

AKSHAYA E-KENDRAS : BRIDGING THE DIGITAL DIVIDE

*Vijaya.S.Uthaman

Abstract

“The illiterate of the future are not those who cannot read or write, but those who cannot learn, unlearn and relearn” – Alvin Toffler (quoted by Terry Paulson 2006)

In recent years digital divide has attracted attentions of both academicians and policy makers for socio-economic developments. Concept of digital divide has many dimensions and there are many technical and non technical gaps to measure the digital divide. Thus in context of present paper digital divide essentially means computer and internet knowledge divide .In the context of present paper digital divide means ‘have’ and ‘have not’ in computer knowledge and internet knowledge among beneficiaries at Akshaya e-Kendra’s in Kerala. This paper specifically analyzes the depth of knowledge in computer and internet prevailing among beneficiaries at Akshaya e-kendras and to assess the importance of common service centers like Akshaya e-Kendra’s in the state.

Keywords: Digital Divide, Information Communication and Technology, Common Service centers (CSC) , Akshaya e-kendra’s.

Introduction

Information communication and technology (ICT) has become an essential aspect in almost all people all over the world. The rapid development and proliferation of ICTs has accelerated the economic and social changes (Nandi,2002).With advanced ICT, especially internet,the world has today become a global village(Acilar Ali et al.,2011).But with explosion of ICT in day to day life of common people ,the knowledge gap between information rich and information poor has caused a major threat in exclusion of certain classes of people which has lead to a phenomenon called digital divide. An unequal access to and utilization of ICT has accepted as one of the prevalent issues of our

* Research Scholar, University of Kerala

time(Sciadas,2005).Thus there exist a digital divide between those who are participating in information technology revolution and those who are not (United Nations,2006).

The Concept of Digital Divide

The concept ‘digital divide’ was first used in the United States in the 1990s to describe the perceived growing gap between those who have access to and the skills to use ICT and those who have limited or no access . It is referred to as the gap between the ‘haves’ and the ‘have-nots’ regarding access to, and use of ICT and the internet. As mentioned above, it is not just the availability of computers, the internet and telecommunication facilities, the digital divide also refers to the lack of ability to use these technologies.

Digital divide has been defined as gap between different individuals, households, business and geographical areas at different social-economic levels with regard to their opportunities to access IT and their use of the internet (OECD, 2001).As ICT become a strong component in day to day life to solve long standing economic and social problem, the people who don’t have access to IT skills and knowledge are becoming less and less capable of participating in the new information society. This has resulted in digital divide in our society.

Wilson (2004,p.300) defines the digital divides as “an inequality in access ,distribution and use of information and communication technologies between two or more populations”.It suggest eight aspects of digital divide like physical access, financial access, cognitive access, design access, content access ,production access, institutional access and political access.

According to Fuchs & Horak(2007) the digital divide refers to unequal pattern of material access to, usage capabilities of, and benefits from computer based information and communication technologies that are caused by certain stratification process that produce classes of winners and losers of the information society, and participation in institutions government ICTS and society.

Hanimann & Ruedin (2007) defined that digital divide essentially describes three distinctive divides: a geographical digital divide (between region and countries), a social digital divide (between social classes) and upgraded digital divide (between technology and human).Thus digital divide can be defined as economic, social or cultural deprivation generated by missing ICT access and skills. In the modern society economic opportunities like employability, role in all social relationship ranging from political participation to local communities friends and family all depend on knowledge in ICT.ICT access inequality is called as the first order digital divide and ICT use inequality is called as second order digital divide (Jin & Cheong,2008).Today there exist many types of digital divide at various level like local, state, national, regional and worldwide based on gender, age, income and

education wise (Boje & Dragulanescu, 2003). Digital divide is a dynamic process due to continuous development of information technologies and emergence of new technologies.

Digital Divide and India

The initiation of digital India programme in 2015, has made a intrude of digital technology in day to day life of common people in the country. Thus digital literacy in a developing country like India is very crucial. GoI has initiated many programmes like Kissan call centers, Bhoomi project in Karnataka, Gyaandhoot project in Madhaya Pradesh, TDIL Project, FRIENDS, e-krisi, to bridge digital divide (Ipsita Panda., et.al., 2013). Common service centers are one of the mission mode project under Digital India programme. CSC provides skill development, digital literacy, health and financial services to rural India. Currently there are 1.9 lakh operational CSCs all over India.

