

THE MALEVOLENCE OF TECHNOLOGY: AN INVESTIGATION INTO THE VARIOUS SOCIO-ECONOMIC IMPACTS OF EXCESSIVE CELL PHONE USE AMONG UNIVERSITY STUDENTS (A Case Study of University of Malakand, KPK Pakistan)

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ABSTRACT

Technological malevolence is among the loosely debated issues in the current scenario of modernity. Most of the studies emphasize over its lucrative aspect where the current study violates the traditional paradigm because of illuminating the darken face of technological advancement. The current study is an attempt to explore that the communicational technology in shape of cell phone (abuse) is one of the hazardous move in the course of development that brings jeopardy to social cohesion, adjustment, integrity and personality development of the vulnerable and subject students. The current study was conducted in University of Malakand, which is a public sector university in Chakdara town, district Dir (lower), Khyber Pakhtunkhwa province of Pakistan. Data was collected from 100 students (both male and female) who were the excessive cell phone users through simple random sampling technique using structured interview schedule as a tool of data collection. The empirical data has been analyzed through the application of Chi-square test and Gamma analysis while processed in the form of tables and bar charts where a qualitative discussion has penned-down on the basis of findings and results. The results show that the excessive use of cell phone has multivariate impacts upon the students.

Key Words: *Cell phone, abuse, technology, social, economic, impacts*

BACKGROUND OF THE STUDY

Mobile phones are invention of this modern decade having its own advantages and disadvantages; its use is as a need and as a luxury or may be as a status symbol. The uses of mobile phones have changed the human life significantly on different directions with different dimensions. Cellular telephone is a type of short-wave analog or digital telecommunication in which a subscriber has a wireless connection from a mobile telephone to a relatively nearby transmitter. As the cellular telephone user moves from one cell or area of coverage to another, the telephone is effectively passed on to the local cell transmitter (Cooper, 1973).

Use of cell phone technology is of recent origin as the cellular technology was undeveloped until the 1960s, when Richard H. Frenkiel and Joel S. Engel of Bell Labs developed the electronics (Farley, 2007). The rapidly advancing wireless technologies today ensures seamless integration of multiple communication channels like email, fax, text messaging, voice call, etc. and hence, multiple group conversations in mixed channels and formats i.e. voice, text, and pictures etc. have become possible (Chattratichart & Brodie, 2003). The craze of mobile phone started after 1980's in the world, but it has now touched the level of esteem. First it was just for a status symbol but now it has become a dire need of the day and is in the reach of everyone, even a person whose per month income is 2000 rupees (Javid et al, 2011).

Jon Agar (2005) reveals that until not very long ago, the mobile phone was expensive and was preserved few of the rich people but today the cell phone is everywhere and so common that it goes unnoticed. On the contrary, Mobile phone technologies are now in the hands of almost 31% or 2 billion people (Motorola, 2006) of the 6.47 billion people on this planet (Population Reference Bureau Statistics, 2006). The penetration of these technologies is increasing very rapidly with around 779 million mobile phones sold every year and expected to reach over 1 billion units per year sold by 2009 (Gartner Press Release, 2005). In such a hasty run of cell phone technology and among the swift growing regions, Asia is the fastest-growing region, accounted for one of every four phones sold in 2005, a pace that is projected to increase to one of three by 2009 (Gartner Press Release, 2005).

The fact is blatant that such a heavy inoculation of technology in cultural setup eventually influences the traditional life because the cultural background can influence the way technology is perceived, adopted and used (Chakraborty, 2006). On one hand researchers put forward the advantageous aspects of mobile phone usage, which is a source of developing new relationships for youngsters and protraction for older ones (Power and Horstmanshof, 2004). Many researchers proclaimed that in case of emergency mobile phone usage increases the sense of security (Chapman and Schofield, 1998; Taylor and Harper, 2001; Carroll et al. 2002). In addition to the advantages of mobile technology, mobility, access and expediency are the conveniences provided by mobile phone technology that youngsters use for their social fulfillment (Tjong et al. 2003) while it enables busy working parents to keep in touch with their

children (Frissen, 2000; Matthews, 2004). Also, short messaging service (SMS) promotes interactivity among students (Markett, 2006), allows them to share their experiences with their families and provide them a mean to fulfill their familial roles for getting emotional and mental support from families (Chen et al. 2007). Besides, effective communication enhances the productivity that is provided by cell phone technology with a revolutionized way of communication among colleagues, family members and peer groups (Ling and Yttri, 2002).

