have a significant influence on the exercise of Personal Agency. Neither did socio-economic status influence significantly in relation to frequency of mobile phone use. However the exercise of Personal Agency was significantly influenced by frequency of mobile phone use and increased as the frequency of use increased. Furthermore, the exercise of Personal Agency for non-user scale was tested. The scale for non-users was similar to the scale for the users except that the items were negated. The reliability of the two

factors, contactability and organizability was high while the reliability of de-restriction was low. The overall reliability was high. Finally the level of exercise of Personal Agency of mobile phone users and non-users was considered to indicate that the exercise of Personal Agency of mobile phone user was significantly higher in the case of non-users. Furthermore the relationship between Personal Agency and boundaries was considered. It revealed that the level of the exercise of Personal Agency and boundaries were positively correlated indicating that as boundaries increased the level of the exercise of Personal Agency increased. It is likely that more ingenuity is exercised to surmount boundaries, when these are increased.

Section three continued the first phase of the study. However it described qualitative data collection and analysis. It consisted of two chapters (6 and 7).

Chapter six consisted of the qualitative interviews and group discussion framework for the study. It pointed to some of the strengths and pitfalls in qualitative research that the researcher needed to be aware of. It also presented the process for the formation of the interview guide, the procedures adopted to collect the data, and the administration of data collection. The data was gathered in the individual semi-structured interviews and group discussions with the participants consisting of young people, parents and educators. The process of analysis of the data by using NVivo v.8 software was also elaborated.

Chapter seven described the analysis of the qualitative data. It considered three areas: the significance of the mobile phone for young people, the exercise of Personal Agency by mobile phone use, and the effect of Bounded Agency on the exercise of Personal Agency. The findings of the analysis were presented in a detailed manner. The analysis used NVivo to code the data into free nodes, which were further merged into tree nodes. Tree nodes showed the relationships between the free nodes. Furthermore, the technique of summarising the data was used in formulating refined concepts indicated in the data. The opinions of the participants were used to support the findings, relationships between the findings, and the concepts drawn out from the data. The findings relate to the

exercise of Personal Agency by mobile phone users and non-users. These findings suggest that mobile phone users felt themselves at an advantage when addressing regular and contingent situations which they faced in their daily lives, especially in relation to managing emergencies and maintaining relationships. Three characteristics that affected their exercise of Personal Agency by mobile phone use were prominently seen. The non-users found themselves deficient in these.

Section four consisted of one chapter (8) which mixed the quantitative and qualitative results. This was the stage of mixing in which the quantitative and qualitative data were merged and mixed. Hence the data was triangulated and the two results were compared to answer the Mixed Methods research question. The merging is done in the form of a discussion by highlighting each of the findings of the quantitative and qualitative data in relation to each other. It reflected on the objectives of the study and refined the findings to present a model that was earlier derived from the quantitative and qualitative data results. It also presented a dynamic conceptual model of the exercise of Personal Agency by mobile phone use. This model places the three characteristics of contactability, organizability and de-restriction at the heart of Personal Agency of a mobile phone user. However, the Personal Agency of a mobile phone user is bounded by socio-cultural and contextual factors.

Section five consists of one chapter (9) that closed the dissertation. It was the concluding chapter.

Chapter 9 reviewed and summarized the preceding chapters. It reflected on the contributions the study made on furthering knowledge regarding the subject of the study and presented the limitation of the study along with the recommendation for future research.

9.3 Contribution to Knowledge

This study makes a significant contribution to existing research on Personal Agency among young people and on mobile phone studies. Firstly, it is one of the few studies exploring Personal Agency and mobile phone specifically from the perspective of young people of Mumbai belonging to the New Middle Class at a time when India is beginning to grow as a prominent economy of the world. Furthermore, it represents one of the very few studies exploring Personal Agency and mobile phone use among students of adolescent age group. Given the rapid and increasing diversification of mobile phone technology, such research is both timely and highly relevant on the above two counts.

Secondly, the study highlights the value of the mixed method approach for exploring perceptions and lived experiences of young people, and for researching phenomena which have been relatively under-explored. In particular the study highlighted the usefulness of the convergence model as a rigorous Mixed Methods research design. It enabled the researcher to build concepts supported both by quantitative and qualitative data while also seeking to understand how these relate to each other and to the theories involved in the research. This is reflected in the quantitative and qualitative research findings presented earlier.

Thirdly, due to the pragmatic worldview adopted for the study, even though *apriori* assumptions were imposed on the concept of Personal Agency and mobile phones, sufficient room provided for the participants to articulate their own perceptions of Personal Agency and mobile phone use. This process produced unique findings and has identified the three characteristics that define Personal Agency by mobile phone use among young people in Mumbai. Furthermore it also highlighted the variety of priorities among the various categories of participants namely parents, educators, and young people. The triangulation design was useful in discovering these perspectives.

Fourthly, the study also has identified important cultural and contextual factors which impact upon mobile phone use for Personal Agency in various settings. For example,

factors such as parental, institutional and personal restrictions which influence the extent of mobile phone use for Personal Agency. These can be identified as external and internal barriers which hinder mobile phone use for Personal Agency.

While it was important to explore the exercise of Personal Agency by mobile phone use, it is suggested that educational institutions and parents take responsibility in educating young people towards an appropriate use of mobile phones as the data had indicated. A case for educating in moral agency can be made for schools and families. The interviews provide examples and offer practical guidelines for the development of interventions aimed at promoting an appropriate use of mobile phones such as devising a media education syllabus which promotes healthy use of the mobile phone technology. In particular, the integral role of the educational institution and parents is seen as important in providing leadership and creating a curricular and extracurricular environment. An institutional commitment is imperative in order to educate young people on this important idea. Educators should consider that a ban on the use of mobile phone use on school and college premises does not go to the root of the problem. The solution may need to be holistic.

Insights from exploring the exercise of Personal Agency by mobile phone use is important for parents, media educators, mobile phone industry professionals, policy makers, and young people. For the industry, keeping in mind the Appartgeist theory, the mobile phone is an expansive media whose rich 'spirit' is to be tapped by doing research in diverse contexts to draw out the myriads of possibilities awaiting discovery, while at the same time bearing in mind that cultures need to be respected.

Lastly, the values of the mobile phone endorse a "free to be me" attitude. However *dharma* instead talks of maintaining the social order by performing ones duties attached to ones stage of life. Maintaining social order requires a denial of the self as understood in the Indian thought. This creates friction between the two values in the Indian culture especially in the family, and clear and accepted boundaries may be required that respect both.

9.4 Limitations of the study:

The number of participants among the non-users was small and hence even though the reliability of the PAoMPNUQ was high overall, yet the third factor of the scale was low. An increase in the number of participants would give a stronger reliability to the scale. Furthermore, the non-users can be asked to fill the same questionnaire provided to the mobile phone users. However this will require some modifications in the syntax of the items of the PAoMPUQ in order to reflect the experience of non-users also in the questionnaire.

This exploratory study identifies variables of mobile phone use that impacts on Personal Agency. But the relationship between the three factors is not shown or studied as it was beyond the scope of this research. Also the data was collected in the first quarter of the year 2009. Since the technology is constantly changing (it is to be borne in mind that the ‘Apparatgeist’ has the quality of ‘becoming’), the insights derived in this research too may require updating and revision as time and the socio-cultural situation progresses.

This study provides a helicopter view of the objectives stated earlier and hence inferences drawn do not provide conclusive evidence to any particular social characteristics. Neither do they spot any underlying trend. Furthermore, due to constraints of time, certain topics have not been discussed in an in-depth manner and may be further taken up in the future.

9.5 Recommendations for Further Research

As stated, this study has focused primarily on young people’s self-reported opinions and experiences about the use of mobile phones for Personal Agency. The mixed method research approach assisted in broadening and deepening the objective.

Among the research findings, students have ascribed certain characteristics and values to mobile phone users and non-users. It is recommended that further research be conducted

by engaging larger samples of users and non-users by which the findings of this study can be supported or contradicted. Larger samples might arrive at results with higher confidence levels in quantitative results. Non-users may be difficult to find and hence the collection of data from such participants needs to be strategized and planned well. It can take the form of responding to the findings of the current research or it may encourage the participants to freely and independently share their own perspectives and opinions about their daily use of mobile phones for Personal Agency.

Furthermore, it is possible that there could be discrepancies between what participants reported and how they actually behaved. For example, initially, participants opined that both girls and boys were treated equally. However on probing further they shared stories of discrimination. To counter such discrepancies, it is recommended that observational research focusing on the behavioural patterns of participants be incorporated in the research to complement interviews and group discussions.

Furthermore, although the tri-characteristics of contactability, organizability and de-restriction have emerged as a major theme in the current study and appear to constitute factors which characterise mobile phone use for Personal Agency, further research into the nature and inter-relationship of the three factors is recommended.

Another important consideration to be borne in mind is that the PAoMPUQ was explored by exploratory factor analysis. The factors of this scale were considered reliable individually and as a whole. In doing so the scope of exploration was fulfilled. However this scale can be further confirmed by performing a confirmatory factor analysis so that it can be replicated in other contexts. However this requires a different study with a different set of participants and a different context. Such a study can be performed by building on the present one. Similarly the PAoMPNUQ was validated by carrying out a reliability test on its individual factors and the scale as a whole. Even though the reliability of the whole scale was high and contactability and organizability factors were high also, the reliability of the third factor, de-restriction was low because it contained only two items as well as small number of participants. Hence this scale can

be further tested by collecting data from a larger sample size of non-users to ensure its reliability.

The biggest challenge in promoting Personal Agency and innovativeness among young people is countering passivity and unquestioning dependence on external sources, for that matter even the mobile phone. Hence since frequency emerged as one of the major variables that promoted Personal Agency, young people may be encouraged to frequently attempt to do things with personal motivation and group networking.

Finally, when I approached the principals of the high schools and colleges in India and Dublin for permission to conduct this research, they were reluctant to facilitate access to the students, primarily because young people have represented an attractive and accessible research focus for many researchers. It was a point well accepted. It is important that researchers avoid saturating young people as research targets and, as such, it is imperative that the research conducted with them as participants, should ultimately be aimed at improving young people's daily lives.