The important step in taking ICT to the mass has been rolled-out in Kerala by introducing call centres, FRIENDS, Akshaya centres etc, but the most important one is Akshaya Centres. AKSHAYA project was launched in 2002 at Malappuram as a pilot project for e-literacy. It was first of a type of instrument used to bridge the digital divide in the state. The Akshaya e-centre imparts basic training that not only familiarizes people with the basics and the scope of IT, but also ensures hands-on-skill in operating a computer and using the Internet.. In 2007 Akshaya moved in to phase- two of the project rendering new G2C and B2C services. Currently there are 2666+ Akshaya centers in the state. It is now providing more than 23 G2C services to citizen. The Government of India has sanctioned the request of Government of Kerala to integrate the Akshaya centres with the Common Service Centers scheme under the National e-Governance Programme (NeGP). Accordingly all Akshaya centres are now Akshaya Common Service Centres.

Need and Significance of the study

Kerala state has achieved 93.91 percentage of literacy rate (2011 Census) with highest Human Development Index (HDI) in country. Kerala government is taking many proactive steps like for making all government services online and reach common citizen in most effective and transparent ways. Thus it's necessary to analyze the existing digital divide in the state and to analyse the importance of Akshaya e-kendras in delivering these services to citizen.

Statement of the Problem

Since India is a country of 2.2 billion populations and where 70 % resides in villages, reaching them through ICT is a tedious job for government. There are many challenges like good infrastructure, interoperability, professional computing skill, which act as a barrier for the wholesome use of ICT for the benefit of citizen. Akshaya e-Kendra's are

ICT enabled access points for delivery of various Government & business services to citizens initiated to bridge digital divide. Thus there is a need to study the relevance of Akshaya e-Kendra's in bridging digital divide in this decade for common citizen of state.

Objective of the study

The study pertains to determine the aspects of digital divide among beneficiaries at Akshaya e-Kendra. Here digital literacy is assessed on the knowledge of beneficiaries in computer and Internet. Study specify on

1. To analyze relationship between computer knowledge and knowledge to access internet among beneficiaries and to determine major use of Internet among beneficiaries.
2. To determine the digital divide among beneficiaries with regard to age education and gender.

Methodology

The study is descriptive in nature. Primary data has been collected from 450 beneficiaries of Akshaya e-Kendra's in Kerala using an interview schedule. By stratified random sampling technique Kerala is divided into three zones viz., south, central and North. A sample of 150 each was selected from each zone in Kerala. For analysis SPSS software is used. Tools like Chi-Square test, T-Test for single mean, frequency, Independent t-test, One way ANOVA are used.

Analysis and Discussions

- 1.1 Here an analysis on relation between the knowledge in computer and internet is assessed. Table 1 gives result of chi-square analysis. Since p value is less than 0.001, H_0 is rejected at 1% level of significant. Hence H_1 is accepted and concluded that there is significant association between beneficiaries having computer knowledge and internet knowledge.

Table: 1.

Pearson Chi-Square between Knowledge in Computers and Internet

Knowledge in Computers	Knowledge to access Internet		Pearson Chi-Square
	Have	Have not	
Have	130(90.3%)	14(9.7%)	
Have not	27(8.80%)	279(91.2%)	<.001**

Source: Primary data

From table 1, based on row percentage 90.3 percentage of beneficiaries who have computer knowledge have knowledge to access Internet, 9.7 percentage of beneficiaries having computer knowledge have no knowledge to access internet. 8.8 percentage of beneficiaries who don't have computer knowledge have knowledge to access internet and 91.2 percentage of beneficiaries neither have computer knowledge nor internet knowledge. It can be inferred that 8.8 percentage of beneficiaries are using alternative tools like mobile phones, tablets etc to access internet.

1.2 To determine the penetration and major uses of internet among beneficiaries

The Table 2 shows that about 34.9 percentage of beneficiaries' uses internet whereas 65.1 percentage does not use internet. Thus there is a huge gap in usage of internet among beneficiaries

Table 2:

To understand penetration of Internet

Status of knowledge in Internet	Frequency	Percent(%)
Have	157	34.9
Have not	293	65.1

Source: Primary data

1.3. To determine major uses of internet among beneficiaries who uses Internet (from 34.9%).

From Table 3 it can be seen that among the users of internet the major purpose for using internet is for social media (54.8%), to get new knowledge (24.8%) and for entertainment (11.5%). The use of e-governance services and e-learning is negligible. Thus internet penetration for the purpose of e-governance is very low among beneficiaries'. Thus a major challenge exists, to make citizen more digitally literate about how to use internet for e-governance. For that purpose a large digital awareness programs must be initiated by government. More infrastructure must be provided for the availability of internet in cheap cost. More capacity building activities has to be done. Thus alternate ways must be adopted for digital empowerment of society.

