

The Role of Information and Communication Technology in Social Development: A Case Study of Khyber Pakhtunkhwa

¹Qaiser Aman (Ph.D), ²Dr. Sultan Altass

¹Associate Professor, College of Business, King Abdulaziz University Jeddah, Rabigh Campus,

²Assistant Professor, Head of Accounting Department, College of Business, King Abdulaziz University Jeddah, Rabigh Campus,

Authors Email id: dr.qaiseraman@gmail.com, altass@outlook.com

Abstract: This study finds the perception of people regarding impact of Information & Communication Technology (ICT) on social development in Pakistan (Khyber Pakhtunkhwa). For the said purpose ICT was measured through mobile, internet, CTV, newspaper, radio. The independent sample t-test and ANOVA used to examine the perception of ICT on social development. Results show that mobile phone, internet, CTV and newspapers are statistically significant factors having impact on social development. While radio has no significant relation with social development. People also perceived that mobile, internet and CTV have negative impact on our society.

Keywords: Information & Communication Technology, Social development.

I. INTRODUCTION

Nowadays human life heavily dependent upon Information Technology. It creates ease in our life. Due to globalization it's become indispensable. Individuals as well as institutions want reliable and fast information. This is only possible due to information and communication technology (ICT). Especially, banking sector, cellular industry, online shopping, airline industry, showbiz environment and security agencies they need more fast, reliable, accurate, verified, trustworthy and in time information. They also need to stored, retrieved, process information and send to users for decision-making. Current environment is feasible for ICT. People are using and relying on ICT. Differently channels are available for ICT such as mobile, internet, cable television (CTV) newspaper, radio. In past the people were used messengers and letters for communication. With the passage of time technology emerged and people shifted to technology. Initially technology were not so simple and were too much expensive. Resourceful people and organization could afford the technology. Due to advancement in education and modern ways of production reduce the cost of technology. Now almost the people and organizations of world using technology by one and other means. Availability of internet has given access to everyone to information and communication. People and institutions are using differently devices for information and communication such as cellular devices, electrical communication tools, computer based terminals etc. Transparent and fair and fast information & communication are becoming need of the day. Our planet has become global village and due this everyone is communication to the world. Companies are using information and communities technologies for their own performance and growth. Marketing, finance, research & development (R&D) personnel management, operation management almost the sections of a company are using information and communication technologies for its activities. Marketing department is monitoring and selling their products through ICT and projecting their sales day by day even hour by hour. They are sending their reports to users and management and getting feedback. This is possible only ICT.

ICT plays a significant role to national politics, economic activities, education and health sector. ICT has increased the quality of education, has increased political awareness in general public. Work efficiency is increased in the age of information Technology. Better awareness and better information ultimate leads to decisions. Better decisions plays crucial role in the social development of the society. Social development plays vital role in economic development of a

country. Economic development is necessary and compulsory for survival of a country. Social development is very important for a health society because it refers to the process by which an individual learns to interact with others around them. They develop and perceive their own action, reaction, and thinking within their society. By interaction and perception individuals also get skills to communicate with others and refine their decisions. Better social development gives better community and better community represent to good nation. Good nation become a role model for others (www.scanva.org).

Government of Pakistan set a target of digital Pakistan. In this regard Khyber Pakhtunkhwa province of Pakistan where recent provincial government has taken the initiative of shifting provincial departments from conventional system to online database. It established an Information Technology Board (ITB) and set the targets of digital access, digital governance, digital economy and digital skills. In this regard, police station services are converted to online and other departments have started offering online complaint handling. These all efforts are in purpose to facilitate the general public. ICT help people get the right information within no time and save the cost as well as other resources. Currently 73.8% population of KPK is under age of 29 years. According to Khyber Pakhtunkhwa Information Technology Board there are 133.3 million mobile phone users with 29.5 million having access to 3G/4G connectivity in the province of KPK. Television is a very strong communication icon. Social development statistics of KPK 2015-16 report reveal that in total 1.37 million TV sets are operational in the province of Khyber Pakhtunkhwa. Digital satellite TV service is available in urban areas of KPK. The cellular phone is the heart of digitization economy and it creates ease and fast communication among people. According to Pakistan Telecommunication Authority (PTA) 152 million mobile subscribers in Pakistan. A very huge number of users. They are shaping their lifestyle and culture.

