Role of Information Communication Technology in Social Time Displacement of University Students

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Abstract

This is the era of technological revolution and it was believed that emergence of Information Communication Technologies (ICTs) made communication process simple, easy and fast by converging all the function of other mediums. Keeping in view the importance and usage of ICTs the focus of underlying study is to explore the displacement effect of ICTs on students. Students of four Universities of Lahore were the sample of the study. Data has been collected by employing Survey method, whereas the concept of Time Displacement is set as theoretical ground for the study. Researcher analyzed the data and it was found that use of ICTs have some negative effect on the social structure of Pakistani society by highlighting that students spend more time on using ICTs instead of giving time to their families and friends as in terms of social time displacement by giving more time to technology than that of physical activities.

Keywords: Displacement effect; Information communication technology; Internet; Social time displacement; Social structure; University students

Introduction

Development and progress are essential elements of an evolutionary phase in human life. Human beings developed different modes of survival to cope with the challenges; for instance, carving patterns of novelty in every field of life according to the need of the hour. One of the prime invention of twentieth century was ICTs known as Information Communication Technology: define as " Diverse set of Technological tools and resources used to communicate, and to create, disseminate, store and manage information" [1]. Introduction of ICTs provided support to the concept of Global Village that the world has scrutinize into a globe which is connected through electronic media and other communication technology with no time and space difference between states.

McLuhan [2] stated that "As electrically contracted, the globe is no more than a village. Electric speed at bringing all social and political functions together in a sudden implosion has heightened human awareness of responsibility to an intense degree".

It was believed that new ideas replace the old ones with some positive and negative impacts on society. Same is the case with the invention of ICTs. Therefore, in the current research researcher has focused on the effect of internet exposure of ICTs on students in terms of physical social interaction which was associated with the term Social Time Displacement, and to the extent in which these ICTs are facilitating in broader prospects.

Objectives of the study

Objectives of the study are:

- To explore the effects of internet exposure on the socialization of University students.
- To know the extent of ICTs in facilitating University students.

Rationale for the study

Digital literacy is much needed to take part in global citizenship in the course of 21st century where the possession of information is the driving force behind the transformation of society; which is due to the rapid development in ICTs, it's not only the demand of digital literacy but also a diversion from the previous form of communication technologies by subsuming the features of interpersonal communication and mass communication. As in past, there are numerous researches primarily focused on the effects of Mass media and its content but after the emergence of new communication technology researchers have shifted their attention from basic mass media effects research to new communication technology effects. Like other Inventions emergence of ICTs have some positive and negative effects on its users that allows researcher to examine both types of effects; that is, the extent of facilitation provided by ICTs and effects of internet exposure on the social structure of Pakistani society.

Literature Review

ICTs have a bigger role to play in every field of life and with every passing minute its importance has been on increasing side as Khedekar and Magre [3] carried out research to explore the level of awareness about the ICTs among students of secondary education and the relationship between awareness of ICTs and students' academic performance. They found a significant relationship between the awareness of ICTs and academic performance of students with respect to gender. ICTs has brought revolutionary changes in the field of education despite the challenges as Mikre [4] said in an article that regardless of the challenges of ICTs integration in higher education it still has significant contribution in providing quality education. Similarly, Youssef and Dahmani [5] wrote an article on "The impact of Information Communication technology on students' performance in higher education: Direct effects, indirect effects and organizational change" and summarize the findings of two major aspects. One is on the indirect effect of ICT on students' characteristics, performance and found a high percentage of different effects of ICTs. Secondly, the use of ICTs required changes in the higher education. Findings of the article shows that the use of ICTs is increasing rapidly but its adoption rate in higher education is very slow and it varies from institute to institute.