1.4 To determine the digital divide among beneficiaries with regard to age, education and gender.

1.4.1 Table 4 gives the result of One way ANOVA table to determine significant

difference in digital divide among beneficiaries with regard to age. Since p value is less than 0.01 H_0 is rejected at 1 % level and its accepted that there is significant difference among group in knowledge in computer and Internet with regard to age. Based on Duncon multiple range(DMR),the age group of 15-25,26-35 and above 55 is significantly different from other age group. There is no significant difference of opinion among age group of 36-45 and 46-55 regarding knowledge in computer and internet. With mean score value it can be inferred that age group of 15-25 has highest knowledge in computer and internet and age

Table 3
Major use of Internet among beneficiaries

Purpose of using Internet	Frequency	Percent
Entertainment	18	11.5
E-Learning	6	3.8
E-Governance Services	8	5.1
To get new Knowledge	39	24.8
For Social Media	86	54.8

Source: Primary data

group between 46-55 and above 55 among beneficiaries has least digital literacy

Table 4:
One way ANOVA table to determine significant difference in digital divideamong beneficiaries with regard to age

Age group	Knowledge in accessing internet		F value	F value
	Mean	Std. Deviation		
15-25	1.5938(d)	.72853	36.906	<.001**
26-35	.9894(c)	.88591		
36-45	.6774 (b)	.87429		
46-55	.4742(b)	.76503		
Above 55	.2157(a)	.55629		

Source: Primary data

Table1.5
**One-Way ANOVA to determine significant difference
 in digital literacy among beneficiaries
 with regard to Education**

Education	Knowledge in computer and internet		F value	P value
	Mean	Std. Deviation		
No Education	.1014(a)	.38900	88.888	<.001**
Up to 10	.2623(a)	.58088		
Plus Two	1.1463(b)	.86241		
Degree/Diploma	1.4851(c)	.76960		
PG and Above	1.8000(d)	.56061		

Source: Primary data

Since p value is less than 0.01 H_0 is rejected at 1 % with regard to digital literacy among beneficiaries with regard to education. Hence there is significant difference in digital divide among beneficiaries with respect education level. Thus with mean score it can be inferred that education qualification of PG and above has high knowledge in computer and internet, education qualification of degree and Plus two has moderate knowledge in computer and internet and beneficiaries with no education and upto 10th education has considerably low knowledge in computer and internet.

1.4.3 Table 6 shows the details of Independent sample T-test to determine significant difference in digital literacy between male and female .

Table 1.6:
**Independent sample T-test to determine significant
 difference between male and female**

Digital Literacy	Gender				t-value	P value
	Male		Female			
	Mean	SD	Mean	SD		
	3.06	0.95	3.6	0.75		
				5.212	<0.001**	

Source: Primary data

Since P value is less than 0.01 null hypothesis is rejected at 1% level with regard to digital literacy between male and female and alternate hypothesis is accepted. Hence there is significant difference between male and female with regard to knowledge in computer and internet. Based on mean score the female beneficiaries (3.6) have higher knowledge in computer and internet than male beneficiaries (3.06).

Findings

This paper tries to determine digital divide among beneficiaries at Akshaya e-Kendras. According to Table 1 there is significant association between beneficiaries having computer knowledge and Internet knowledge. From Table 2 it can be seen that there is 34.9 percentage of penetration of Internet among citizen, which is in parity with reports of TRAI, 2015. Major purpose of usage of internet among beneficiaries were for social media and entertainment. Various aspects like age, education, gender were analyzed for existence of digital divide in Table 4, Table 5 and Table 6. It can be inferred that there is a huge gap among beneficiaries about the knowledge in computer and knowledge to access internet, which creates a digital divide among citizen. It can be found that age group of 46-55 and 55 and above has less knowledge in computers and internet. Similarly citizen with no education and upto 10th has negligible knowledge in computers and accessing internet. From this study it can be inferred that it is very essential in society for an alternate solution to bridge the digital divide. Thus, Akshaya e-kendras are truly essential for imparting IT Education, e-governance services, Other B2C services especially in rural areas, and providing information technology services with affordable costs to bridge the digital divide in the state.

Conclusion

The Government plays an important role in bridging the digital divide in Kerala. Thus Akshaya e-kendras have a major role in bridging the digital divide in the state and act as an alternative source for socio economic upliftment of society. Given the significant age, education and gender digital divide which Kerala faces; a proactive government policy is a must to make more investments in ICT access.

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