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APPENDIX A

MOBILE PHONE and PERSONAL AGENCY QUESTIONNAIRE FOR USERS/NON-USERS (164 items)

I. GENERAL

CIRCLE THE OPTION THAT BEST DESCRIBES YOU IN THIS QUESTIONNAIRE

Q1. Gender: 1) Female

2) Male

Q2. Age: 1) 15-16 years

2) 17-19 years

3) 20 years and above

Q3. State your educational level (circle one only)

1) currently studying in Junior college

2) currently studying for graduation or higher

Q 4. Education of either mother or father who is more educated among them (circle one only):

0) Illiterate

1) Just literate but no schooling

2) less than primary but attended school for at least one year

3) Primary pass but less than 10th

4) 10th class pass but less than Graduation

5) Graduation

6) Postgraduation (non-technical including Ph.D)

7) Professional qualification with technical degrees or diplomas e.g. Doctor, Eng., CA, MBA etc

Q5. Occupation of father if he is the chief wage earner in your family, otherwise mother (circle one only)>

0) None of the family member is employed

1) Self employed with income less than 5000 (labourer, housewife)

2) Self employed e.g. shops, petty business with income greater than 5000

3) Service at shops, home, transport

4) Service in Private sector or independent business employing 2-20 persons

5) Service in central/State/Public undertakings or owner of a company employing greater than 20 persons or self employed professional viz Doctors, CAs, Eng, etc

Q6. Family possessions (you may circle more than 1 option):

1) Refrigerator 2) TV 3) Radio/Transistor/Music system 4) AC 5) Washing Machine

6) Telephone 7) Mobile phone 8) Credit card 9) Sanitary latrine

10) Any newspaper subscribed throughout the month

Q7. Living in a type of house (circle one only):

1) No place to live, pavement, mobile cart

2) Rented room in Chawl

3) Own room in Chawl

4) Rented house with 1-2 rooms

5) Rented house with 3-4 rooms or Own house with 1-2 rooms

6) Rented house with 5 or more rooms or Own house with 3-4 rooms

7) Own house with 5 or more rooms

Q8. Possession of a vehicle or equivalent (you may circle more than 1 option):

- 0) No vehicle
- 1) 1 or more cycles (not baby cycle)
- 2) 1 or more scooter(s)/motorbike(s)/three wheeler
- 3) 1 Car or other four wheeler
- 4) 2 or more Cars or other four wheelers

Q9. Do you have a mobile phone?

- 1) Yes
- 2) No

IF YOU CIRCLE YES TO QN NO.9, CONTINUE WITH SECTION II ONLY
IF YOU CIRCLE NO TO QN NO.9, CONTINUE WITH SECTION III ONLY

SECTION II: MOBILE PHONE USERS

Q10. Did you want a mobile phone, before you got it?

- 1) Yes
- 2) No

Q11. If yes, Why did you want it?	Rank in order of importance
1) Because everybody around me already had one	
2) Because it was a novel idea	
3) Because friends asked me to get one for myself	
4) Because parents asked me to get one for myself	
5) Because it would give me the 'convenience' of calling anytime	
6) Because it would make me 'easily accessible' (to other people) i.e. is a good medium to get messages	
7) Because it was easy to communicate with friends	
8) Because my family did not have a landline, so preferred a mobile	
9) Because I would be on the same level as my friends	
10) Because I needed privacy in my communication	
11) Any other (please specify and rank):	

Q12. Was the mobile phone gifted to you or did you buy it with your own money? (circle one)

- 1) It was gifted to me.
- 2) I bought it with my own money

Q13. On an average, I use SMS more than voice calls? (circle one) 1) Yes 2) No

Q14. For what purposes do you use your mobile phone?	Rank in order of importance
1) For Security	
2) To keep in touch with parents	
3) To avoid surveillance from parents	
4) To download songs/pictures/videos	
5) To keep in touch with friends	
6) To feel esteem among friends	
7) To store numbers	
8) To download information	
9) To seek advice	
10) To discuss personal issues	
11) Any other (please specify and rank):	

Q15. How long have you been using a mobile phone? (circle one)

- 1) Less than 6 months
- 2) 6 months to 1 year
- 3) More than 1 year to 2 years
- 4) More than 2 years to 3 years
- 5) More than 3 years

Q16. On an average, how much credit do you spend every month on mobile phone use? (circle one)

- 1) Rs 50 or less
- 2) More than Rs 50 to Rs 100
- 3) More than Rs 100 to Rs 200
- 4) More than Rs 200 to Rs 350
- 5) More than Rs 350

Circle the statements below as: 1=Not at all true; 2=Hardly true; 3=Moderately true; 4=Exactly true.

A) BECAUSE I HAVE THE MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
15. I can easily be contacted by my parents and friends wherever I am	1	2	3	4
16. I can easily be contacted by my parents and friends whenever they need me.	1	2	3	4
17. I can easily get in touch with my parents and friends wherever I am.	1	2	3	4
18. I can easily get in touch with my parents and friends whenever I need them.	1	2	3	4
19. It is easy for others to contact me directly	1	2	3	4

(personally/without any intermediary).				
20. My parents and friends can easily contact me in case of any emergency.	1	2	3	4
21. I can easily contact my parents and friends in case of any emergency.	1	2	3	4
22. I can easily pass time by entertaining myself with music or radio, anytime and anywhere.	1	2	3	4
23. I can easily seek information from information services or internet.	1	2	3	4

B) BECAUSE I HAVE THE MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
24. I feel certain that my parents and friends will be able to be in touch with me wherever I am, than non-users.	1	2	3	4
25. I feel certain that I will be able to move around freely and still be in touch with people than non-users.	1	2	3	4
26. I feel certain that I will be able to contact my parents and friends anytime and anywhere than non-users.	1	2	3	4
27. I feel certain that I will be able to access sources of leisure more easily than non-users.	1	2	3	4
28. I feel certain that I will be able to co-ordinate my meetings with friends more easily than non-users.	1	2	3	4
29. I feel certain that I will be able to contact my parents or friends in case of any emergency.	1	2	3	4
30. I feel certain that I will be able to have direct access to people (without intermediaries).	1	2	3	4
31. I feel certain that I will be able to have quick access to information services or internet at my very fingertips.	1	2	3	4

C) SINCE I HAVE A MOBILE PHONE...

	Not at all true	Hardly true	Moderately true	Exactly true
32. I can easily contact people personally and gather as many facts as possible to make some urgent decision anytime and anywhere. (H3:1)	1	2	3	4
33. I can easily contact people to find as many ways to approach a problem any anytime and anywhere.	1	2	3	4

34. I can be more systematic in making decisions as I can contact people back and forth anytime and anywhere.	1	2	3	4
35. I can note down my ideas anytime and anywhere.	1	2	3	4
36. I can ring back and forth to evaluate my decision or solution to a problem anytime and anywhere.	1	2	3	4
37. I know I can use my mobile phone in emergencies.	1	2	3	4
38. I can keep reminders without depending on my memory, anytime and anywhere.	1	2	3	4
39. I can organise and co-ordinate my short term and long term schedules and plans anytime and anywhere.	1	2	3	4
40. Parents and friends have no problem in informing me of any change of plans and vice versa.	1	2	3	4
41. Co-ordination with my group of friends real time becomes easy wherever they may be.	1	2	3	4
42. I don't speak or SMS carelessly and without paying attention to my words and text on my cell phone.	1	2	3	4
43. I can plan in advance for a meet face-to-face meeting e.g. group study or to meet on Internet Messaging.	1	2	3	4
44. I communicate with some more regularly than others.	1	2	3	4

D) SINCE I HAVE A MOBILE PHONE...

	Not at all true	Hardly true	Moderately true	Exactly true
45. I feel happy that I can talk to my parents and friends whenever I feel like.	1	2	3	4
46. I feel at ease that contact with my parents and friends is at the tip of my fingers.	1	2	3	4
47. I feel confident that I can call my parents and friends directly.	1	2	3	4
48. I feel that those whom I care for are with me all the time.	1	2	3	4
49. I have many people whom I can turn to if I need help at anytime and anywhere	1	2	3	4
50. I feel safe that my parents and friends are in touch with me when I am out.	1	2	3	4

E) SINCE I HAVE A MOBILE PHONE...

	Not at all true	Hardly true	Moderately true	Exactly true
51. I feel free.	1	2	3	4
52. I negotiate with my parents regarding the time to return home if I am out with friends.	1	2	3	4
53. I can record pictures, videos or audio, make notes, store memories that please me or listen to music when I desire.	1	2	3	4
54. I can call whomever I want to or any information service that I need.	1	2	3	4
55. I can call any information service that I need.	1	2	3	4
56. I would prefer paying my own bill so I can use it as I wish.	1	2	3	4
57. I contact people directly i.e. on a one-to-one level.	1	2	3	4
58. I can talk to my friends at will and as long as I like.	1	2	3	4
59. I can access any information that I require of the internet using my mobile phone.	1	2	3	4

F) SINCE I HAVE A MOBILE PHONE...

	Not at all true	Hardly true	Moderately true	Exactly true
60. I have to use the mobile phone sparingly since my parents/others pay the bill.	1	2	3	4
61. My parents restrict my mobile phone use when they think it is necessary.	1	2	3	4
62. I know that improper use of the mobile phone has legal implications.	1	2	3	4
63. I know that using the mobile phone in school, class or tuition is not permitted.	1	2	3	4
64. I can't get in contact with others if the signal strength is low or battery runs down.	1	2	3	4
65. Mobile phones should be used sensibly.	1	2	3	4
66. Mobile phones are suitable for use only after one completes std 12th.	1	2	3	4

67. I limit mobile phone use during my personal study time.	1	2	3	4
68. I don't send offensive messages to others via mobile phone.	1	2	3	4
69. Girls are allowed more freedom to use the mobile phone than boys.	1	2	3	4
70. My parents don't like when I talk too long on the phone.	1	2	3	4
71. My parents don't like me talking late nights on the phone.	1	2	3	4

G) SINCE I HAVE A MOBILE PHONE...