Despite of the above said upsides of cell phone, the opposite side on the other hand of the luminous picture show the darken aspects. Studies have been made on the contraindications of such technology, which emphasize on detrimental and tricky aspects of using cell phones excessively among youngsters such as emotional stress, financial costs, falling literacy and damaged relationships (Bianchi and Phillips, 2005; Paragras, 2003; Monk et al 2004; Palen et al. 2001; James and Drennan, 2005). In addition, excessive mobile phone usage gives rise to serious social, health and educational hazards as well while a strong correlation has been observed between excessive cell phone usage and criminal activities such as fighting, theft, use of alcohol and narcotics (Ling, 2005). In such context, educational implications have been urged far more than the other aspects where a study of Srivastava (2005) found that students keep using their mobile phone even while attending to their lectures in classrooms while more keenly observed using short message service (SMS) during their lecture hours (Rishi, 2007). In addition, the youngsters ignore their safety precautions and use cell phone while driving that put them at serious safety risks (McEvoy et al. 2005).

New generation seems to be so obsessed with using cell phone, who have been observed as the real victims and original addicts of cell phone use because they use their mobile phones even at places where usage is prohibited such as planes, hospitals and petrol stations (Bianchi and Phillips, 2005; Palen et al. 2008). Consequently, the excessive usage brings financial worries and makes adolescents financially indebted (Griffiths and Renwick, 2003). The study of Aoki & Downes (2003) reveals that the major strength of students are in a habit of making calls at night that leads to jeopardized results like sleep loss because the students specifically the youngsters desperately desire contact with their friends (Ito, 2006). The prime desire of such youngsters evolves the sense of presence of their belongings all the time through (SMS) short messaging service (Warner, 2003).

In respect of the above cited factual data, this study has been framed to analyze and assess the adverse consequences of excessive cell phone use. In this regard, Niaz (2008) expresses that it is need of the hour to spread awareness about the hazards caused by excessive mobile usage as it has become a public health issue. Prevalence and practice of cell phone has brought ease and comfort to the individual but also contains the obnoxious consequences for the youth and particularly students. In this context, this study has highly lucrative dimensions and is significant in its nature.

STATEMENT OF THE PROBLEM

Researches tend to diagnose social diseases, access their causes and treat such social monsters and evils throughout the globe while the researchers persevere to prostrate the curses that are more often found to jeopardize human race and particularly their social life. This study aims to diagnose and treat the malevolence of cell phone technology that has brought numerous adverse alterations on youth in Pakistani society. The adoption of the mobile phone by young people has been a global phenomenon in recent years, which is now an integral part of adolescents' daily lives and is considered as one of the most popular form of electronic communication. In fact, the mobile phone has turned from a technological tool to a social tool (Campbell, 2005). In addition, the mobile phone is a status symbol for young people where the features of phone, appearance and personalized accessories all attest to the users' status (Netsafe, 2005). Mobile phone culture stepped in the land of Pakistan after 1990s but mobile phone got its fame after 1994 after the establishment of some cellular networks. Now, every one person out of two in the world and every one person out of three in Pakistan has a mobile phone (Javid et al, 2011). The hasty proliferation of technology has persisted to exist and alter the world to a global village that has brought plentiful shifts in the social structure and social organization of different communities accordingly. Besides the changes in social structure, it also has impacts on personality development and social interaction of the users (Naz et al, 2011). In a traditional society like Pakistan, young people are found more exposed to the technological threats and hazards as compared to older people because they feel a sense of fear for getting familiar with new technological trends and devices (Kurniawan, 2008).

The research of Walsh et al. (2008) expresses that young people are obsessed with using their cell phones and often seen to show the symptoms of behavioral addiction, however, the ratio of boys' addicts is far more than that of girls cell phone addicts Devís et al. (2009). The impacts of cell phone use on individual vary from individual to individual, gender to gender, age to age etc. as a huge variation has been found among these variables, which ultimately affect their usage and the usage tend to bring impacts in variation (Turner, 2008). In addition, some other factors have also been found linked to the extent of mobile phone usage such as marital and work status, income etc. (Rice & Katz, 2003). Sociologists and social scientists have begun to note that many people, especially those under 30 years old, are spending a great deal of time speaking to people they are not with, at the expense of those who are actually there. A telling example comes reveals that almost 31% individuals throughout the globe have access to cell phones (Kelly & Chakraborty, 2006) where the entire groups of young people sitting together are frequently seen while talking on their mobile phones to absent friends and colleagues (International Telecommunication Union, 2004).

