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A Study of Digital Diffusion in Tirunelveli District, Tamilnadu

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ABSTRACT

Information technology is the technology used to store, manipulate, distribute or create information. The aim of the study is to portray the level of opinion among the selected members of Tirunelveli District. The universe of the study is commonly defined as the totality of everything that exist, which consists of individuals, groups of people, organizations, or even objects. In the present study the universe consists of whole population of the all the 11 blocks of Tirunelveli district. In order to obtain homogeneity among the selected population the study adopted Simple Random Sampling. The sample consisted of 1100 general community people from eleven selected blocks of Tirunelveli district. The study reveals that Half of 51.1% of the respondents' opinion about the development technology in Tirunelveli district is good. Further, the recommendation made that the pace at which information technology is changing can knock down the very pillars of it. It is constantly evolving and refining. Stronger security processes, new operating systems and virtual real time communication have been the call of the day.

INTRODUCTION

Information technology is the technology used to store, manipulate, distribute or create information. The type of information or data is not important to this definition. The technology is of any mechanism in processing this data. As it is widely known to perform a calculation of any type, if we work out efficient programs of technology and get them thoroughly tested for every function it is expected to perform before putting to use, it will our time to complete quickly. The chance of human errors that could occur when things are done manually could also be avoided the programs are developed keeping in mind the exact requirements that are sought after and developed properly to address the issues correctly without problems. Information technology works based on these simple concepts. As we know, it's applications in our lives is extremely wide ranging from simple addition, subtraction to overall performances like controlling a spaceship in Mars from the ground of the earth. Electronic databases now can store huge volume of data which can be used very easily and internet can be accessed for gathering any information about all the firleds regarding to the matter of essentials in our day to day life.

CATEGORIES OF ICT

The following table shows the range of technologies under the various categories of ICT

Information	Technologies
Creation	Personal Computers, Digital camera, Scanner, Smartphone
Processing	Calculator, PC, Smartphone
Storage	CD, DVD, Pen drive, Microchip, Cloud
Display	PC, TV, Projector, Smartphone,
Transmission	Internet, Teleconference, Video conferencing, Mobile technology, Radio
Exchange	e-mail, Cell phone,

SCOPE OF THE STUDY

Information and Communication Technologies (ICTs) have drastically changed the world in which we live. With increased interconnections in financial markets, media, knowledge sharing and archiving, billions of people around the world today are logging on, surfing the web, browsing, and posting information that is accessible irrespective of geographic location or time. Linear patterns of information sharing have effectively been replaced by circular patterns of information gathering. This is the Information Age (Castells, 2000). This transformation does not reach the entire world's population but in turn for more than two decades, public use of the Internet increased upto 20% of the world population from a small network of academics in the United States.

In India, the growth of both these sectors is very significant in the past two decades. Indian IT industry has built up an enormous confidence for itself in the global markets. IT industry in India comprises of software industry and information technology enabled services (ITES), which also includes business process outsourcing (BPO) industry. India is considered as a pioneer in software development and a favorite centre or hub for IT-enabled services. The Indian software and services exports including ITeS-BPO exports is estimated at US $ 49.7 billion in 2009-10, with an increase of 5.5% while comparing to US $ 47.1 billion in 2008-09. The IT services exports attained to be US $ 27.3 billion in 2009-10 as compared to US $ 25.8 billion in 2008-09, showing a growth of 5.8 per cent. ITES-BPO exports increasingly grew up from US $ 11.7 billion in 2008-09 to US $ 12.4 billion in 2009-10 within a year, and its growth rate is 6 per cent. On the Other hand, the growth of Telecommunications is also alarming. According to the present condition, country has emerged as one of the fastest growing telecom markets in the world. Indian telecom has become the second largest wireless network in the world after China. As it is progress, telecommunication system in India is a highly remarkable by achieving its highest distinction.