Study Objectives

1. To examine the perception of people about ICT and social development
2. To find demographics impact on ICT and social development

II. LITERATURE REVIEW

Boehm (1991) examined the IT and concluded non-IT-individuals don't perceive and understand output of information technology. They do not use it properly, he investigated that different professions use it differently like in health sector of developed nations. The internet is an advanced version technology and everyone is using it differently throughout the world.

Deibert et al (2008), found that internet has a significant growth in the field of information technology and created substantial amount of change in developing social networks. Some are using internet just for social communications and some of them using for their financial benefits. People consume more time on it to strength the relation with people.

Nie & Erbring, (2001) measured the subscriber expertise in media relations. They found that users expertise significant contribute in building relations. They can use the media with respect to own desired and can get advantages over others. Orleans & Laney (2000) analyzed the use of media with respect to users' skill. Media people are more aware about the uses of media. They are good in public relations and use the media for making personal relations. Pruijt, (2002) and Wellman et al (2001) have the same finding of users skill and opportunities. Orlean and Laney (2000) analyzed the skill of users with respect to media relations. Skilled users use technology in contributing media relation. While media and technology are more open to create opportunity for users to participate in personal relationship and it is the demand of social media. They also found that in real the actions are not matched what they performed in social media.

Jennings and Thomson (2002) found the effects of mediated communication. They concluded that personal communication and media are the important determinants of our community. They said that we are depended on information based activities. But media are accusing the world from one kind or another.

Yoshii (2001) investigated that due to emergence and increase in broadcasting and media society culture and values have been changed. Fast telecommunication and flow of information made a drastic change in the values of a society. Some of them using such technologies in a positive way and vice versa. Due to misuse of technology, technology is creating social problem and society is paying it social cost. It created gap between rich and poor. Advance technology had become a social status and some phenomenon promoted the frustration among the society. He suggested to break and control such issues a government can play significant role. Through quality education and proper media ethics we can control the bad consequences on the society.

Karnik (1995) examined a Network for Information and Computer Technologies (NICT) with respect to awareness and education. She explained privatization and commercialization of education increased trends of education worldwide. Online education programs had become more popular and society is getting benefits from it. Most of the developing countries are getting advantages from it. Societies are well aware about information and different ways of production, marketing, finance and also about culture.

Hagiwara (1999) studied to determine impact of global television (TV) on the values, attitudes and behavior patterns of a society expectations. Results showed that India respondent's response (22%), on the other hand Philippines respondents (34%) have given their opinion that western media are changing our culture. While Malaysia respondents percentage is high (37%) and the 34 percent) said that there is negative impact of western media on their cultural. Almost all the respondents selected "No" or "neutral" option. Overall very small portion of respondents worried about it that western media has negative impact on the society culture.

Camella (2007) also studied the impact of media on society culture and values and found mixed results. Those spending more time on media and watching movies they supposed to be liberal and they are not to strict their own culture. So, users of media make their decision regarding to their life style on the bases of past experiences instead of what the media is projecting (Rubin et al, 1985). Herman and Sandvoss (1997) point out the impact of media communication and social development of a society. They point out ICT has positive impact on politics, economic, social and technological, in his book "The media in the world."

III. RESEARCH METHODOLOGY

The aim of this research study is to measure the perception of people regarding ICT and social development. Major cities of the KPK province were selected. A random sampling technique was used. The sample size was calculated by table method which was comprised of 317 respondents of KP province, Pakistan. Following major cities were taken as a sample cities such as Dera Ismail Khan, Bannu, Peshawar, Abototoabad, Karak, Kohat and Swat and data were collected from these cities. Questionnaire was developed on seven scale point to investigate the overall perception of respondents regarding impact of ICT on social development. The questionnaire contained information of ICT with respect to social development. The study considers five ICTs tools in the present study they include mobile phone, internet, cable TV, newspaper and radio. To know the perception of people about usage of internet and social development. It was tried to identify that how the internet impacts society values, and outcomes. Questionnaire considered range from 1 to 7. Seven considered "strongly agree" and 1 considered "strongly disagree". Different dimensions were considered in like internet usage time, business activities, criminal activities, living standard, employment, Islamic values, enjoyment, frustration, fast and reliable information for the perception of internet usage and social development.