Students in this regard are never behind to compete within their peer groups while excessively using cells, having a vast range of contacts and introducing new hi-fi technological mobile sets. In addition, the college and more specifically the university students have been

observed while continuously talking on cell phone or found engaged in text messages even in their lecture hours (Rishi, 2007). In this context, this study has been arranged in order to enumerate the impacts of excessive cell phone use among the students of University of Malakand (a public sector university in *Chakdara*, District *Dir Lower*, *Khyber Pakhtunkhwa* Province of Pakistan. The study emphasizes to look into the multidimensional and multivariate impacts of the cellular technology on students academics and social interaction. In this regard, Aoki and Downes (2002) argue that the cultural background can influence the way technology is perceived, adopted and used, which best exemplifies that culture of the research community is traditional in nature. Furthermore, the newly born changes are taking place in the area where the inhabitants are not familiar to such alterations (Naz, 2009; and Khan, 2011). This traditional structure and mind-set of the individuals further lead to the abuse of technology that has been evident in the shape of excessive cell phone abuse by new generation.

THE ARGUMENT

Among the universal ways of life, there exist numerous layouts that shape the life as well as relations of inhabitants of Pakhtun Belt where the differential ways are practiced and zealously followed by the citizens (Naz et al, 2011). Resultantly, the fact is blatant that the impacts of globalization in cultural sphere have most generally been viewed in a pessimistic light. Traditionally, it is been associated with the influence of cultural identities, victimization of the accelerating encroachment of a homogenized, westernized, consumer culture (Horowitz, 2000). Such victimization desperately leads to obnoxiousness in cultural identity almost everywhere with the depredations of modernization, but the developing world is particularly at verge (Naz et al, 2011). This factual information leads the researcher to an argument that the arrival and triumph of the newly emerged technological advancement bring abrupt and unwelcomed changes in a traditional society. In this connection, the plea of the researchers is authentic to argue that the prevalence of cell phone technology has worse impacts over the new generation of the area under study.

OBJECTIVES

- To identify and record various social impacts of mobile phones on university students
- To explore and analyze various economic consequences of excessive cell phone use on students

HYPOTHESES

H1: There is a strong association between social impacts and excessive cell phone use on students in university

H2: Economic dependency is directly associated with excessive use of cell phone among university students

METHODS AND PROCEDURES

The purpose of this research study is to find out the adverse impacts of excessive cell phone use on students academics and social interaction at university level. In addition, the research activity endeavors the relationship of cell phone addiction in the form of its excessive use and students' drooping results and intellectual output.

The study was undertaken in University of Malakand that is a public sector university in *Chakdara* Town of District *Dir* (Lower), *Khyber Pakhtunkhwa* province of Pakistan. According to the university's Annual Report (2010), the total population (both male and female students) of the university is 4632 comprised of 21 different departments. The overall research area (University of Malakand) was stratified in 21 departments while out of the total population i.e. in the university i.e. 4632, a total of 100 respondents (both male and female students) were selected through Random sampling technique because of their homogeneity in the context of their behaviors, life style, commonality of interest and goal in shape of attainment of education, almost same use of cell phone and possession of mobile phones.

Structured interview schedule was used as a tool of data collection in order to attain the factual data with ease. The respondents were interviewed thoroughly in a face to face contact through a designed and pre-tested interview schedule.

RESULTS AND DISCUSSION

The empirical information collected during the current research has been discussed under two headings concerning the social and economic impacts of excessive cell phone use among students of the target area. The tables describe major chunks of respondents in frequency while the discussion includes percentages of the most frequent values elaborated in tables. In addition, the additional and secondary impacts are also been discussed qualitatively in relation to majority of the impacts. In addition, with regard to the attainment of authenticity and accurate results; Chi-square test and Gamma analysis have been used to validate the relationship between excessive cell phone use and its socio-economic impacts on the users. Besides, the collected information has also been represented through bar charts for more convenience and easy understanding. In addition, the response of respondents has been enumerated in two dimensions i.e. mild and severe, which shows the intensity of the impacts that to which extent the impacts of excessive cell phone use are engraved in the target area. Furthermore, each variable has been studied and evaluated by all the respondents i.e. 100 where there response has been mentioned under their concern priority in shape of mild or severe impacts. The main details under table concerned are given as below:

SOCIAL IMPACTS

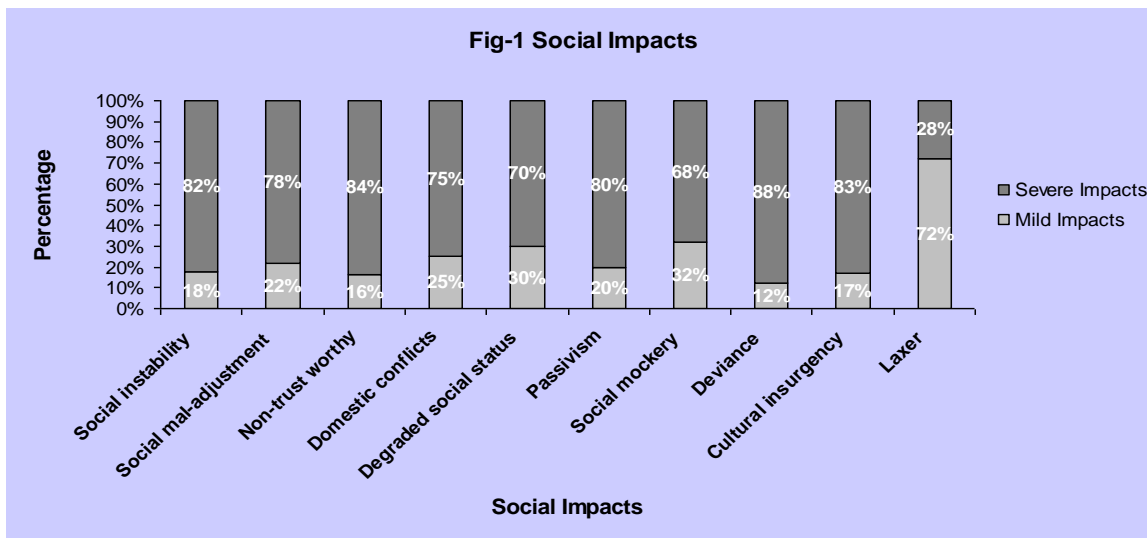
Immense literature witnesses the multidimensional impacts of technological advancement besides its lucrative consequences. In this regard the current study also reveals the curses of technology which tends to hamper humans' potentials and personal capacities. In this context, the following table best exemplifies the social impacts of excessive cell phone use on the target individuals in the concern research area. The empirical data expresses the response of 18 % respondents who favor that excessive cell phone use creates milder social instability while a high number of respondents i.e. 82% reflect that the prevalence of social instability through excessive use of the said communicational technology is severe. Besides, social adjustment is one of the major issue of concern in the present stage of modernism and globalization that has been affected by the mobile phone used by the target population (22%) while the phenomenon of social mal-adjustment has been worsened by the excessive cell phone use among students (78%). In addition, 84% of the respondents reveal that such an excessive use of cell phone makes the user severely non-trust worthy while such notion has been expressed in soothing manner by 16 % of the total respondents.

TABLE-1 THE SOCIAL IMPACTS

Social Impacts	Mild Impacts	Severe Impacts
Social instability	18	82
Social mal-adjustment	22	78
Non-trust worthy	16	84
Domestic conflicts	25	75
Degraded social status	30	70
Passivism	20	80
Social mockery	32	68
Deviance	12	88
Cultural insurgency	17	83
Laxness	28	72

($\chi^2 = 8.457$, D.f. = 8, Highly Significance = .000**, Gamma Value = 0.369, ** = Highly Significant)

Technology is one of the most lucrative aspects in prosperity of the nation while it's adverse consequences not in dormancy (Naz et al, 2011). In this context, the collected information in the current study reports that it is a source of creating passivism among the users (20%) while such perception has been strictly emphasized by 80% of the respondents that technological abuse is a source of creating the passivism and pessimism. Besides, the information critically analyzes that the in-depth installation of technology brings a slight deviance from the social norms and values (12%) while a high ratio of the respondents i.e. 88% reflect the idea that deviation from the expected behavior is one of the severe impacts of excessive cell phone use among the users. On the contrary to the mentioned consequences, the empirical data elucidates that cultural insurgency is among the milder impacts of cell phone use (17%) while 83% respondents strictly urge that cultural revolt has been severely caused by the excessive use of cell phone by the students in the target area. In addition, the collected information also reveals there is a bulk of impacts other than the mentioned above that have been severely prevailed by the excessive use of cell phone. Such impacts include domestic conflicts (75%), degraded social status (70%), social mockery (68%) and laxness (72%).