Presently India secures 121st position in the ICT Development Rankings out of total 157 countries. Though the value of the index increased from 2.13 in 2011 to 2.21 in 2012 India's overall ranking slashed down from 120 to 121 during this period. Hence India has to improve its status regarding to ICT, if it wants catch up its development goal.

NEED OF THE STUDY

With regards to the development of ICTs, the world is going through a major shift. The Information Age, otherwise referred to as the network society, is a contemporary meta-narrative that leads to so many studies in all fields of the social sciences. As a theoretical space in the conduct of contemporary research, the Information Age suggests that we are moving beyond the Industrial Age and into an era where the sharing of knowledge and ideas are the new driving force of power and the world economy. Castells (2000) demonstrates the economic repercussions of the network society and the ways it binds national economies throughout the world. Whether one discusses the emergence of global financial systems or growing citizen solidarity networks, one thing remains common at the core of the new society, that the solicitation and exchange of the world's most valuable resource: information. As it is as a "new social morphology of our society" (ibid: 501), networking logic is both a structure and a process that enables the exchange, the redirection, and the reception of information, on a global scale, without any restriction of space or time. When one is a part of these new networks, distance is in fact rendered irrelevant, allowing direct, simultaneous, decentralized, and expanding relations of collaboration, advocacy, trade, production, and innovation, by generating new forms of power constellation and distribution.

This is the dominant organizational form of the Information Age, which has displaced the centres of power and influence into the space of flows (meaning the channels by which digital information is shared), beyond the control of any yet accessible to all. The space of flows represents the new "material organization of time-sharing practices" and it greatly impacts our daily life materially and symbolically (ibid: 442). As tools allow immense exchanges of information, ICTs made impact on many realms. The use of Internet in the quest to promote and defend human rights, international law, and democratic governance, is well documented and is perhaps the strongest asset for civil society struggles around the world today and one of the most positive examples of the space of flows. Civil society groups in a particular transnational advocacy networks, including Diaspora communities, have been some of the most active users of ICTs such as the Internet for information sharing, mobilization and social change (Norris, 2001).

OBJECTIVES OF THE STUDY

- ✓ To study the demographic profile of the respondents
- ✓ To portray the level of opinion among the selected members of Tirunelveli District
- ✓ To analyze the association between the selected socio-demographic variables with the impact of information and communication technology
- ✓ To suggest suitable measures based on the findings of the study

REVIEW OF LITERATURE

Ramorola Mmankoko Ziphorah (2014) published an article on Information and Communication Technology Integration: Where to Start, Infrastructure or Capacity Building?. The e-Education policy in South Africa highlights the importance of information and communication technology literacy and demanded that every school going learner should be ICT-savvy by 2013. However, the policy does not present the implementation strategies; and the challenge is that most schools still lack of technology equipment for teaching and learning, and teachers are not yet fully equipped with the knowledge and skills to integrate technology into the curriculum. Using qualitative case study design, this study explores the challenges facing and successes relating to technology education with respect to the essential conditions of a technology integration framework. The findings revealed the availability of infrastructure as well teachers who lack relevant computer technology knowledge and skills. The study recommends the capacity building as a major priority.

Happiness Ihuoma Igbo and et al., (2013) conducted a study on the Influence of Information and Communication Technology on Behavior Problems of Nigerian Youths. The study investigates the influence of Information and Communication Technology on behavior problems of Nigerian youths. A self administered survey was conducted with 550 convenience samples of university undergraduates in three universities in Benue State, Nigeria. Four research questions and four hypotheses guided the study. Descriptive statistics, mean, standard deviation and multiple regression statistics were used to analyze the data. The empirical results indicate that there is a joint significant influence of ICT, school, sex and age on cybercrime, aggressive behavior, truancy and sex crimes among the youths. However while ICT remained constant and significant, none of the other variables contributed significantly and independently. The study recommends that guidance counselors and clinical psychologists at both post primary and tertiary institutions should use the appropriate skills and techniques to assist for curbing the identified behavior problems.