	Not at all true	Hardly true	Moderately true	Exactly true
72. I switch off the cell to avoid taking calls from my parents or friends since it belongs to me personally.	1	2	3	4
73. I call my friends late at night.	1	2	3	4
74. I converse with my friends on the quiet if my parents object.	1	2	3	4
75. I carry out a SMS conversation to avoid being detected being often on phone by my parents.	1	2	3	4
76. I move away from my parents while talking on the phone.	1	2	3	4
77. I plan with my friends when we can talk.	1	2	3	4
78. I and my friends miscall each other or text to indicate that we are free to talk or come on Internet chat without giving any indication to others in the house.	1	2	3	4
79. I continue college conversations at home on the phone regularly.	1	2	3	4
80. I am in regular contact with my friends throughout the day.	1	2	3	4
81. I talk for long on the mobile phone.	1	2	3	4
82. I speak/SMS when I go to sleep.	1	2	3	4
83. My parents are no longer able to know what or with whom I speak.	1	2	3	4

84. I am able to speak privately with my friends at home.	1	2	3	4
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SECTION III: MOBILE PHONE NON-USERS

Q90. If you circle 'No' to Q9. which means you do not have a mobile phone, then do you borrow a mobile phone for use? (circle one)

- 1) Yes 2) No

If you circle 'YES' continue from Q91 onwards, if you circle 'NO' continue Q94 onwards

Q91. If yes, Why do you borrow it?	Rank in order of importance
1) Because everybody around me already had one	
2) Because it is a novel idea	
3) Because friends ask me to get one for myself	
4) Because parents ask me to get one for myself	
5) Because it would give me the 'convenience' of calling anytime	
6) Because it would make me 'easily accessible' (to other people) i.e. is a good medium to get messages	
7) Because it is easy to communicate with friends	
8) Because my family did not have a landline, so prefer a mobile	
9) Because I would be on the same level as my friends	
10) Because I need privacy in my communication	
11) Any other (please specify and rank):	

Q92. Do you borrow a mobile phone 'regularly' or 'only when you need'?

- 1) Only when I need 2) Regularly

Q93. From whom do you mostly borrow the mobile phone for use?

- 1) Parents 2) Relatives 3) Friends 4) Others

Q94. What are your reasons for not keeping a mobile phone?	Rank in order of importance
1) Mobile phones are suitable only after Std 12 th	
2) Mobile phones distract young people from studies	
3) Mobile phones are used by young people to tease others	
4) Mobile phones are used by young people to show off	
5) I can't afford it at present	

6)	Nobody gifted it to me
7)	Mobile phone is a bad influence
8)	My parents don't approve of having a mobile phone
9)	I want to buy it with my own money after I start earning
10)	Mobile phones are not good for health
11)	Any other (please specify and rank):

Q95. Do you want to buy it later?

- 1) Yes 2) No

Circle the statements below as: 1=Not at all true; 2=Hardly true; 3=Moderately true; 4=Exactly true.

A) EVEN THOUGH I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
96. I can easily be contacted by my parents and friends wherever I am.	1	2	3	4
97. I can easily be contacted by my parents and friends whenever they need me.	1	2	3	4
98. I can easily pass time by entertaining myself, anytime and anywhere.	1	2	3	4
99. I can easily get in touch with my parents and friends wherever I am.	1	2	3	4
100. I can easily get in touch with my parents and friends whenever I need them.	1	2	3	4
101. It is easy for others to contact me directly (personally/without any intermediary).	1	2	3	4
102. My parents and friends can easily contact me in case of any emergency.	1	2	3	4
103. I can easily contact my parents and friends in case of any emergency.	1	2	3	4
104. I can easily seek information from information services or internet.	1	2	3	4

B) EVEN THOUGH I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
105. I feel certain that my parents and friends will be able to be in touch with me wherever I am.	1	2	3	4
106. I feel certain that I will be able to move around freely and still be in touch with people.	1	2	3	4

107.I feel certain that I will be able to contact my parents and friends anytime and anywhere.	1	2	3	4
108.I feel certain that I will be able to access sources of leisure e.g. games, music etc.	1	2	3	4
109.I feel certain that I will be able to co-ordinate my meetings with friends easily.	1	2	3	4
110.I feel certain that I will be able to contact my parents or friends in case of any emergency easily just like mobile phone users.	1	2	3	4
111.I feel certain that I will be able to have direct access to people (without intermediaries).	1	2	3	4
112.I feel certain that I will be able to have quick access to information services or internet.	1	2	3	4

C) EVEN THOUGH I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
113.I can easily contact people personally and gather as many facts as possible to make some urgent decision anytime and anywhere.	1	2	3	4
114.I can easily contact people to find as many ways to approach a problem anytime and anywhere.	1	2	3	4
115.I can be systematic in making decisions as I can contact people back and forth anytime and anywhere.	1	2	3	4
116.I can note down my ideas anytime and anywhere.	1	2	3	4
117.I can easily contact people back and forth to evaluate my decision or solution to a problem anytime and anywhere.	1	2	3	4
118.I know I can quickly contact my loved ones in emergencies.	1	2	3	4
119.I can keep reminders without depending on my memory, anytime and anywhere.	1	2	3	4
120.I can organise and co-ordinate my short term and long term schedules and plans anytime and anywhere.	1	2	3	4
121.Parents and friends have no problem in informing me of any change of plans and vice versa.	1	2	3	4
122.Co-ordination with my groups of friends real time is easy wherever they may be.	1	2	3	4
123.I speak carelessly and without paying attention to my words.	1	2	3	4
124.I can plan in advance for a meet face-to-face meeting e.g. group study or to meet on Internet	1	2	3	4

Messaging.				
125.I communicate with some more regularly than others.	1	2	3	4

D) SINCE I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
126.I feel disheartened that I have to restrict my contact with my parents and friends to only when I at home and not anytime that I feel like.	1	2	3	4
127.I feel uncomfortable that contact with my parents and friends is not easily possible when I am out.	1	2	3	4
128.I feel uncertain that I can't call my parents and friends directly.	1	2	3	4
129.I feel cut off from those whom I care about, when I am out.	1	2	3	4
130.I have limited number of people whom I can turn to immediately if I need help.	1	2	3	4
131.I feel anxious that my parents and friends are not in touch with me when I am out.	1	2	3	4

E) SINCE I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
132.I don't feel free.	1	2	3	4
133.I cannot negotiate with my parents regarding the time to return home if I am out with friends.	1	2	3	4
134.I can't record pictures, videos or audio, make notes, store memories that please me or listen to music when I desire.	1	2	3	4
135.I can't call whomever I want to or any information service that I need.	1	2	3	4
136.I would prefer paying my own bill so I can use it as I wish.	1	2	3	4
137.I can't contact people directly i.e. on a one-to-one level.	1	2	3	4
138.I can't talk to my friends at will and as long as I like.	1	2	3	4
139.I can't access any information that I require off the internet using a mobile phone.	1	2	3	4

F) SINCE I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
140.I think that mobile phone users should use credit sparingly since their parents/others pay the bill.	1	2	3	4
141.I think that the parents restrict their children's mobile phone use when they think it is necessary.	1	2	3	4
142.I know that improper use of the mobile phone has legal implications.	1	2	3	4
143.I know that using the mobile phone in school, class or tuition is not permitted.	1	2	3	4
144.I know that mobile phone users can't get in contact with others if the signal strength is low or battery runs down.	1	2	3	4
145.I believe that mobile phones should be used sensibly.	1	2	3	4
146.I believe that mobile phones are suitable for use only after one completes std 12th.	1	2	3	4
147.I believe that mobile phone use should be avoided during personal study time.	1	2	3	4
148.I believe that mobile phone users should not send offensive messages to others.	1	2	3	4
149.I know that girls are allowed more freedom to use the mobile phone than boys.	1	2	3	4
150.I know that parents don't like when their children talk too long on the phone.	1	2	3	4
151.I know that parents don't like their children talking late nights on the phone.	1	2	3	4

F) SINCE I DON'T HAVE A MOBILE PHONE....

	Not at all true	Hardly true	Moderately true	Exactly true
152.I can't switch off the landline to avoid taking calls from my friends since it is common for the household.	1	2	3	4
153.I can't call my friends late at night.	1	2	3	4
154.I can't converse with my friends on the quiet if my parents object to talking on the landline. (H7:1)	1	2	3	4
155.I can't carry out a SMS conversation to avoid being detected being often on phone by my parents. (H7:1)	1	2	3	4

156.I am in full gaze of my people at home while talking on the landline.	1	2	3	4
157.I plan with my friends when we can talk.	1	2	3	4
158.I and my friends can't miscall each other or text to indicate that we are free to talk or come on Internet chat without giving any indication to others in the house.	1	2	3	4
159.I continue college conversations at home on the phone only when I need.	1	2	3	4
160.I am not in regular contact with my friends throughout the day.	1	2	3	4
161.I can't talk for long on the landline.	1	2	3	4
162.I can't speak when I go to sleep.	1	2	3	4
163.My parents are able know what or with whom I speak.				
164.I am able to speak privately with my friends only when I am out of home.	1	2	3	4

APPENDIX B

MOBILE PHONE ASSISTED PERSONAL AGENCY (MPAPAQ) **(92 Items)**

PART I. GENERAL

TICK THE OPTION THAT BEST DESCRIBES YOU IN THIS QUESTIONNAIRE

A) BACKGROUND:

Q1. Gender: 1) Female 2) Male

Q2. State your educational level (tick one only)

- 1) Currently studying in Junior college.
- 2) Currently studying for General Higher Education (e.g. Graduation in Arts, Commerce, Science)

Q3. Which culture do you follow (tick one only)

- 1) Hindu 2) Islamic 3) Sikh 4) Christian 5) Buddhist 6) Jain
- 7) Any other (please specify) _____

B) SOCIO-ECONOMIC STATUS:

Q4. Education of either mother or father who is more educated among them (tick one only):

- 0) Illiterate
- 1) Just literate but no schooling
- 2) Less than primary but attended school for at least one year
- 3) Primary pass but less than 10th
- 4) Std X class pass but less than Graduation
- 5) Graduation
- 6) Postgraduation (non-technical including Ph.D)
- 7) Professional qualification with technical degrees or diplomas e.g. Doctor, Eng., CA, MBA etc

Q5. Occupation of father if he is the chief wage earner in your family, otherwise mother (tick one)

- 0) None of the family member is employed
- 1) Self employed with income less than 5000 (labourer, housewife)
- 2) Self employed e.g. shops, petty business with income greater than 5000
- 3) Service at shops, home, transport
- 4) Service in Private sector or independent business employing 2-20 persons
- 5) Service in central/State/Public undertakings or owner of a company employing greater than 20 persons or self employed professional viz Doctors, CAs, Eng, etc

Q6. Type of house you live in (tick one only):

- 1) No place to live, pavement, mobile cart
- 2) Rented room in Chawl
- 3) Own room in Chawl
- 4) Rented house with 1-2 rooms
- 5) Rented house with 3-4 rooms or Own house with 1-2 rooms
- 6) Rented house with 5 or more rooms or Own house with 3-4 rooms
- 7) Own house with 5 or more rooms

Q7. Family possessions (you may tick more than 1 option):

- 1) Refrigerator 2) TV 3) Radio/Transistor/Music system 4) AC 5) Washing Machine
6) Telephone 7) Mobile phone 8) Credit card 9) Sanitary latrine
10) Any newspaper subscribed throughout the month

Q8. Possession of a vehicle or equivalent (you may tick more than 1 option):

- 0) No vehicle
1) 1 or more cycles (not baby cycle)
2) 1 or more scooter(s)/motorbike(s)/three wheeler/truck
3) 1 Car or other four wheeler
4) 2 or more Cars or other four wheelers

Q9. Do you have a mobile phone?