The chi square test and gamma technique were applied to test the hypothesis-1. The chi-square value (8.457 with Degree of freedom=8 and Alpha=.05) shows a highly significant (.000**) association that validates that excessive cell phone use prevails the numerous social impacts on users (see Table-1). The gamma value (0.369) exemplifies a positive relationship between the mentioned variables in the hypothesis (see hypothesis-1).

ECONOMIC IMPACTS

Economic stability and income orientation guarantees the repute of the individual in family as well as the society. The current scenario of modernism has a long range of opportunities and skills for the individual to attain a sound economic position. On the contrary, this technological advancement brings havoc to human's income and economy as he/she becomes extravagant as the curiosity for the attainment of such technology raises. Such a rise

in the curiosity for the attainment of technology exceeds the limits of their income, which adversely influences the economic structure.

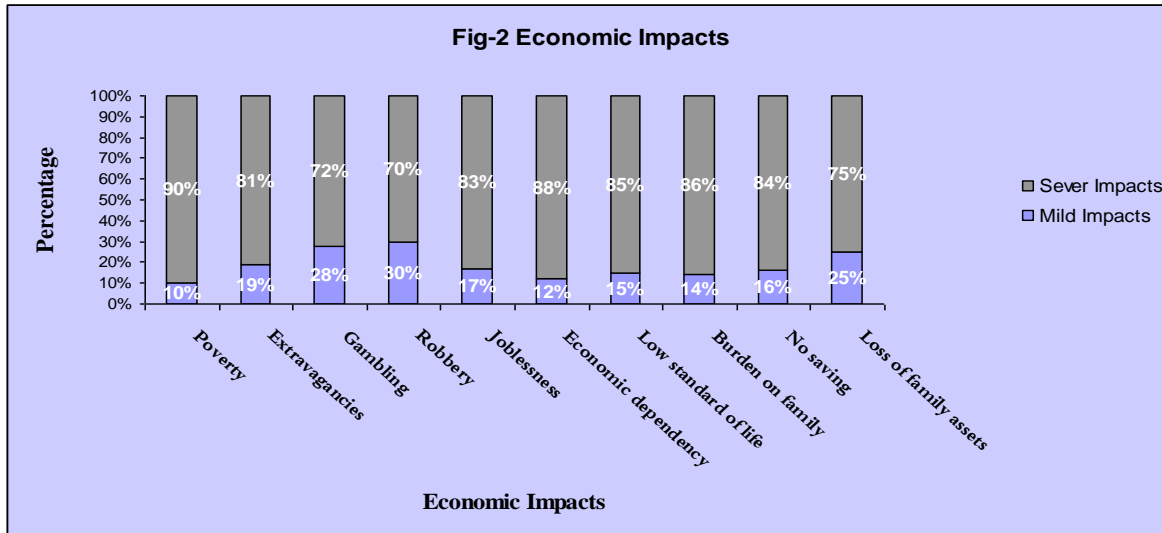
The analysis of the collected data (mentioned in table-2) obviously illustrates that excessive use of cell phone severely augments the ratio poverty (90%). Furthermore, the collected data reveals that use of the said communicational devices brings extravagancy while 83% of the respondents express that such an evil of technological abuse lead to joblessness as the user tend to lose his/her job. In addition, the data patently expresses that economic dependency is one of the major negative consequence of excessive cell phone use that makes the user impotent and worthless (88%). Besides, Table-2 unequivocally elucidates the puzzling response of respondents that the excessive cell phone use is responsible for low standard of life of the users (85%) while it has been observed with the alarming percentage through the collected data that it is a source of burden on family that makes the user extremely dependant on other family members (86%).

TABLE-2 THE ECONOMIC IMPACTS

	Mild Impacts	Sever Impacts
Poverty	10	90
Extravagancies	19	81
Gambling	28	72
Robbery	30	70
Joblessness	17	83
Economic dependency	12	88
Low standard of life	15	85
Burden on family	14	86
No saving	16	84
Loss of family assets	25	75

($\chi^2 = 19.320$, D.f. = 11, Highly Significance = .000**, Gamma Value = .288, ** = Highly Significant)

In addition, analysis of the empirical information reveal that the menace of excessive cell phone use adversely affects the saving of user (84%) while it leads to the excessive nuisance of gambling (72%), the jeopardy of robbery and theft (70%) and brings havoc to the familial assets through excessive expenditure on use of mobile phones (75%) (see Table-2).