ICTs were not only successful in the field of education but also playing significant role in the personal and professional life of its users as Phelps and Maddison [6] had compiled the data from 14 teachers of visual Arts about the use of ICT and found diversity in teacher's use of ICTs in personal and professional life. Moreover, ICTs have displaced the old ways of communication as Liu and Hsu [7] had written a research article on "The displacement Effect of the converged Service: The Example of IPTV". This study was based on the development of digital TV in Taiwan with an aim to analyze the displacement effect of IPTV (one of the three major digital platform in Taiwan) on the two major digital TV platforms (digital terrestrial TV and Digital cable TV). Researcher adopted telephonic survey method and gathered through list provided by "Chunghwa Telecom (CHT) a major service provider of IPTV in Taiwan. Findings of the study show that IPTV have clear displacement effect on other two digital TV platforms. More people spend time on using IPTV less it spends on other two platforms. Lee and Leung [8] state about the great displacement of the conventional medium after the arrival of internet which lead towards the less time spending on existing mediums. In another research conducted in Canada found that those who were using internet and other communication gadgets giving less time to the other social activities [9].

Similarly Kestnbaum et al. [10] carried out research on "Information Technology and Social Time Displacement" the research article focus on departure of conventional technology and the use of Information communication technology. Researcher used comprehensive method in the form of 24 hours' time based diary and recorded activity on day to day bases. When all the time diaries of internet users and non-users were compared it was found that user of new technology have active social life, they gave priority to their secondary activities and maintain their socialization but there was a slight decline in giving time to their children. Information communication technology seems to be time enhancer and its user employed it as a productive tool to increase and revive the old social contacts.

Theoretical Framework

Theoretical ground which is being set to support this study is Displacement Theory to explore the effect of ICTs in displacement of social time of university students.

Displacement theory

Advancement made in conventional mediums allows people to talk about the usage of new mediums. Maxwell McCombs tries to address this phenomenon and named it as "Displacement" and later on develop it as Displacement Theory. In literal meaning displacement is moving something from its own place. According to Maxwell McCombs, people have limited amount of time to spend on the media, the more they spend on one medium less they spend on other medium.

Revolution in the field of communication gave birth to the debate amongst scholars over the displacement effects and their impact on existing mediums. Different studies were conducted to explore the displacement effect on existing mediums and their findings headed towards the three schools of thoughts.

- Asymmetrical Relationship.
- Complementary Relationship.
- Functional Displacement.

First school of thought represents an increase-decrease relationship in terms of audience use of new and existing media. Second school of thought is in favor of increase-increase relationship between new and existing mediums whereas third school of thought talks about the functional displacement of new and conventional mediums.

Later on Lee and Leung [8] introduce two new approaches of displacement effect.

- Medium Centric Approach.
- User Centric Approach.

According to the medium centric approach the more an individual gave time to one medium the less he spends time on existing mediums. On the other hand, user centric approach gives attention to the needs and gratifications of user. There will be a null displacement effect if new communication mediums fulfill the similar needs as existing mediums does.

Time displacement effect

Displacement effect focused on the individual's time and money employed on using new and conventional mediums. So, the concept of time displacement focuses on time constraints and it argued that the time available to use the different kind of medium is limited. According to Lee and

Leung [8] "people have fixed amount of time and money to spend and if they spend more on one medium then they will spend less on other [7].

Functional displacement

According to Schramm et al. [8] time displacement effect emphasizes on time an individual spend on using new mediums but functional displacement based on the functions of new medium, and it is stated that if new medium perform the similar function in an effective way it will displace the existing medium.

Numerous studies have shown that functional displacement will occur when users have a choice for alternate mediums performing who were performing similar functions.

All the work done on theories of displacement effect revolves around the resources of time and money. Most of the studies focus on Time Displacement and Functional Displacement but the technological revolution paves the way for researchers to raise the question of Social Time Displacement, which assumes that new mediums/ communication Technology not only displace time and mediums (on basis of functions) but also displace the social time and structure of society.

Social time displacement

Putting forward the concept of Time displacement effect researcher aims to test the Social Time Displacement effects in Pakistani society. Social time displacement can be hypothesized as; when new communication technologies came, they not only displace the time (which people used to give to other technologies) but t also affected the social life and structure of people specially youngster including interaction with family, friends, physical activates, and other social events.