- 1) Yes 0) No

**IF YOU TICK YES TO Q9, CONTINUE WITH PART II ONLY.
IF YOU TICK NO TO Q9, CONTINUE WITH PART III ONLY STARTING ON
PG NO.7**

PART II: MOBILE PHONE OWNERS

A) PRELIMINARY INFORMATION:

Q10. Did you want a mobile phone, before you got it?

- 1) Yes 0) No

Q11. If yes, Why did you want it?	Rank as 1st, 2nd, 3rd ... in order of importance across the items given.
1) Because it was a novel idea	
2) Because parents/relatives asked me to get one for myself	
3) Because it would give me the 'convenience' of calling anytime and be 'easily accessible' anywhere	
4) Because my family did not have a landline, so preferred a mobile	
5) Because I would be on the same level as my friends	
6) Because I needed privacy in my communication	
7) Any other (please specify and rank):	

Q12. Was the mobile phone offered to you or did you buy it with your own money? (tick one)

- 1) It was offered to me. 2) I bought it with my own money

Q13. How long have you been using a mobile phone? (circle one)

- 1) Less than 6 months
- 2) 6 months to 1 year
- 3) More than 1 year to 2 years
- 4) More than 2 years to 3 years
- 5) More than 3 years

Q14. On an average, how often do use your mobile phone? (tick one only)

- 1) Never (not using at all)
- 2) Rarely (once a week)
- 3) Sometimes (2 times a week)
- 4) Often (3/4 times a week)
- 5) Very often (at least once a day)
- 6) Frequently (more than once a day)

Circle the statements below as:

1=Not at all true; 2=Hardly true; 3=Moderately true; 4=Exactly true.

B) BECAUSE I HAVE A MOBILE PHONE:

(i) HOW CAPABLE OF KEEPING IN TOUCH DO I BELIEVE I AM?
(CAPABILITY OF KEEPING IN TOUCH)

	Not at all true	Hardl y true	Moderate ly true	Exact ly true
15. I can easily get in touch with others wherever I am and whenever I need them.	1	2	3	4
16. I can easily be contacted by my parents and friends directly wherever I am and whenever they need me.	1	2	3	4
17. Others can easily contact me in case of any emergency.	1	2	3	4
18. I can easily contact my parents and friends in case of any emergency.	1	2	3	4
19. I can easily pass time by entertaining myself with music or radio, anytime and anywhere.	1	2	3	4
20. I can easily seek information from information services, anytime and anywhere.	1	2	3	4

(ii) HOW OPTIMISTIC AM I OF ITS USEFULNESS IN THE IMMEDIATE FUTURE?

(OPTIMISM OF ITS USEFULNESS)

	Not at all true	Hardly true	Moderately true	Exactly true
21. I am certain that my parents and friends will be able to be in touch with me wherever I am.	1	2	3	4
22. I am certain that I will be able to move around freely and still be in touch with people directly anytime and anywhere.	1	2	3	4
23. I am certain that I will be able to access sources of leisure whenever I want.	1	2	3	4
24. I am certain that I will be able to contact my parents or friends in case of any emergency.	1	2	3	4
25. I am certain that I will be able to have quick access to information services.	1	2	3	4

(iii) HOW COMPETENT DOES IT HELP ME TO BE IN PLANNING?

(COMPETENCY IN PLANNING)

	Not at all true	Hardly true	Moderately true	Exactly true
26. I can easily contact people personally to gather facts to make some urgent decision while on the move.	1	2	3	4
27. I can ring back and forth to evaluate my decision or solution to a problem while on the move.	1	2	3	4
28. I can keep reminders without depending on my memory.	1	2	3	4
29. I tend to pay attention to my words or text and while speaking or SMSing.	1	2	3	4
30. I can plan an instant face-to-face meeting e.g. group study or a meeting on Internet chat.	1	2	3	4

(iv) HOW SUPPORTED DO I FEEL?

(EXPERIENCE OF SOCIAL SUPPORT)

	Not at all true	Hardly true	Moderately true	Exactly true
31. I feel happy that I can talk to my parents and friends whenever and from wherever I feel like.	1	2	3	4
32. I have many people whom I can turn to if I need help at anytime and anywhere.	1	2	3	4
33. I feel safe that my parents and friends are in touch with me when I am out.	1	2	3	4

(v) HOW AUTONOMOUS DO I FEEL?
(EXPERIENCE OF AUTONOMY)

	Not at all true	Hardl y true	Moderate ly true	Exact ly true
34. I feel free.	1	2	3	4
35. I negotiate with my parents regarding the time to return home if I am out with friends.	1	2	3	4
36. I can record pictures, videos or audio, make notes, store memories that please me or listen to music when I desire.	1	2	3	4
37. I don't have to depend on others to call whomever I want to or access any information service that I need.	1	2	3	4

(vi) WHAT BOUNDARIES DO I ENCOUNTER IN ITS USE?
(BOUNDARIES OF MOBILE PHONE USE)

	Not at all true	Hardl y true	Moderate ly true	Exact ly true
38. I know that improper use of the mobile phone has legal implications.	1	2	3	4
39. I know that using the mobile phone in school, class or tuition is not permitted.	1	2	3	4
40. I can't get in contact with others if the signal strength is low or battery runs down.	1	2	3	4
41. I don't send offensive messages to others via mobile phone.	1	2	3	4
42. I know that girls are allowed less freedom by parents regarding mobile phone use than boys.	1	2	3	4
43. My parents don't like me talking late nights on the phone.	1	2	3	4
44. I believe that prolonged mobile phone radiations could cause health problems.	1	2	3	4

(vii) HOW DOES IT FACILITATE CLAIM OVER PERSONAL SPACE?
(CLAIM OVER PERSONAL SPACE)

	Not at all true	Hardl y true	Moderate ly true	Exact ly true
45. I switch off the cell to avoid taking calls from my parents or friends since it belongs to me personally.	1	2	3	4
46. I communicate with my friends on the quiet with SMS if my parents object me being engaged often with the mobile phone.	1	2	3	4
47. My friends and I miscall each other or text to indicate that we are free to talk or come on Internet chat without giving an indication to others in the house.	1	2	3	4
48. I am in regular contact with my friends throughout the day.	1	2	3	4
49. I speak/SMS when I go to sleep.	1	2	3	4
50. I am able to speak privately with my friends at home.	1	2	3	4

PART III: MOBILE PHONE NON-OWNERS

A) PRELIMINARY INFORMATION:

Q51. If you tick 'No' to Q9, which means you DO NOT HAVE a mobile phone, then do you borrow a mobile phone for use? (tick one)

- 1) Yes 0) No

If you tick 'YES' to Q51, CONTINUE FROM Q52 ONWARDS.

If you tick 'NO' to Q51, CONTINUE Q55 ONWARDS.

52. If yes, Why do you borrow it?

Rank the items below as 1st, 2nd, 3rd ... in order of importance.

1) Because it is a novel idea
2) Because parents/relatives ask me to get one for myself
3) Because it would give me the 'convenience' of calling anytime and be 'easily accessible' anywhere
4) Because my family did not have a landline, so prefer a mobile
5) Because I would be on the same level as my friends
6) Because I need privacy in my communication
7) Any other (please specify and rank):

Q53. On an average, how often do you borrow a mobile phone for use? (tick one option only)

- 1) Never (not using at all)
- 2) Rarely (once a week)
- 3) Sometimes (2 times a week)
- 4) Often (3/4 times a week)
- 5) Very often (at least once a day)
- 6) Frequently (more than once a day)

Q54. From whom do you mostly borrow the mobile phone for use? (tick one option only)

- 1) Parents
- 2) Relatives
- 3) Friends
- 4) Others

Q55. Do you want to buy it later? (tick one option only)

- 1) Yes
- 0) No

Q56. What are your reasons for not having a mobile phone?	Rank the items below as 1st, 2nd, 3rd ... in order of importance.
1) Mobile phones are suitable only after Std 12 th	
2) Mobile phones are a source of distraction to young people	
3) Mobile phones are used by young people to tease others or show-off	
4) I can't afford it at present	
5) Nobody gifted it to me	
6) My parents don't approve of having a mobile phone	
7) I want to buy it with my own money after I start earning	
8) Mobile phones are not good for health	
9) Any other (please specify and rank):	

Circle the statements below as: 1=Not at all true; 2=Hardly true; 3=Moderately true; 4=Exactly true.

B) BECAUSE I DON'T HAVE A MOBILE PHONE:

(i) HOW CAPABLE OF KEEPING IN TOUCH DO I BELIEVE I AM?
 (CAPABILITY OF KEEPING IN TOUCH)

	Not at all true	Hardly true	Moderately true	Exactly true
57. I can't easily get in touch with others wherever I am and whenever I need them.	1	2	3	4
58. I can't easily be contacted by my parents and friends directly wherever I am and whenever they	1	2	3	4

need me.				
59. Others can't easily contact me in case of any emergency.	1	2	3	4
60. I can't easily contact my parents and friends in case of any emergency.	1	2	3	4
61. I can't easily pass time by entertaining myself with music or radio, anytime and anywhere.	1	2	3	4
62. I can't easily seek information from information services, anytime and anywhere.	1	2	3	4

(ii) HOW OPTIMISTIC AM I OF ITS USEFULNESS IN THE IMMEDIATE FUTURE?

(OPTIMISM OF ITS USEFULNESS)

	Not at all true	Hardly true	Moderately true	Exactly true
63. I am not certain if my parents and friends will be able to be in touch with me wherever I am.	1	2	3	4
64. I am not certain if I will be able to move around freely and still be in touch with people directly anytime and anywhere.	1	2	3	4
65. I am not certain if I will be able to access sources of leisure e.g. games, music etc. whenever I want.	1	2	3	4
66. I am not certain if I will be able to easily contact my parents or friends in case of any emergency.	1	2	3	4
67. I am not certain if I will be able to have quick access to information services.	1	2	3	4

(iii) HOW COMPETENT DOES IT HELP ME TO BE IN PLANNING?