Mobile phone was an-other component of ICT to examine the perception of society with respect to social development. Such dimensions were considered, social life, business activities, cultural, value, living standard, and criminal activities, male and female interaction. The perception of people about usage of mobile phone and social development respondents were asked to give their opinion from "strongly agree" to "strongly disagree" with seven likert-scale. Cable TV was also considered to judge the opinion of society about it. Various attributes were taken into account such as talk shows, News, dramas, film, sports and entertainment is being provided by cable TV to society are important for social development or not. They were directed to select one option ranging from 7 "strongly agree" to 1 "strongly disagree". Newspaper and radio were also taken a component of ICT. How newspaper and radio can become a good component of ICT in shaping the social development of a country. Respondents were asked to give their opinion about newspaper and radio with respect to social development. They were instructed to select appropriate number ranging from 1 "Strongly disagree" to 7 "Strongly agree". Following dimensions were considered such as employment opportunities, descriptive information, awareness regarding social evil like corruption, political awareness, fast and reliable information and data about public programs, representation of public voice, enhancing good moral values and so on.

IV. DATA ANALYSIS AND INTERPRETATION

Cronbach's Alpha reliability test was applied for the purpose of to check the reliability of questionnaire. Value of Cronbach's alpha based on standardized items was 0.928. Similarly, reliability of the subscales was also tested using Cronbach alpha reliability coefficient and the values of mobile phone, internet, cable TV, newspaper and radio were .859, .606, .914, .885, and .949 respectively.

In order to analyse the perception of ICT with respect to social development in the province of Khyber Pakhtunkhwa, information was gathered through well-structured questionnaire. Information was gathered from both male and female respondents regarding perception of respondents relating to impact of ICT on social development. Table 4.2 shows socio-demographic characteristics of the respondents. Total 317 respondents were contacted in which female representation were 24.3% and male respondents were (75.7%). The reason of low percentage of female respondents in the present study lies in the fact that social and cultural taboos provide hindrance in social mixing of male and female respondents in the province. Further, female respondents are rarely available for survey especially when the distributor of questionnaire is male. In such circumstances, 24.3% female of the total respondents is sufficient for fulfilling the purpose of the study. We categorized the respondents into four age categories. A total of 77% respondents are from age category of 16-25 years followed by age category of 26-35 years, 36-45 and above 45 years.

Education plays an important role in social development and societies with higher literacy rate are considered to develop faster than those with low literacy rate. Results in Table 4.2 show that 58% respondents have post-graduation degree whereas those having under-graduation degree are 35%. Very few respondents have matriculation and others. The future research should consider equal proportion of sample representing different education levels.

Demographic variable of profession were classified into four profession such as businessmen, students, government and private employees. Out of total 317 respondents, around 50% respondents are working in private organizations, whereas 34% respondents are engaged in government. Those having own business were only 2.8% and 13.6% were students. The marital status of the respondents showed that 57.4% respondents were married while 42.6% respondents were unmarried.

Table 1: Demographic characteristics of the respondents

Characteristics	Frequency	Percentage
Gender		
Male	240	75.7
Female	77	24.3
Age categories		
16-25 years	244	77.0
26-35 years	56	17.7
36-45 years	12	3.8
Above 45 years	5	1.6
Education		
Matriculation	5	1.6
Intermediate	5	1.6
Under-graduation	112	35.3
Post-graduation	184	58.0
M Phil	10	3.2
PhD	1	0.3
Profession of the respondents		
Business	9	2.8
Student	43	13.6
Government employees	108	34.1
Private employees	157	49.5
Marital status		
Married	182	57.4
Unmarried	135	42.6

Types of ICT used by the respondents

The role of ICT has an important role in improving social development of a society. Different ICTs are considered in the present study. They include mobile phone, TV, radio, cable TV and newspapers. Results in Table 4.3 show that all the respondents possess mobile phone. Similarly all the respondents are found having TV, radio and cable TV. Although all the respondents reported to read newspapers, out of 317 respondents, 62.5% respondents used to read English newspapers and 37.5% respondents are Urdu newspaper readers.