Research Questions and Hypothesis

RQ1. How far the exposure of internet affects the physical social interaction of University students?

H.1. Exposure of internet leads to the less physical social interaction of University students.

RQ2. How far the use of ICTs facilitates university students?

H.2. The greater use of ICTs leads to the greater facilitation.

Methodology

In the present study research has used Survey method and Questionnaire as tools of data collection. Questionnaire is comprised of closed ended questions. Whereas, the Universe of the present study is University students of Lahore and sample is taken from following four Universities of Lahore.

- Punjab University (PU)
- University of Management and Technology (UMT)
- Lahore College for Women University (LCWU)
- University of Central Punjab (UCP)

Researcher has selected these Universities by using purposive sampling technique whereas students were selected by employing Simple random sampling technique. The total sample size is 400 students, 100 from each university. Data was analyzed by using SPSS software. Correlation was employed to test relationship between variables.

Findings and Interpretations

The total 400 questionnaires were distributed and out of that 380 would select remaining were discarded due to incomplete or improper response (**Tables 1 and 2**).

Table 1: Frequency table of social capital.

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
1. ICT Helps in Social Interaction	11 (2.9%)	13 (3.4%)	45 (11.8%)	200 (52.6%)	111 (29.2%)	380 (100%)
2. ICT Leads towards Less Physical Interaction	14 (3.7%)	27 (7.1%)	66 (17.4%)	174 (45.8%)	99 (26.1%)	380 (100%)
3. Prefer Online shopping then Physical	40 (10.5%)	139 (36.6%)	84 (22.1%)	87 (22.9%)	30 (7.9%)	380 (100%)
4. Prefer ICT for Marketing Purpose	12 (3.2%)	38 (10%)	89 (23.4%)	177 (46.6%)	64 (16.8%)	380 (100%)
5. Prefer ICT to Communicate with friends and Family	11 (2.9%)	15 (3.9%)	57 (15%)	179 (47.1)	118 (31.1)	380 (100%)
6. Prefer to Spend Time on using ICT then physical Sports	35 (9.2%)	71 (18.7%)	74 (19.5%)	126 (33.2%)	74 (19.5%)	380 (100%)
7. ICT is a Killer of Time	14 (3.7%)	30 (7.9%)	83 (21.8%)	148 (38.9%)	105 (27.6%)	380 (100%)

H.1. Exposure of internet leads to the less physical social interaction of University students.

It is evident from **Table 3**, that the use of internet by using ICTs has significant correlation with all the dependent variables of social interaction; that is, ICTs Helps in social interaction

(0.874 P=0.000), ICTs leads to less physical interaction (0.890 P=0.000), Prefer online shopping then go physically (0.901 P=0.000), Use ICTs to communicate with friends and family (0.871 P=0.000), Prefer to spend time on ICTs then physical sports (0.937 P=0.000), ICT is killer of time (0.893 P=0.000)Thus the hypothesis, Exposure of internet leads to less physical social interaction of University students has been supported.

Table 2: Frequency table of facilitation.

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
1. ICT helps in access of Fast Information	14 (3.7%)	9 (2.4%)	30 (7.9%)	179 (47.1%)	148 (38.9%)	380 (100%)
2. ICT helps in access of Reliable Information	9 (2.4%)	22 (5.8%)	73 (19.2%)	206 (54.2%)	70 (18.4%)	380 (100%)
3. ICT make Work Easy	11 (2.9%)	9 (2.4%)	27 (7.1%)	182 (47.9%)	151 (39.7%)	380 (100%)
4. Online Tools help more than Books	18 (4.7%)	45 (11.8%)	89 (23.4%)	153 (40.3%)	75 (19.7%)	380 (100%)

Table 3: Correlation between Use of ICTs and social interaction.