Giorgio Canarella Stephen M.Miller (2017) published an article on the determinants of growth in the U.S. information and communication technology (ICT) industry: A firm-level analysis. Using a mildly unbalanced panel data set of 85 U.S. information and communication technology (ICT) firms that survived for 24 years from 1990 to 2013, they examined the effect of firm size, agency costs, R&D investments, capital structure, profitability, and the Great Recession of 2007–2009 on firm growth. The study results that a non-linear and concave-in-size relationship between growth and size. Further, it reveals that : a) firm growth exhibits positive persistence; b) agency costs and financial leverage impede firm growth; and c) R&D investment and financial performance facilitate the growth. As expected, the Great Recession (2007–2009) curbed firm growth in the ICT industry.

UNIVERSE AND SAMPLING

The term universe is commonly defined as the totality of everything that exist, including all matter and energy, the planets, stars, galaxies, and the contents of intergalactic space. It consists of individuals, groups of people, organizations, or even objects. In the present study the universe consists of whole population of the all the 11 blocks of Tirunelveli district. In order to obtain homogeneity among the selected population the study adopted Simple Random Sampling. For the purpose of the present study, the researcher adopted Purposive Method as a technique for defining the sample size with the intention of

making generalizations (i.e., statistical inferences) from that sample to the population of interest. The sample consisted of 1100 general community people from eleven selected blocks of Tirunelveli district.

SOURCE OF DATA COLLECTION

The research study uses both primary and secondary data. Primary data were collected from the selected respondents which forms the first hand information. While secondary data were gathered from official documents, previous research studies, websites, books, journals and working papers of selected institution.

RESULTS OF THE STUDY

Table – 1 Classification of the respondents towards technological development in Tirunelveli District

S. No	Particulars	Frequency (n=1100)	Percentage
1	High Development	382	34.7
2	Good	562	51.1
3	Not Bad	130	11.8
4	No Development	26	2.4

This table shows the respondents classification towards technological development in Tirunelveli District. Half of 51.1% of the respondents' opinion is good, tiny majority of 34.7% of the respondents opined that technology is highly developed in Tirunelveli. 11.8% of the respondents opined 'Not Bad'. Notably 2.4% of the respondents' opinion is there is no development in this particular district. India is a developing nation, while considering the current status of the nation and its states the technological development is not reach it peek stage. In spite of this, there is lot of improvement in technology. So it can be gradually developed.

Table - 2
Association between age of the respondents and usage of different types of services in their mobile phone

Different types of Mobile Services	Age				Statistical Inference
	Upto 30 years	31-40 years	41-50 years	Above 51 years	
Money Transactions	6 (18.8%)	17 (53.1%)	5 (15.6%)	4 (12.5%)	
Bills Payment	109 (65.3%)	47 (28.1%)	9 (5.4%)	2 (1.2%)	
Ticket Booking	73 (42.4%)	68 (39.5%)	20 (11.6%)	11 (6.4%)	
Games	69 (46.0%)	69 (46.0%)	11 (7.3%)	1 (.7%)	
To see Updated Program	67 (73.6%)	19 (20.9%)	4 (4.4%)	1 (1.1%)	
To See Social Media	6 (46.2%)	5 (38.5%)	1 (7.7%)	1 (7.7%)	X^2=14.132 Df=33 .000<0.05 Significant
To See Date, Time and Weather	5 (33.3%)	8 (53.3%)	0 (.0%)	2 (13.3%)	
To hear Radio and Musics	19 (32.2%)	26 (44.1%)	12 (20.3%)	2 (3.4%)	
To know Education and General Information	8 (38.1%)	11 (52.4%)	1 (4.8%)	1 (4.8%)	
To see Films	4 (10.5%)	17 (44.7%)	15 (39.5%)	2 (5.3%)	
Others	8 (42.1%)	8 (42.1%)	3 (15.8%)	0 (.0%)	
More than 2 purposes	7 (70.0%)	3 (30.0%)	0 (.0%)	0 (.0%)	

Inference

The above table reveals that there is a significant association between age of the respondents and usage of different types of services in their mobile phone. Hence, the calculated value less than table value ($p<0.05$).