(COMPETENCY IN PLANNING)

	Not at all true	Hardly true	Moderately true	Exactly true
68. I can't easily contact people personally to gather facts to make some urgent decision while on the move.	1	2	3	4
69. I can't easily ring people back and forth to evaluate my decision or solution to a problem while on the move.	1	2	3	4
70. I can't keep reminders without depending on my memory.	1	2	3	4
71. I tend not to pay attention to my words and while speaking.	1	2	3	4
72. I can't plan an instant face-to-face meeting e.g. group study or a meeting on Internet chat.	1	2	3	4

(iv) HOW SUPPORTED DO I FEEL?
(EXPERIENCE OF SOCIAL SUPPORT)

	Not at all true	Hardly true	Moderat ely true	Exact ly true
73. I feel disheartened that I can't talk to my parents and friends whenever and from wherever I feel like.	1	2	3	4
74. I have limited number of people whom I can turn to immediately if I need help.	1	2	3	4
75. I feel anxious that my parents and friends are not in touch with me when I am out.	1	2	3	4

(v) HOW AUTONOMOUS DO I FEEL?
(EXPERIENCE OF AUTONOMY)

	Not at all true	Hardly true	Moderat ely true	Exact ly true
76. I feel I can't do many things I would have wished to do.	1	2	3	4
77. I can't negotiate with my parents regarding the time to return home if I am out with friends.	1	2	3	4
78. I can't record pictures, videos or audio, store memories that please me or listen to music when I desire.	1	2	3	4
79. I have to depend on others to call whomever I want to or access any information service that I need.	1	2	3	4

(vi) WHAT BOUNDARIES DO I ENCOUNTER IN ITS USE?
(BOUNDARIES OF MOBILE PHONE USE)

	Not at all true	Hardly true	Moderat ely true	Exact ly true
80. I know that improper use of the mobile phone has legal implications.	1	2	3	4
81. I know that using the mobile phone in school, class or tuition is not permitted.	1	2	3	4
82. I know that mobile phone users can't get in contact with others if the signal strength is low or battery runs down.	1	2	3	4
83. I believe that mobile phone users should not send offensive messages to others.	1	2	3	4
84. I know that girls are allowed less freedom by parents regarding mobile phone use than boys.	1	2	3	4

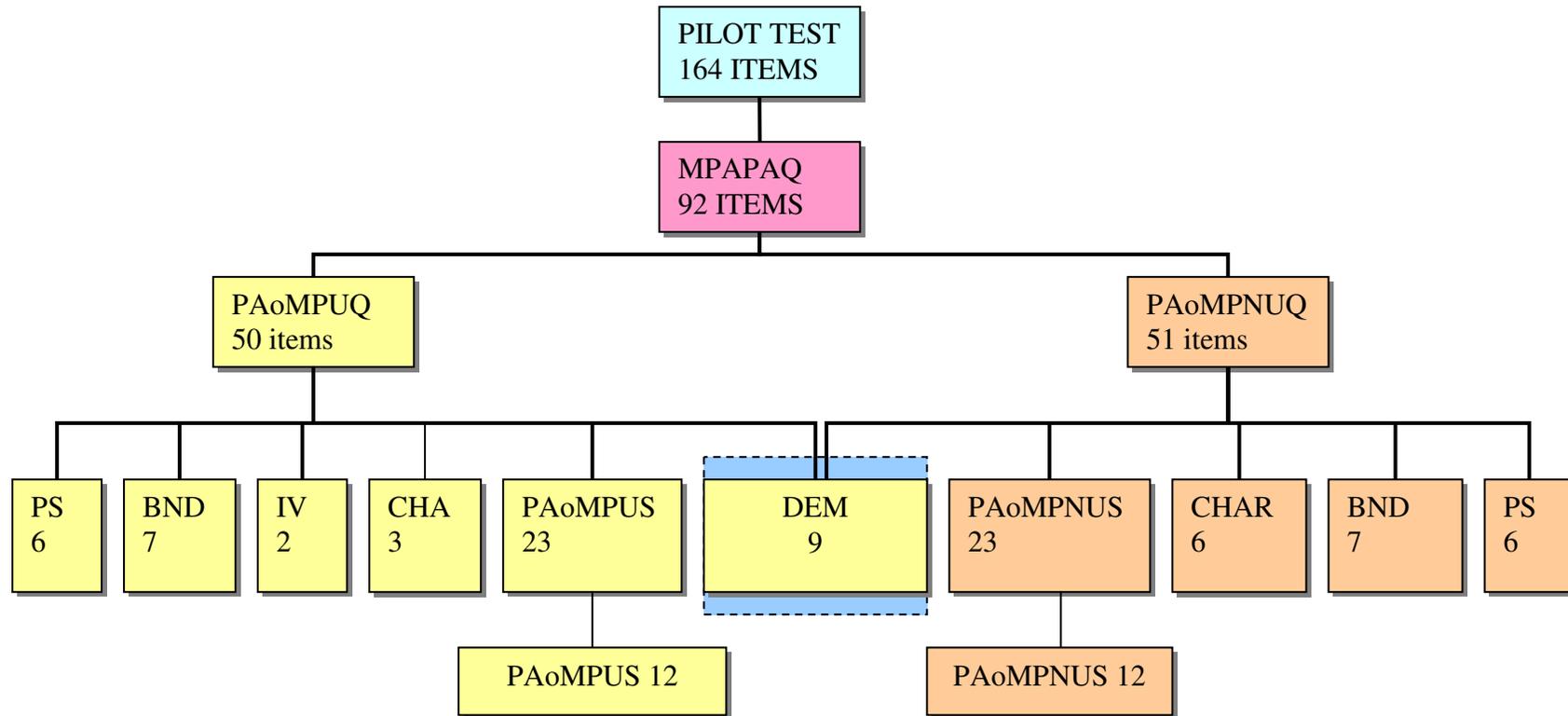
85. I know that parents don't like their children talking late nights on the phone.	1	2	3	4
86. I believe that prolonged mobile phone radiations could cause health problems.	1	2	3	4

(vii) HOW DOES IT FACILITATE CLAIM OVER PERSONAL SPACE?
(CLAIM OVER PERSONAL SPACE)

	Not at all true	Hardly true	Moderat ely true	Exact ly true
87. I can't switch off the landline to avoid taking calls from my friends since it is common for the household.	1	2	3	4
88. I can't communicate with my friends on the quiet if my parents object to talking on the landline.	1	2	3	4
89. My friends and I can't miscall or text each other to indicate that we are free to talk or come on Internet chat without giving an indication to others in the house.	1	2	3	4
90. I am not in regular contact with my friends throughout the day.	1	2	3	4
91. I can't speak when I go to sleep.	1	2	3	4
92. I am able to speak privately with my friends only when I am out of home.	1	2	3	4

---XXX---

APPENDIX C
DEVELOPMENT OF THE QUANTITATIVE INSTRUMENT



MPAPAQ: Mobile Phone Assisted Personal Agency Questionnaire
 PAoMPUQ: Personal Agency of Mobile Phone User Questionnaire
 PAoMPNUQ: Personal Agency of Mobile Phone Non-User Questionnaire
 PS: Personal Space
 BND: Boundaries

IV: Independent Variables
 CHA: Characteristics
 PAoMPUS: Personal Agency of Mobile Phone User Scale
 DEM: Demographics
 PAoMPNUS: Personal Agency of Mobile Phone Non-User Scale

APPENDIX D

Plain Language Statement

This research study is provisionally titled: THE MOBILE PHONE AND PERSONAL AGENCY.

Department: School of Communications, DCU
Principal Investigator: Darryl Ashwin D'Souza
email: darryl.dsouza2@mail.dcu.ie

This research study investigates how the possession of the mobile phone enhances the confidence and capability of young people from middle-class families to respond to the limits experienced in daily life situations. Specifically, cultural concerns that restrict their personal space are considered. The study is situated in Mumbai, India.

The data collection for this study will take place through self-administered questionnaires and interviews. Pilot questionnaires and interviews will be administered among volunteers from the students aged 18 years or over from colleges in Mumbai. The final data collection will take place in Mumbai. The interviews will be audio recorded to facilitate analysis. The questionnaire and interview will require roughly 15 and 20-30 minutes respectively which will be acquired from the school time with the permission of the proper authorities.

The researcher foresees no physical risks that the participants will be exposed to. The questionnaire and the interview will be administered in the classroom provided by the school authorities. However the questionnaire contains questions related to demographic information and habits, attitudes and behaviors about their mobile phone communication with their family and friends. Some of these questions may cause some amount of unease. The participants are free not to answer any question that may make them feel uncomfortable or withdraw from the research study at any point. There is no penalty for withdrawing before all stages of the research study have been completed.

There is no direct benefit to the participants taking part in the questionnaire or interview but generally society will benefit from the insights drawn from the answers.

Participants will fill a consent form. The questionnaire and interview will be conducted under condition of anonymity and confidentiality and the transcripts will be securely stored. The acquired data will be destroyed after the completion of the research study.

Participation or non participation in this research study will not affect the ongoing grades of the participants.

If participants have concerns about this study and wish to contact an independent person, please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Office of the Vice-President for Research, Dublin City University, Dublin 9. Tel +353-01-7008000

MOBILE PHONE and PERSONAL AGENCY

CONSENT FORM

Dear participant,

Hello. I am a research student from Dublin City University, Dublin. I am conducting research which investigates how the possession of the mobile phone enhances the confidence and capability of young people from middle-class families to respond to the limits experienced in daily life situations. Specifically cultural concerns that restrict their personal space are considered in this study. The study is situated in Mumbai, India.

This questionnaire/interview should take about 15/20-30 minutes respectively to complete. You will answer a few brief general information questions followed by the main body of questions. Your participation is voluntary and you may withdraw at any time without penalty.

There are no known risks to participating in this survey. Your participation is anonymous and your name will not be associated with your answers. Your responses will be kept completely confidential and the transcripts will be securely stored. The acquired data will be destroyed after the completion of the research study.

Although you may not directly benefit from your participation, others may ultimately benefit from the knowledge obtained in this study. Participation or non participation in this research study will not affect the ongoing grades of the participants.

If you have any questions or concerns about this study, please contact the principal investigator.
Thank you.

Your Sincerely,
Darryl D'Souza
E-mail: darryl.dsouza2@mail.dcu.ie

Participant's Reply

I understand the above information. Furthermore, I understand that the return of a completed questionnaire indicates consent to participate in this survey.