Independent Variable		ICT Helps in Social Interaction	ICT Leads to Less Physical Interaction	Prefer Online shopping then go Physically	ICT to Communicate with friends and Family	Prefer to Spend Time on ICT then physical Sports	ICT is a Killer of Time
Frequent Use of ICTs with Internet access	Pearson Correlation	.874**	.890**	.901**	.871**	.937**	.893**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	380	380	380	380	380	380
**Correlation is significant at the 0.01 level (2-tailed)							

H.2. The Greater use of ICTs leads to the greater facilitation.

It is evident from **Table 4**, that the use of ICTs with internet access has significant correlation with all the dependent variables of facilitation; that is, ICT Helps in access of Fast Information (0.860; P=0.000), ICTs help in access of reliable information (0.865; P=0.000), ICTs make work easy (0.851; P=0.000), Online tools help more than books (0.922; P=0.000) Thus the hypothesis, Greater the use of ICTs leads to the greater facilitation has been supported.

Table 4: Correlation between use of internet and facilitation.

Independent variable		ICT Helps in access of Fast Information	ICT Helps in access of Reliable Information	ICT Makes Work Easy	Online Tools help more than Books
Frequent Use ICTs with internet access	Pearson Correlation	.860**	.865**	.851**	.922**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	380	380	380	380
**Correlation is significant at the 0.01 level (2-tailed)					

Discussion and Analysis

In last few years it has been observed that easy and affordable access to internet provides an opportunity to its users to use communication technology more effectively in Pakistan. Apart from the benefits that internet is offering to its users, it's appropriate to examine the effects of exposure to the internet especially on students because ratio of using internet among students is more than that of any other segment of population. In recent past numerous studies have been conducted to explore the effects of internet. Kestnbaum and his associated [10] worked on the effects of internet on social life of its users and suggested that users of new communication technology have active social life, they give priority to their secondary activities and maintain their socialization but there was a slight decline in giving time to their children. They also highlighted that information

communication technology seems to be time enhancer and its user employed it as a productive tool to increase and revive old social contacts. Lee and Leung [8] explore the displacement effect of internet on existing medium and found a higher displacement effect of internet on conventional mediums. They stated that arrival of internet leads towards the less time spending on exiting mediums. Similarly, Pronovost [9] suggested that people who use internet and other communication gadgets give less time to social activities. In the present study researcher made and effort to explore the effect of internet on the social interaction and social time of people. According to collected data 2.9% respondents strongly disagreed with the statement that ICTs help in social interaction, 3.4% disagree, 52.6% agreed while 29.2% respondents strongly agreed with the statement. Results also shows that 3.7% respondents strongly disagreed with the view that ICTs lead towards less physical interaction with the people, 7.1% disagreed, 45.8% agreed with the statement and 26.1% strongly agreed with the statement that ICTs lead towards the less physical interaction with people. When students were asked about their preference to do shopping by using ICTs as compared to go physically, it was found that 10.5% respondents strongly disagreed with the statement, 36.6% disagreed, 22.1% agreed and 22.9% strongly agreed with the statement. On a question to students that will you prefer to use ICTs to communicate with friends and family, 2.9% respondents strongly disagreed with the statement, 3.9% disagreed, 47.1% agreed and 31.1% respondents were strongly agreed with the statement. 9.2% Respondents strongly disagreed with the statement that they prefer to spend time in using ICTs than that of the physical sports, 18.7% disagreed, 33.2% agreed and 19.5% strongly agreed with the statement. When students were asked that will they agree with the view that ICT is a killer of time 3.7% students strongly disagreed, 7.9% disagreed with the view, 38.9% agreed, 27.6% students strongly agreed with the view that ICT is a killer of time (**Table 1**). It is evident from the **Table 3** that using ICTs with internet access have significant correlation with all the dependent variables of social interaction. Above discussed results and the previously done researchers indicate that internet has effect on different levels and the present study reveals that exposure to internet of university students leads to less physical interaction, which means that emergence of new communication technology and the use of internet displace the social time of Pakistani youth, they prefer online shopping they prefer to spend time on new communication technology and give priority to use communication technology to communicate with friends and family instead of face to face communication and discussion.