Research Hypothesis

There is a significant association between age of the respondents and usage of different types of services in their mobile phone.

Null Hypothesis

There is no significant association between age of the respondents and usage of different types of services in their mobile phone.

Statistical test

Chi-square test was used the above hypothesis

Findings

The above table reveals that there is a significant association between age of the respondents and usage of different types of services in their mobile phone. Hence, the calculated value less than table value ($p<0.05$). So the research hypothesis is accepted and the null hypothesis rejected.

Table - 3
Association between age of the respondents and the services provided by Social Media

Services of Social Media	Age				Statistical Inference
	Upto 30 years	31-40 years	41-50 years	Above 51 years	
Chatting	217 (50.3%)	175 (40.6%)	30 (7.0%)	9 (2.1%)	X^2=98.346 Df=18 .000<0.05 Significant
Conference	17 (30.4%)	22 (39.3%)	13 (23.2%)	4 (7.1%)	
To make more friends in less time	16 (34.8%)	14 (30.4%)	14 (30.4%)	2 (4.3%)	
To mingle in social media	21 (20.8%)	43 (42.6%)	23 (22.8%)	14 (13.9%)	
Others	19 (33.9%)	23 (41.1%)	11 (19.6%)	3 (5.4%)	
None	188 (49.6%)	143 (37.7%)	37 (9.8%)	11 (2.9%)	
All the Mentioned	14 (45.2%)	10 (32.3%)	5 (16.1%)	2 (6.5%)	

Inference

The above table reveals that there is a significant association between age of the respondents and services provided by Social Media. Hence, the calculated value is less than table value ($p<0.05$).

Research Hypothesis

There is a significant association between age of the respondents and services provided by Social Media.

Null Hypothesis

There is no significant association between age of the respondents and services provided by Social Media.

Statistical test

Chi-square test was used the above hypothesis

Findings

The above table reveals that there is a significant association between age of the respondents and services provided by Social Media. Hence, the calculated value less than table value ($p<0.05$). So the research hypothesis is accepted and the null hypothesis rejected.

RECOMMENDATION

Communication Technology has made trade, investment, business simpler and unruffled through e-commerce and on-line transactions but suffers from cyber crimes, forgery, sabotage, hacking and loss. Internet has made the whole world a small intellectual village but at the same time is polluted with horrid contents like pornography, spam, worms and viruses. Therefore, it is high time now for careful inspection of the legal and ethical aspects of ICT as there are not enough guidelines available in this field as compared to those available in conventional branches of science and technology. More importantly, now ICT is not limited to the scientists and software engineers alone rather it has become a widespread phenomenon, affecting people at various stages in their role, as customers, service provider, participants, middlemen etc. So it has become the moral responsibility of the sociologist, business people and scientists to decide in which way ICT can be best utilized.

Privacy means providing confidentiality to our personal data. One may not like, for example, to make public one's insurance details, medical history etc.

Information Integrity means the information provided should be relevant, complete, up-to-date, trustworthy and available in time. A job alert after the recruitment is over or without the address of the employer or to a student who is in his/her high school, for example, is hardly of any use.

Security and protection concerned with protection against accidental or intentional destruction or disclosure of data and programs by unscrupulous persons and in case data loss occurs how to recover it.

CONCLUSION

Change is the only constant – is the best way to sum up the future of information technology. The pace at which information technology is changing can knock down the very pillars of it. It is constantly evolving and refining. Stronger security processes, new operating systems and virtual real time communication have been the call of the day. Communication has never been easier. Information technology is penetrating even rural areas and people are becoming technologically throughout. The future of operations in any business lies in the information technology. Communication has been facilitated on a real time basis and the future is all about the virtual world.

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