Chi-square test and Gamma technique were used to check the validity of hypothesis-2 that economic dependency is directly associated with the excessive cell phone use in the target area among the target population. The chi-square value (19.320, with degree of freedom, 11 and Alpha .05) describes highly significant (.000**) association between excessive cell phone use and economic degradation and dependency (Table-2). The Gamma value (.288) shows positive relationship in the context of expenditure over cell phones and its adverse economic outcomes; therefore the proposed hypothesis is approved as authentic and valid.

CONCLUSION

The malevolence of technology is among those matters that need keen discretion. The fact is blatant that technology is among the lucrative steps that has brought a variety of positive and prosperous alterations in human's life. On the contrary, the issue is of high concern because its havocs are still in dormancy that needs illuminations in order to highlight its passivism and adverse consequences. This research study patently concludes that the use and abuse of cell phone encompass numerous adverse impacts over the youth and specifically the students that are monitor-worthy. The empirical data of the research reflects that these consequences include buckle of social status and havoc to individual's economic well-being. In addition, the whole research activity expounds that the use of cell phone in the target area is alarmingly high that tends to draw the obnoxious silhouette of adversity in shape of intensive social and economic miseries. Furthermore, evidences have been found through the research that the abuse and prevalence of cell phones play a significant role to hinder the economic stability of the users and bring discontentment and pathetic conditions in the society as well as diminish the zest of human's creativity.

The research has palpable results in the course of social impacts, brought over the subject users and abusers that wobble the beneficial performance of students. The excessive use of the mentioned communicational technology leads to the filthy status of the user that further lead to personality disorganization. In addition, the empirical data indicates that social instability, mal-adjustment and deviance are the fruits that are introduced to the social

structure in the area. Besides, cell phone comprises of the addictive qualities that fascinates the users to such an extent where they become cultural-insurgents where they contentiously violate the cultural norms and values. Resultantly, the havoc of social impacts crosses the boundaries of morality and makes the user as laxer.

The current research study has illuminated the economic consequences of excessive cell phone use on students, which unanimously comes to the conclusion that the technology of cell phone is one of the disastrous threats to economic independence of the students and their families. It has been drawn-out during the research that excessive cell phone use paves the way for plenty of crimes and deviant acts that are regarded as severe threats to the stability of community. Such crimes include the series of robberies, excess of burglaries and thefts and more prominently the curse of gambling. Besides, the research illuminates that augmentation in the rate of joblessness is also one of the major impacts of such menace where most of the excessive cell phone users remain jobless and are idles, which regard them as burden on family as well as society through increasing the miseries of society.

In last, the cell phone addiction and its excessive use can be regarded as a blizzard in the course of its hazardous consequences in the current scenario of modernity. It has become a threat to the social and economic stability and prosperity of the research community. In-short, the overall research findings come to a unanimous conclusion that excessive cell phone use is a technological monster and a malevolence, which is hindering the overall smooth functioning of the subject students as well as the society in a large spectrum with adverse effects on future of the nation.

RECOMMENDATIONS

The current study extends few recommendations that will ultimately assist the concerned authorities to tackle the issue with elegance and embellish the menace of technology into benefits.

- This study suggests that the role of educational institutions is inevitable while particularly the teachers of the concerned institution have to shoulder the responsibility wholeheartedly as they are the constructors of the nation. There should be cell phone awareness education in universities to abate the excessive use of cell phone among students and aware them about the obnoxious consequences of their abuse. In addition, the awareness programs shall be launched at institution level in shape of workshops and seminars to alleviate the malevolence of communicational technology.
- Government has to confront the quiescence of cell technology in order to protect the future of nation (students) as it is intensifying the worries and miseries. Policy arrangement and implementation can play the role of a corner stone to overcome the threats of such technology. The fact is evident that the communicational companies are in a run of competition, which is introducing numerous packages including 'night packages', 'free hour's packages' etc. that are

worsening the miseries and influencing their educational course, which is a monster for the future of the country.

- Family plays a pivotal role in formation as well as deformation of its members' personality, behavior and role. Further, the role of parents is insatiable to be denied as they are the real sources of inspiration for the off-springs. In this regard, there should proper and strict check and balance on students by parents to analyze whether the cell phone is properly used by their children or they are abusing the technology. The parents should ensure the provision of cell phone to their children on immense need basis rather the excessive engagement of children in cell phones should be strictly discouraged.

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