Thank you.

Signature: _____

Date: _____

You continuance with the survey implies that you have read and understood this consent form. Please note that the privacy of your responses is respected. Your name is not collected, and no form of personal identifier will be stored with your responses to this questionnaire/interview. Thank you for taking part in my research.

APPENDIX E

CORRELATION MATRIX OF 23 ITEM PAoMPUS

	q15	q16	q17	q18	q19	q20	q21	q22	Q23	q24	q25	Q26	q27	q28	q29	q30	q31	q32	q33	q34	q35	q36	q37
Correlation q15	1.000	.572	.524	.332	.345	.206	.438	.363	.384	.494	.271	.564	.396	.320	.308	.240	.563	.439	.476	.391	.284	.338	.279
q16	.572	1.000	.556	.314	.263	.167	.460	.357	.324	.474	.289	.412	.319	.264	.234	.149	.415	.334	.412	.215	.146	.274	.160
q17	.524	.556	1.000	.473	.254	.217	.506	.381	.303	.516	.376	.556	.336	.294	.217	.251	.467	.408	.460	.273	.196	.361	.190
q18	.332	.314	.473	1.000	.144	.147	.378	.372	.161	.376	.237	.354	.300	.294	.173	.207	.269	.295	.310	.170	.293	.243	.127
q19	.345	.263	.254	.144	1.000	.345	.277	.352	.490	.210	.386	.310	.289	.227	.318	.300	.179	.281	.220	.296	.171	.384	.301
q20	.206	.167	.217	.147	.345	1.000	.157	.311	.355	.171	.582	.303	.243	.191	.341	.352	.107	.191	.172	.252	.175	.245	.343
q21	.438	.460	.506	.378	.277	.157	1.000	.505	.311	.470	.317	.477	.364	.250	.161	.175	.426	.395	.422	.203	.201	.311	.285
q22	.363	.357	.381	.372	.352	.311	.505	1.000	.426	.378	.357	.403	.330	.270	.261	.273	.255	.277	.331	.247	.296	.259	.262
q23	.384	.324	.303	.161	.490	.355	.311	.426	1.000	.288	.450	.304	.426	.261	.364	.376	.186	.278	.217	.234	.164	.337	.250
q24	.494	.474	.516	.376	.210	.171	.470	.378	.288	1.000	.257	.446	.331	.220	.219	.145	.439	.420	.457	.218	.220	.235	.175
q25	.271	.289	.376	.237	.386	.582	.317	.357	.450	.257	1.000	.360	.337	.250	.352	.460	.218	.282	.279	.174	.133	.266	.378
q26	.564	.412	.556	.354	.310	.303	.477	.403	.304	.446	.360	1.000	.542	.293	.316	.296	.525	.419	.367	.390	.265	.279	.254
q27	.396	.319	.336	.300	.289	.243	.364	.330	.426	.331	.337	.542	1.000	.269	.284	.331	.311	.426	.255	.273	.252	.213	.235
q28	.320	.264	.294	.294	.227	.191	.250	.270	.261	.220	.250	.293	.269	1.000	.319	.287	.238	.308	.319	.203	.134	.292	.299
q29	.308	.234	.217	.173	.318	.341	.161	.261	.364	.219	.352	.316	.284	.319	1.000	.364	.260	.202	.274	.249	.238	.208	.287
q30	.240	.149	.251	.207	.300	.352	.175	.273	.376	.145	.460	.296	.331	.287	.364	1.000	.092	.310	.274	.234	.201	.210	.371
q31	.563	.415	.467	.269	.179	.107	.426	.255	.186	.439	.218	.525	.311	.238	.260	.092	1.000	.572	.596	.413	.270	.340	.237
q32	.439	.334	.408	.295	.281	.191	.395	.277	.278	.420	.282	.419	.426	.308	.202	.310	.572	1.000	.544	.255	.234	.293	.319
q33	.476	.412	.460	.310	.220	.172	.422	.331	.217	.457	.279	.367	.255	.319	.274	.274	.596	.544	1.000	.253	.174	.312	.190
q34	.391	.215	.273	.170	.296	.252	.203	.247	.234	.218	.174	.390	.273	.203	.249	.234	.413	.255	.253	1.000	.389	.311	.249
q35	.284	.146	.196	.293	.171	.175	.201	.296	.164	.220	.133	.265	.252	.134	.238	.201	.270	.234	.174	.389	1.000	.285	.220
q36	.338	.274	.361	.243	.384	.245	.311	.259	.337	.235	.266	.279	.213	.292	.208	.210	.340	.293	.312	.311	.285	1.000	.363
q37	.279	.160	.190	.127	.301	.343	.285	.262	.250	.175	.378	.254	.235	.299	.287	.371	.237	.319	.190	.249	.220	.363	1.000

APPENDIX F

GUIDE FOR INTERVIEWS WITH YOUNG PEOPLE -MP USERS:

PERSONAL AGENCY & MOBILE PHONE USE STUDY

PROFILING A MOBILE PHONE USER

- Do you have a mobile phone?
- Why did you want a mobile phone? Why did you acquire the Mobile Phone?
- How long have you been using the mobile phone? Do you share it?
- What significance does the mobile phone have for you? Why?

SELF-EFFICACY

- How does the possession of a mobile phone influence your self-confidence? Cite reasons and examples.
- How useful was it for you in daily affairs?
- Is there is any particular difference in yourself from the time when you did not have a mobile and after you started using it? What has influenced those changes?
- Narrate an instance when the availability of the mobile phone was the impulse to do actions which you would not do in its absence?
- What are the abilities that the mobile phone provides users of mobile phone?

OPTIMISM

- Do you carry the mobile the mobile phone with you? Why?
- Any instance when you have felt fortunate to have carried it?

PLANFULNESS

- What is the influence of having the mobile phone on planning and co-ordination?

AUTONOMY

- What is the influence of having the mobile phone on freedom?

BOUNDED AGENCY

- What are the restrictions that you face while using a mobile?
- What is your parents' opinion on your mobile phone usage?
- Any conflicts because of Mobile phone use? What do you do then?
- Narrate any instance when you were annoyed that you had the mobile phone with you at that moment.
- How are girls and boys treated with regard to mobile phone use and possession?

APPENDIX G

GUIDE FOR INTERVIEWS WITH YOUNG PEOPLE -NON-USERS:

PERSONAL AGENCY AND MOBILE PHONE USE STUDY

PROFILING A MOBILE PHONE NON-USER

- Do you have a Mobile phone?
- What are the advantages and disadvantages of a cell phone?
- Are you planning to buy a mobile phone? When?
- Why? Why not? (before/after 12th)?
- What are the advantages and difficulties of having and not having a mobile phone?

SELF-EFFICACY

- How you go about daily affairs without mobile phone? Cite reasons and examples.

OPTIMISM

- When you leave house, do you expect that you will be able to be in contact with people? Why/why not?

PLANFULNESS

- What is the influence of not having a mobile phone on organizing yourself and co-ordination?

SOCIAL SUPPORT

- What is the influence of not having a mobile phone on being in touch with those you like?

AUTONOMY

- What is the influence of not having the mobile phone on freedom?

BOUNDED AGENCY

- What are the limitations that are faced by those among your friends who have mobile phones?
- Are mobile phone users prone to break family, school or other rules?

APPENDIX H

GUIDE FOR INTERVIEWS WITH TEACHERS:

PERSONAL AGENCY AND MOBILE PHONE USE STUDY

- Do you use a cell phone? How frequently do you use it?
- What is the suitable age for a child to get a cell phone?
- How useful or harmful is the mobile phone for Education?
- What are the advantages and disadvantageous in the mobile phone possession by children?
- What capabilities are enhanced or impeded in students due to mobile phone possession and use?
- What is the influence of having a mobile phone on the independence of children?
- How are girls and boys treated with regards to mobile phone possession and use?

APPENDIX I

GUIDE FOR INTERVIEWS WITH PARENTS:

PERSONAL AGENCY AND MOBILE PHONE USE STUDY

- Do you use a cell phone? How frequently do you use it?
- What is the difference between your children's and your attitude with regard to mobile phone possession?
- What is the suitable age for a child to get a cell phone?
- What was the age of your child when he started using a mobile phone? How frequently does he use it?
- How useful or harmful is the mobile phone for family life?
- What are the advantages and disadvantages in the mobile phone possession by children?
- What capabilities are improved or impeded in your child due to mobile phone possession and use?
- What is the influence of having a mobile phone on the independence of children?
- How are girls and boys treated with regards to mobile phone possession and use?

APPENDIX J

INTERVIEW WITH MOBILE PHONE USER

I/ M/ JC/ G/ U/ 002_REC008

Duration: 18 mins

DD: Do you have a mobile phone?

REC008: Yes.

DD: How long have you been usingb your cell phone?

REC008: It's about a year now that I've been using a cell phone.

DD: How did you acquire it?

REC008: It was gifted by my parents. I asked for it in the beginning in the 9th std when I was longing for the cell. I truly wanted it. It is like all my friends had a cell phone. And then you know to be in the group...like I wanted the cell phone to feel part of the group. There were murmurings about it but then my parents did not feel it was necessary to give me a cell at that time so they bought it for me after the board (std X-junior cert) exams.

DD: Do you now feel that you are part of your group now?

REC008: Not really cause that time I was in school. And now I'm not very attached to them. Its like they are in another college and I am in another college. But then the mobile keeps me in contact with them so in a way I did fit into the group.

DD: What does a Cell phone mean to you?

REC008: It is something that you use to communicate with people. It is also entertainment at some point of time if you have the MP3. Basically, for me it is more like something that, if I don't have it I feel uneasy. I don't feel myself. It's around me every time, every where even when I am going to sleep it's with me.

DD: You think young people are more adept with mobile phones than adults?

REC008: Ya. Because my dad, you know, he comes to me when he doesn't know how to operate his phone and he is like...baby could you show me like, you know...like type this message for me, I'm too slow at it.

DD: For what purpose you use your cell phone?

REC008: I use it to talk to my parents on the phone, message them. And I also use it for music and entertainment.

DD: How useful is the mobile phone in your daily affairs? Cite examples.

REC008: Em...like I said if for example, I do promotions and when I am out and about, sometimes I don't really know the place. And it could be that I am lost. There was this one time that I was lost and I did not know what to do. I was like at the wrong place and there were a lot of people around who I kept asking and nobody knew the direction to the place that I wanted to go. Because the phone was with me I

could contact my dad and ask him for directions. So like he could you tell me how to reach that place. So yes I feel capable of using the phone.