It was believed that Dependency on ICTs is due to the broad range of facility provided by ICTs to its users. The quality of ICTs to facilitate its users allow societies to utilize ICTs in different sectors of health (e-health), education (e-education) and business (e-business). Naz [11] examined the purpose of using internet and ICTs among students and found that students used internet for the purpose of entertainment and education. ICTs with internet access were not only facilitating in terms of education and entertainment but allows smooth communication among employees of organizations. Fidler [12] in his book "Mediamorphosis" explained that how media organizations use digital communication. Media organizations send their audio, video and text material through wireless services, even some media organization are trying to utilize multimedia dissemination of information. It shows that ICTs provides handful facility to media organization. In another study conducted by Latif [13] on the use of basic online technology among media professions explore that ICTs played an important role in facilitation media professions but it also demand a certain level of skills to operate these technologies and the study reveal that media professionals in Pakistan were not technology friendly and they believe that advancement made in ICTs would not facilitating them properly. In the present study researcher tried to examine the relationship between usage and facilitation provided by ICTs. On the bases of collected data 3.7% strongly disagreed with the statement that ICT helps in access to fast information, 2.4%disagareed, 47.1% agreed and 38.9% strongly agreed with the statement that ICTs helps in an access to the fast information. 2.4% respondents were strongly disagreed with the view that ICT helps in tan access to reliable information, 5.8% disagreed, 54.2% agreed with the view and 18.4% strongly agreed with the statement that ICTs help in the access to reliable information. Results reveal that 2.9% respondents strongly disagreed with the view that ICT make students work easy, 2.4% respondents disagreed, 47.9% agreed and 39.7% strongly agreed to the view. When it was asked that do ICTs help you more than that of books, 4.7% strongly disagreed with the view, 11.8% disagreed, 23.4% remains neutral, 40.3% agree and 19.7% strongly agree with the view that ICTs helps more than books (**Table 2**). It is evident from the collected data and **Table 4** that use of ICTs with internet access has significant correlation with all the independent variables of facilitation. It shows that ICTs extensively facilitating the university student like in the access to fast and reliable information, ICTs make their work easy and students also prefer to take help from ICTs for study purpose more than that of books.

Conclusion

ICTs carry the quality of being performing all the functions of Interpersonal and Mass Communication which makes its adoption indispensable among all the fields of life. It was observed that in many developed and developing countries ICTs are used to bring social change. Keeping in view the importance of ICTs, researcher has also highlighted the effects of exposure to internet in the form of knowing the facilitation provided by the ICTs. Present study also shed light on one of the growing concepts of displacement effect on society due to ICTs in the form of social time displacement.

ICTs are facilitating the university students in a number of ways, which means that high ratio of students are using ICTs. Results of the study show that higher percentage of students is using ICTs for the sake of getting fast and reliable information. Apart from getting fast information, use of ICTs facilitate students in making course related assignments and other related problems.

Present study made an effort to explore the effect of exposure to ICTs with internet access on Social/family system of Pakistan. Pakistan is a state where a large population live in family system but the advent of ICTs and its penetration among masses especially in youth raised serious concerns on social/family system in Pakistan. Students are using ICTs with internet access to such an extent that they prefer to spend maximum time on using ICTs, most of the students are habitual of doing online shopping, they have adopted preferable modes of application to communicate with friends and family which clearly indicates that ICTs has displaced the social time of students which was termed as Social Time Displacement, which is an extension of Time displacement theory in which it was predicted that new technology displace the time spend on conventional medium. Putting forward the concept of Time Displacement researcher highlighted that ICTs are not only displacing amount of time spend on old mediums but ICTs are also effecting the social structure of Pakistani society by displacing the time students used to spend physically with their family and friends as well as to sports and other leisure activities.

Acknowledgement

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