Table 2: Availability of ICT among the respondents

ICT	Frequency	Percentage
Mobile phone	317	100.0
TV	317	100.0
Radio	317	100.0
TV	317	100.0
Newspapers	317	100.0
English	198	62.5
Urdu	119	37.5

The opinion of the respondents was measured by seven point Likert scale from strongly agree to strongly disagree. A scale ranging from 1, 2, 3, 4, 5, 6 and 7, "strongly disagree" to "strongly agree respectively was applied in this study. Therefore, the respondents were asked to tick or encircle the answer of their choice for each of the question.

The data was arranged and encoded for the purpose of analysis. The independent sample T-test and ANOVA were also applied. In order to analyze the perception of respondents about role of ICT in social development. For the collection of data 317 questionnaires were distributed between male and female citizens of Khyber Pakhtunkhwa. In which 240 questionnaires were filled by male. While 77 questionnaires were filled by female. The low rate female of participation in this survey was cultural taboos and rigid mind set of Khyber Pakhtunkhwa people.

Table 3: Group statistics (Gender)

	Gender	N	Mean	Std. Deviation	Std. Error Mean
MOB	Male	240	5.0605	1.21704	.07856
	Female	77	4.9738	1.17115	.13346
IRNET	Male	240	5.7117	1.88745	.12183
	Female	77	5.7481	1.20783	.13764
CTV	Male	240	4.4792	1.43299	.09250
	Female	77	4.4649	1.35683	.15463
RD	Male	240	4.0767	1.62075	.10462
	Female	77	4.4325	1.49529	.17040
NPAPER	Male	240	4.3079	1.19233	.07696
	Female	77	4.4623	.96873	.11040

In order to find out the perception of people regarding impact of ICT on social development, the group statistics have been applied to the data. The table shows that Mobile technology, Internet, Cable TV, Radio and Newspapers, role in ICT and its impact on social development The Means Score for all those variables which are highly significant to the overall impact of ICT on social development like Mobile for male 5.0605 and for female 4.9738, Internet role is 5.7117 for male and 5.7481 for female, Cable TV is 4.4649 for male and for female is 4.4649, Radio is 4.0767 for male and for female 4.4325, Newspaper is 4.3079 for male and 4.4623 is for female. It is quite clear that ICT has great impact of social development according to the group statistical data.

Table 4: ANOVA Results

Variables	Age		Qualification		Profession	
	F-Value	Sig	F-Value	Sig	F-Value	Sig
Mobile	14.306	.000	1.842	.139	6.658	.000
Internet	12.830	.000	5.893	.001	3.796	.002
CTV	2.959	0.033	2.579	.054	6.640	.000
Newspaper	20.732	.000	4.407	.005	3.365	.006
Radio	3.843	.010	.712	.545	1.832	.106

Table 4 s indicates that mobile phone plays a significant role in the social development of a society. Internet also impact significant for promoting the social development of a society. Cable TV has positive impact on the social development of a society. Newspaper and radio also shows significant impact on the social development of a society. Above statistics indicate ICT instruments are to be considered very important in shaping the social development of a society. Education plays significant role in using ICT instrument such as mobile, internet, CTV, newspaper and radio. Education matters in using ICT and making decisions regarding life style, culture, and what is good or bad for society. Education creates awareness among society and it plays very important role in early childhood. Now a days children are using mobile,

internet CTV and they should be aware about these instruments. Results shows that there is no significant relation between radio and social development of a society. Other demographic variable profession considers to be important in ICT and social development. Radio has found no significant relation in ICT and social development by profession. While remaining variables such as mobile, internet, CTV, newspaper play a significant role in shaping the social development of a society.