Also, I am conscious when I am using the phone that I'm using it in a good way. I'm not misusing it. For example, like em...I am using it to contact friends and I'm not using it...em... for bad...like...like watching em...stuff that I shouldn't be watching. So then I feel really confident.

DD: How significant is the mobile to you in your daily life?

REC008: It's very important because I go to different places and it's very essential for me cause my parents want to keep in touch with me. They feel safer when I'm out, so that even when I'm going to a far off place they know they can contact me wherever I am. So they feel safe sending me out because of the mobile phone. On the other hand even I feel safe because if I'm in a problem, I can contact anyone at any point of time wherever I am.

DD: So how does having it affect your ability to handle situations, in comparison to you not having it?

REC008: Em...life's situations...Yes, because...when I was all upset when my boyfriend broke up with me I could contact my friends and let them know how I was feeling and... they were like guiding me and telling me what I should do and what I shouldn't do. And em...I was able to face what was coming next. He couldn't tell me that...that he wanted to break up. I was ready for it in a way because my friends had already told me about it, so I was informed. So I knew what the situation could have been and how I had to react to it. So in that way yes it helps you to face a situation in a better way.

DD: So you knew how to express yourself in that situation?

REC008: Yaaa because (laughs) I don't like to tell people on their face...like..it's rude, that I really don't like you. You know...you are not such a wannabe. It's not easy to tell a person. The person will just look at you and I won't know what to say. And my ex-boyfriend, I told him you are so mean, you are selfish, like you know, I abused him through a text message. So I felt that a lot of thinking goes inside that I could express better. If I was in front of him, I would get all melted and wouldn't be able to say a thing. So ya.

DD: Is there any significant difference in yourself from the time you did not use a mobile and now which you think could possibly attribute to the mobile phone?

REC008: Em...earlier I was very friendly with everyone. For me everyone was the same. But now that I got a phone its like...you have no phone...or it's better than someone else's. There comes that thing, you know...I am better than them. But before, I was not like that...I was not a very...it has brought a change in my personality in my ways. Not in the way I think but the way, I talk to people has changed from what I was.

DD: Is it useful to have a mobile phone?

REC008: There was a time we were in a train and my friends and I were going to *Vidya Vihar*. At the station I got into one train and my friends were left out and...and

I was so nervous because I hadn't traveled in the train before. And em...I reached the next station and I don't know what to do. And then I was like, okay, my phone was with me. And I called up my friends 'what should I do...should I carry on and meet you'll at the next station or what, I don't even know the place and all'. Then they calmed me down, 'don't take tension, we'll meet you at the next station'. Then I was so, so, thankful, I mean, like, I have the phone with me. I was not like alone. I could contact my friends.

DD: So what are all the things you do with your mobile phone?

REC008: You can plan stuff to do. Like, you happen to get bored and you don't know what to do. You can plan with friends what you're gonna do the next day. Then it makes the next day better like you know in advance. For example I have already planned like you know we are going to do so many things during the holidays or like ..I am going out on Monday...yeah...So we do keep calling each other up, or telling each other what happened during the day and all, getting all excited...for the smallest of the things.

DD: Do you feel free to move about outside?

REC008: I feel more independent because now I don't have to go with my parents somewhere, I can go alone...travel to a far off place I can go on my own I don't need their company. And I told you I feel safe with it. I can contact if I am in some wrong place.

DD: Any issues faced at home due to mobile phone use?

REC008: One was that I sometimes don't pick up my mama's call because it's on silent and my parents get really angry with me. They like, why don't you pick up the phone? What is the phone for? to pick it up...like 'mama it was on silent'. 'But you are not supposed to keep the phone on silent...you supposed to keep it loud'...'no but it rings too loudly and people all around look at me like'. Then my mom, like 'no, the cell is given to you so that...we can contact you...not for your use'. So then I say mom 'now please...mama please (joins hands showing pleading)'. Like 'the phone is given to you for a purpose, for a reason that we can get contacted to you' and some times my mom is like, 'yeah, if you don't pick up the phone, I am going to take the phone away from you'. And then that's when I get all scared and I keep calling her up when I am out and about, 'mom I will come back in 10-15 minutes'.

DD: You have to call her often?

REC008: Yeah. There is that factor that comes in because my mom says like example like when I'm out late then she will be like why you didn't call up, you should have called up. And then I go on to say mama I did not want to worry you'll. And then she'll be like no you should call and tell us where you are that you know we are. It's like sometimes the mobile does become irritating because I have to keep in touch with my mom every now and then yeah, but on the whole it's like something that I would want to always keep.

DD: Any instance when you felt the mobile shouldn't have been with you.

REC008: When I'm out with friends and I want to take more time out like with my friends my mom keeps calling me every two minutes and that's very irritating, and like, why the hell I even have this phone with me, like I shouldn't have got the phone then they would no like you know no calls...ya...no disturbance like.

DD: Your parents are funding for the recharge.

REC008: Ya.

DD: What are the limitations that you face while using a mobile?

REC008: I get a talk time of only a hundred bucks a month. I have to utilize it fully. And it is so difficult because you know you want to talk more and you don't realize how much you are spending. So before half the month is over, my balance is over too. So I find I can't talk to complete satisfaction because I don't have enough of balance. Because my parents' say 'why do you need so much of balance. 100 bucks is ok if you call 2-3 people a day and you don't have to talk for so long. You meet them at college' .So then I find that as a limitation because I can't use it when and for however long I want to.

DD: What do your parents think about your mobile phone usage?

REC008: When I'm in the house my mom doesn't like me talking on the phone. She says that you know you've just been out with your friends and now you have come in the house and again you are with your phone. But then they are not really strict about it, they allow me to use it and all that, but my mom gets a little angry and she keeps shouting at me.

DD: So then what do you do?

REC008: I like 'mom pleeeeee, little more pleeeeee, and then she'll be like, 10 minutes, that's it'. So she gives in to your pleading.

DD: When you leave the house and realize that the mobile is not with you what will you do?

REC008: I (laughs) go back to the house and get it.

DD: You can use your cell anytime you want at home?

REC008: Not really because I don't use my cell phone in the night unless it's very urgent and I really need to talk to someone. But then I don't, I mean, I don't. But it's with me at all times. I get messages in the night. I don't really reply because I'm so tired. It's switched on but I don't reply to it. I reply to it only in the morning. A goodnight message I would reply at that point of time. But then I don't, I reply in the night. Not that I don't rigidly, but then it's like late in the night and I am already asleep then I would not go out of my way.

DD: How are girls and boys treated with regard to mobile phone use and possession?

REC008: Well I think so, yes. My cousin brother got a phone from my uncle earlier than me. He was in the 6th std. [class]. When I went to argue with my parents and question them em...they gave me the reason that he was more mature to use it. But then I was like, he is in the 9th and I'm in the 9th, it's the same. But then they were like 'he will use it in a better way, you girls don't know how to use it'. I don't think it was fair enough because both of us are normal human beings and we should be

treated equally. That's what I feel. And ya...I kept arguing with them 'why I shouldn't have a cell and these stupid reasons like you don't need it, you're a girl, you just go for tuitions and you come back'. So...then I was like that doesn't mean I don't need to enjoy, I don't need to contact friends. I also have friends. Then ya...they kept arguing. They did not know what to say. They just said, 'stop it, cut it'. So I had no say in it.

DD: Do you have any questions you want to ask me?

REC008: No.

DD: Thank you for giving your time.

APPENDIX K

INTERVIEW WITH A MOBILE PHONE NON-USER

I_M_JC_G_NU_005_REC062

Duration: 18: 55

DD: Do you have a cell phone?

REC062: No.

DD: Is there any reason why you don't have a mobile phone?

REC062: My dad had given me a cell phone but the SIM card had been taken on my mama's identity since I am not yet 18yrs. The SIM card is lawfully given only after 18 years. And it is not right to cheat. So I told them that I will not take it. If you want to take it then you may take it for yourselves. Then my mama took for herself.

DD: So you have decided to use the cell phone after you are 18yrs old only?

REC062: Yes. If you want to call anyone you will use the P.C.O. There are so many things you can use. If I go out some place other than the college, then I use the cell phone to inform my parents where I am. But, not in college because if you are attending the lectures and your teacher is teaching....many of my friends...their cell phone rings when the teacher is teaching and they pick it up. You shouldn't do it. It is not allowed. A reminder is also written on the blackboard that you are not allowed to use it. But they are not bothered. They pick it up. Even teachers use it in the premises and in our class. But they say '*chalta hai* [it is ok] we are teachers' and if anyone else's picks it up?...meaning if you [teachers] do it then it is *chalta hai* and if we do it is wrong. You yourself are telling us not to do it and then if we do it?...It is not that once you make a robot and then if it is doing something wrong, blame it for it. You should think about it before making it. There are many things that are not allowed in our college. Even students who are studying in schools are using the cell phones. But it is not suitable for their studying. What is the use? They use the cell phone as a radio. They just listen to music and songs. That is not what it is for.

DD: If you had a mobile what would you do that you cannot do now?

REC062: I would use the cell phone only for games. If I want to listen to music I will listen to it from the PC or the stereo. I don't have to use the cell phone for enjoyment and entertainment. There are some games on it, so just that.

DD: What are the advantages and disadvantages of a cell phone?

REC062: The advantage is that if you have the time and you want to chat with anyone, you can chat. If you are getting late to go home then you can call and inform at home that I'll be coming late. But the disadvantages are that the youth today don't have a proper outlook. They keep calling or sending SMSs, MMSs. And youth send obscene MMSs and SMSs. They are given the cell phone for a purpose of calling their parents to keep them informed where there are but today youth do not know what are they doing and why are they doing. Merely for the same of fun and chatting, they do things that are inappropriate with their personality and with their personal phone.

DD: Does anyone have difficulties contacting you or you have difficulties contacting them?

REC062: I call them on the landline. I don't give them my cell number. Many boys keep asking your cell number. If you give your cell number to them and if they call you and send you something obscene, it will be an embarrassment to tell it to someone that they said this and this. I give them my landline number and then they can't say obscene things. Not that it is right or wrong but for me and my parents it is not appropriate. They allow me to take a cell phone but I don't want to take it. And I gave my landline number to everyone not my cell number. Giving landline number is safer than giving cell phone number.

DD: You had any problem anytime when you were out and about?

REC062: Actually I don't face any difficulties generally. I just come to college and then go home and if I go out of Bombay then my parents give me the mobile to keep them informed because there are many emergency situations that may arise. But in college I don't take the mobile. Even I go to tuition classes but I don't take the mobile. But if I am going to my village then I take it. One day in front of college I had an accident and incidentally I had carried the mobile that day because I had gone to my brother's house since my sister in law had arrived. And I was just going to meet them. And I came from there. That day was my practical classes. On that day I carried the mobile. I was injured. They called my parents. They were calling on my cell phone. When I spoke to them they were happy. Then they said that I have to take the mobile.

Q: Wasn't it useful that you had carried the mobile phone with you that day?

A: No. I thought that day that people are so good because in front of the college, there is space for parking of the bikes. And the students sit there and chat. But for me they are good because I was injured and they called the police and took me to the *Sion* hospital. And they called my parents I didn't call them because if I call them they will get worried about it. It would have been so bad to tell them that I met with an accident and got injured. They would have got worried. So I did not tell them. The police called them.

DD: What are your feelings when you are among your friends who have a mobile phone?

REC062: Well for me it is a normal situation. When you see that your friends are playing or talking on the cell phone, why should we feel sorry for yourself? We come to college for studies and if you are sending messages to everyone and just wasting money like water, it's not correct. By messaging what do you get? Nothing. He read it, I read it. The matter is closed, and further, you provide Rs.3 to the telecom authority. And it is that I have a mobile phone, but I don't bring it to college.

DD: How do your friends react to you for not having a mobile phone?

REC062: I didn't make such people as friends who will look down on me because I don't have a cell phone. People like that are not my friends and my friends don't do that. If someone talks to me that way, I will reply that, has the government bestowed you with a free gift of a cell phone that you are jumping around with it. If you do something inappropriate with it, the one on whose name it is registered will be held

responsible, you will not be held responsible. Tomorrow is voting day. I am doing the right thing. I am doing something for my country. If some one lectures me that you should purchase a mobile, I will tell them that the government doesn't allow you to have a SIM card before 18 years of age. Then how can you take it? It's wrong. The SIM card is given by the government after 18 years. But when we [those below 18] get it, it is cheating.

DD: Would not carrying a mobile phone be useful when you really require it?

REC062: I use the PCO if it is an emergency, and if I'm close to my house then I go home and pick it up. If it is not then I call them from a PCO. If I had a cell phone and I use it and call them, they still have to take the time to come here physically to give it to me. So then what is the difference in me going home? The mobile will not walk here and get what I have forgotten at home. So if you use the PCO it is the same.

DD: Are those who have mobile phone more free?

REC062: No I think both are independent. My ideology is different and theirs is different.

DD: Any issues in planning and co-ordination?

REC062: Planning can be done without the cell phone also. It is not necessary to make the schedule and timetable on the mobile. They use the cell phone for calling friends, messaging friends, using the internet, FM radio and music. That is their schedule. They don't use that kind of information to plan their time or schedule. It is only used for their entertainment. Nothing else.

DD: What do you think about about how cell phone users make use of their cell phones?

REC062: Let me tell you an incident there was this guy, my friend, who used to always use the headset and walk on the road. I told him remove it or else one day you will be hit by an accident. But he said no no I will never meet with an accident. After 3 months he met with an accident and suffered fractures. He was on the motorcycle and was talking on the cell with the earphones in his ears. If you have put that on, you cannot hear and was riding the bike. From the time he was injured, he had thrown out his headphone

DD: There are people who say that they cannot do without a cell phone.

REC062: They are habituated with it. If your mama is with you and one day she had gone somewhere, you will feel that something is far away from you. Today it's the mobile phone. Today it is taking the place of the parent in that sense. Because they use the mobile and say it is so lovely, charming, baby, darling. If anything happens to the mobile, their life gets upset. They will run. If there is no credit, they will run to refill their SIM card. At any cost, their leg may be injured; they may have fever, anything. It is like, the mobile is God. If they lost their mobile they will cry, God help me I will come to church if you return the mobile. It's like that. Ya. Youngsters are going that way. I am also a youth but I don't think that you have to take your cell phone and use it as an entertainment. Many of my friends, their parents tell them.

Come to the temple there is some work to be done there. 'No...I am not coming. I am not well'. But tell her come to the shop 'I want to buy a mobile, I want to do this or that'. She is ready instantly. It is not good. How can you do that? For them obedience to parents is not of value. For them, it's the mobile.

DD: Why is that?

REC062: It's a distraction. They are habituated with the mobile. You do a lot of work on your mobile. Then how can you live without it. You do everything on your cell phone. As soon as the phone rings they pick up the cell phone. They get mad is not picked. 'Hey cell phone is not picked up. Where is it, where is it?' And there is nobody to tell them what you should do it or you shouldn't. But if you tell them not to use it. They will attack you as a monster, so difficult to tell them. My cousin. He has a cell phone but he doesn't use it like youngsters use it, he doesn't. He doesn't have that passion. *N81, N72*. Hey, you have to buys these, his friends say. But he doesn't have that passion.

DD: Would you like to ask me any question?

REC062: No.

DD: Thank you very much for giving your time.

Appendix L

Definition of Key Terms

In order that the concepts are clearly grasped it is important that relevant terminology is clearly understood by all and that it is applied consistently throughout the study. Hence the researcher deemed it appropriate to present the following operational definitions.

Definition of key terms:

- i. **Mobile Phone Users:** Mobile phone users are those who own their own handset and Subscriber Identity Module (SIM) card and use it at least two times a week.
- ii. **Mobile Phone Non-Users:** Mobile phone non-users are those who do not have their own handset and SIM card; they also include those who never use it at all, and those who borrow it for use if they need it, but not more once a week.
- iii. **Mobile Phone:** In this study, the mobile phone is considered more than just a material possession; it also encompasses capabilities, especially that of contact, expressed in this personal communication technology.
- iv. **Personal Agency:** Personal Agency is the exercise of one's capabilities to accomplish a desired goal.
- v. **Mobile Phone Personal Agency:** the exercise of one's capability, with the possibility of perpetual contact afforded by the mobile phone, to carry out a routine task or address a contingent situation, directly or by proxy, in the course of one's daily life.
- vi. **Proxy Agency:** Proxy Agency is the ability of individuals to get people or services to assist them in order to achieve their desired goals.
- vii. **Collective Agency:** Collective Agency is the shared belief of people in their collective power to produce desired results.
- viii. **Young People:** Young people as considered in this research are those who have not completed the 12th Std. Board Exams¹⁹ as well as those who have completed these exams. It is assumed that those in the 12th Std. or lower belong to the average age bracket of 15-16 years, and those who are studying in levels higher than 12th Std. belong to the average age bracket of 17-19 years.

¹⁹ Board Exams are transition examinations to enter university level in India

- ix. **Middle Class:** The Middle class in this study is divided into lower, middle and upper middle classes based on education, occupation, possessions, type of house and vehicle ownership. The New Middle class is known for its consumerist outlook, hence family possessions are added in describing the middle class.
- x. **Self-Efficacy:** Self-Efficacy is the belief in one's capability to perform a specific action required to accomplish a desired goal. General Self-Efficacy is the belief in one's competence to cope with a broad range of stressful or challenging demands, whereas specific Self-Efficacy is constrained to a particular task at hand. For the purpose of this study, efficacy was defined as the ability to manoeuvre through regular and contingent situations.
- xi. **Mobile Phone Self-Efficacy:** Mobile Phone Self-Efficacy is the belief one has in one's capability, with the possibility of the contact afforded by the mobile phone, to carry out routine tasks or manage contingent situations, directly or by proxy, in the course of one's daily life.
- xii. **Optimism:** Optimism is defined as the generalized tendency to expect positive consequences of one's own behaviour. It is the temporal orientation that goes along with Self-Efficacy. Unless people believe that they will be effective in producing desired effects and forestalling undesired ones by their actions they will have little incentive to act.
- xiii. **Mobile Phone Optimism:** The tendency to expect that, with the possibility of contact afforded by the mobile phone, one can easily carry out routine tasks or manage contingent situations, directly or by proxy, in the course of one's daily life.
- xiv. **Planfulness:** 'Planful Competence' or 'Planfulness' is the individual level ability to make and maintain plans. It guides agentic action but is not itself a component of it. In this study, Planfulness is considered as a causal indicator of Agency.
- xv. **Mobile Phone Planfulness:** The capability one perceives in oneself, with the possibility of contact afforded by the mobile phone, to organize oneself to carry out routine tasks or manage contingent situations, directly or by proxy, in the course of one's daily life.
- xvi. **Social Support:** Social Support is the availability of skills, resources and networks of people in order to produce desired results or wield influence and power on one's behalf. Agency, though an individual-level construct, is still one embedded within networks of social relations. People often work together to produce desired results.
- xvii. **Mobile Phone Social Support:** The perception of the availability of networks of people whom the individual trusts, with the possibility of contact afforded by the mobile phone, in order to carry out routine tasks or managing contingent situations, directly or by proxy, in the course of one's daily life.

- xviii. **Autonomy:** Autonomy is the ability of a person to take independent decisions and have a reasonable life without excessive dependency.
- xix. **Mobile phone Autonomy:** The capability that individuals perceive in themselves to make their own decisions in carrying out routine tasks or addressing situations in the course of their daily lives. They do this, directly or by proxy, without disengaging from relationships, due to the capability of contact afforded by the mobile phone.
- xx. **Bounded Agency:** The restriction and limits one perceives to one's capability while pursuing goals in daily life. In this study contextual and socio-cultural restrictions are considered.
- xxi. **Dharma:** *Dharma*, in Hinduism, refers to religious and moral duties assumed according to one's stage of life. In general, it refers to performing proper actions that adhere to rules of conduct pertaining to a larger social group (Raghavan 1988 cited in Hastings 2000).
- xxii. **Construct:** In social sciences, constructs are complex ideas that humans form in order to summarize observations about things that they cannot see directly (Research Assessment Advisor 2010).
- xxiii. **Contactability:** The ability one perceives to be efficacious and certain, in giving and gaining access to people, routinely and in emergencies, is defined as Contactability, in this study.
- xxiv. **Organizability:** The ability one perceives to organize oneself in terms of one's time, efficiency, coordination and mental alertness is defined as Organizability, in this study.
- xxv. **De-restriction:** The ability one perceives to be free and to negotiate is defined as De-restriction, in this study.
- xxvi. **Covariance:** In probability theory and statistics, covariance is a measure of how much two variables change together.