V. CONCLUSIONS

The aim of this study was to find perception of people regarding ICT and social development in the province of Khyber Pakhtunkhwa, Pakistan. For the said purpose five main tools were considered for ICT and ask questions about ICT and social development. Data was analysed with the help of a computer software SPSS. Descriptive statistics, t-test and ANNOVA were applied to conclude the results. The results showed that Information and Communication technology instruments such as mobile phone, internet, cable TV, and newspaper are useful for social development. Some people perceived that radio has no significant contributor in shaping social development. While some people perceived that mobile, internet, CTV even newspaper changing our culture and these have negative impact on our society. They perceived that by mobile phone and internet has reduce the social distance between male and female. On the other hand CTV projecting and promoting male and female interactions. Cellular companies giving advertisement and promoting interactions of young boy and young girl. They have just considered mobile phone usage only for boys and girls communication. Whereas, CTV also promoting and projecting western culture and values. Actually every society have their own culture, taboos, rituals, ethics, norms and values. They perceive the things differently and then act. That is why it is important to project and promote own culture at CTV in this way no negative impact will come on society. People can perceive as it is what is projecting and demonstrating. In short, ICT and social development become indispensable. But regulators can play significant role, they should develop strong code of conduct and regular monitor the activities of ICT. Parents, teachers, educational institutions and government should take the responsibility of social development. They should create awareness and educate the society regarding ICT. ICT plays a significant role in all walks of life such as social development, education, banking, communications, engineering, research and development, marketing, finance, human resource management and doing of business.

REFERENCES

- [1] Boehm, B. W. (1994) Software Risk Management: Principles and Practices, IEEE Software, 30, 32-40. 133-153.
- [2] Bryan, W. (1970). Youth culture and the universities. Massachusetts Menlo Park California, London.
- [3] Camella, C. (2007). Parasocial relationships in female college student soap opera viewers today. *Western Connecticut State University*. Retrieved Feb, 12(2007), 2001.
- [4] Deibert, R., Palfrey, J., Rohozinski, R., Zittrain, J., & Stein, J. G. (2008). *Access denied: The practice and policy of global internet filtering*. Mit Press.
- [5] Dosi, G et al. (1988) "Technical change and economic Theory" London Pinter
- [6] Hagiwara, S. (1999). The reception of global TV in Asia; An association of its impact on local cultures, *Asian journal of communication*, 9(10), 1-19.
- [7] Herman, E. S., & Sandvoss, C. (1997). *The global media*. London Cassel
- [8] Howard, P., Raine, L., & Jones, S. 2001. "Days and nights on the Internet: The impact of a diffusing technology." *The American Behavioral Scientist* 45(3): 383-404.
- [9] Jennings, B., & Thomson, S. (2002). *Fundamentals of Media Effects*. Waveland Press Inc.
- [10] Karnik, K. (1995). New information and communication technologies: Their role in education. *Media Asia: an Asian Mass communication quarterly*, 22(2), 85-93.
- [11] Morris, M. and C. Ogan (1996) "The Internet as Mass Medium" *Journal of Communication* 46(1): 39-50.27).
- [12] Nie, N. and L. Erbring (2001) 'Internet and Society: A Preliminary Report' www.stanford.edu/group/siqss/Press_Release/Preliminary_Report. (accessed 16 July 2004).

- [13] Orleans, M., & Laney, M. C. 2000. "Children's computer use in the home: Isolation or association?" *Social Science Computer Review* 18(1): 56-72.
- [14] Pruijt, H. 2002. "Social capital and the equalizing potential of the internet." *Social Science Computer Review* 20(2): 109-115.
- [15] Rubin, A. M., Perse. E. M., & Powell, R.A. (1985). Loneliness, para social interaction, and local television news viewing. *Human communication research*, 12 (1), 155-180.
- [16] Wellman, B., A.Q. Haase, J. Witte and K. Hampton (2001) "Does the Internet Increase, Decrease or Supplement Social Capital?" *American Behavioral Scientist* 45(3): 436-55.
- [17] Yoshii, H. (2001) Transformation in media and society: laying the ground work for cultural ecology. Retrieved January 16, 2007 from Yoshii@mxz.meshnet.ox.jp.
- [18] Zia, A. (2003). Cable television network in Pakistan: Introduction, development, prospects and dilemmas. (pp. 1,3,10, 137, 135,160). Unpublished M. Phil thesis, department of Mass communication, University of the Punjab, Lahore,Pakistan<https://www.scanva.org/support-for-parents/parent-resource-center-2/social-development-in-children/>