

DETERMINATION OF COLLEGE TEACHERS' PERCEPTIONS, APTITUDE AND ATTITUDES TOWARDS USE OF ICTS TOOLS AND COMPUTER ASSISTED TEACHING AT HIGHER EDUCATION [A Case Study of Selected Arts and Commerce Faculty Members in Anand District]

Dr. Uday Hariom Vyas¹

¹Department of Computer Science

Shri R.K.Parikh Arts and Science College, Petlad

ABSTRACT

The aim of this study is to analyze Arts, Science and Commerce teachers' approaches towards computer and ICTs abetted teaching. Since last two decades Computer and ICTs has changed the scenario of world. We can see its impact on everybody. It influence on our life and we cannot live without it. Computers, Laptops, Smart phones, Internet, ICT tools are now become a member of our family, all these are not luxury but essentials. So, researcher has tried to research on Determination of College Teachers' Perceptions, Aptitude and Attitudes towards Use of Icts Tools and Computer Assisted Teaching at Higher Education.

Key words: Teacher determination; Aptitude; ICT literacy; ICT tools; Internet literacy; Higher Education; Internet Apps.

I INTRODUCTION

During the last decade, the education sector has controlled economic planning. Even though many new national missions/programs and reforms agenda, by both the central and state governments with private sector intervention. While we have tremendously enhanced capacity, we lag in quality, given adequate autonomy to our Universities. Centralized control and a standardized approach remains at the heart of regulations. We are in the 21st century with a mid-20th century regulatory architecture. During this time we have seen countries like China, Korea and Singapore, transform from developing to advanced economies in a decade due to strategic planning and a larger vision that correlated economic development to transformation in the education sector, in particular higher education and research, to become globally competitive.

Over the last two decades, India has remarkably transformed its higher education landscape. It has created widespread access to low-cost high-quality university education for students of all levels. With well-planned expansion and a student-centric learning-driven model of education. A differentiated three-tiered university system – where each tier has a distinct strategic objective – has enabled universities to build on their strengths and cater across different categories of educational needs. Further, with the effective use of technology, India has been able to resolve the longstanding tension between excellence and equity.

II. METHOD

Educational institutions should train teachers who are technology-competent and who effectively use and integrate technology into their teaching activities. This study aims at drawing an understanding of how teacher in college perceive technology can help institutions of higher education to successfully integrate, in relation with the current ICT usage.

2.1. Objectives of Research Study.

- To know about which ICTs tools are most useful to benefit education.
- Teachers are knowing the usefulness, appropriateness and efficacy of ICTs.
- To know teachers are using internet and its Apps. in teaching.
- To know teachers are using open source and free software.

2.2. Sample

The accessible population in this study was self-finance and grant in Aid College teachers of Anand district -Gujrat State.

2.3. Data Collection:

Self-administered questionnaire was employed to gather data from randomly selected 185 teachers. The questionnaire consists of information on socio-demographic profile; ownership, knowledge and training in computer; purpose of use of computer, It tools, Internet etc. and teachers' perception of computer technology for classroom transaction, computer competency and actual use of computer for teaching.

3. Data Analysis and Interpretation.

The data were analyzed using frequency distribution; Statistical Package for Social Sciences (SPSS) was used to carry out the data analysis.

The structured non-disguised questionnaire used to collect the necessary primary data of 18 questions. These are followed by unstructured section that consists of respondents profile to collect the information of selected female respondents. Data Analysis is done in the Tabular & Graphical form.

3.1 Profile of Selected Teacher.

The structured non-disguised questionnaire used to collect the necessary primary data of 18 questions. These are followed by unstructured section that consists of respondents profile to collect the information of selected teacher respondents. Profile of respondents were collected through the questionnaire of personal detail i.e. Age, Designation, and Educational qualification, Gender, Teaching Stream, Teaching in Grant in Aid or Self Finance Colleges. In the following Table (3.1) reflects the total respondents among these respondent 21.63% respondents were from Arts, 24.32% respondents were from commerce and 54.05% respondents were from science stream.

Table Number: 3:1 “Profile of Selected Respondents”

Sr. No.	Gender	STREAM			Total
		Arts	Science	Commerce	
01	Male	20	68	37	125
02	Female	20	32	08	060
Total		40	100	45	185

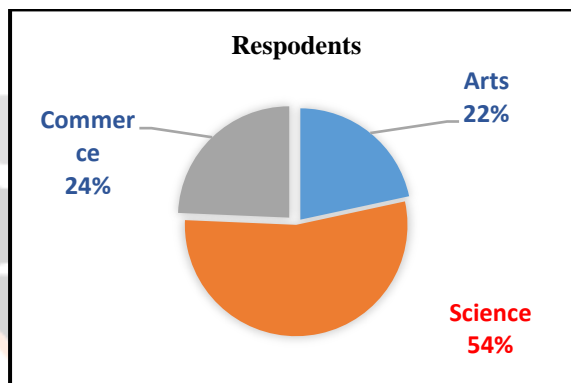


Chart – 3.1

3.2 Socio –Demographic Profile.

In the following Table (3.2) reflects the an analysis of the socio-demographic factors among these 32% were female teachers and 68% were from male, 74% teachers were teaching in grant in aid colleges and 26% were in self-finance colleges.

Table 3-2: Socio-Demographic Profile

Sr. No.	Variable	Category	Arts	Science	Commerce	Total
1	Gender	Male	20	68	37	125
		Female	20	32	08	60
2	Age	25-39	08	41	19	68
		40-49	26	46	10	82
		50-62	06	13	16	35
3	Type of Institute	Grant in Aid	36	68	33	137
		Self-Finance	04	32	12	48
4	Teaching in	U.G.	28	82	29	139
		P.G.	03	09	02	14
		U.G. & P.G.	09	09	24	42

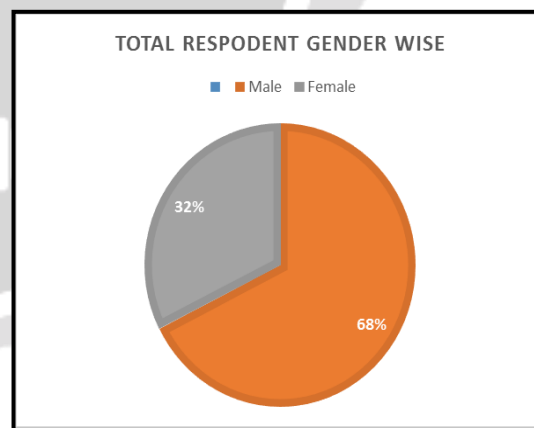


Chart – 3.2 Socio-Demographic Profile

Different age group of teachers was examining. Only 19% were above 50 years of age and 81% teachers were between 25-50 years.

3.3 Teachers Perception on Computer & Devices.

Table 3.3 reflects the information on teachers’ perception with respect to the transformative role of ICT in the teaching were collected. Question regarding use of computer in teaching, certificate in computer, use of various devices, multimedia projector.

Table 3-3: Teachers Perception on Computer & Devices

Sr. No.	Use of ICT in Teaching	Arts	Science	Comm.	TOT.	%
1	Certificate in Computer	26	45	25	096	51.89
2	Computer in Teaching	30	95	41	166	89.73
3	Computer Devices	40	97	36	173	93.51
4	Multimedia Project	14	66	30	110	59.46

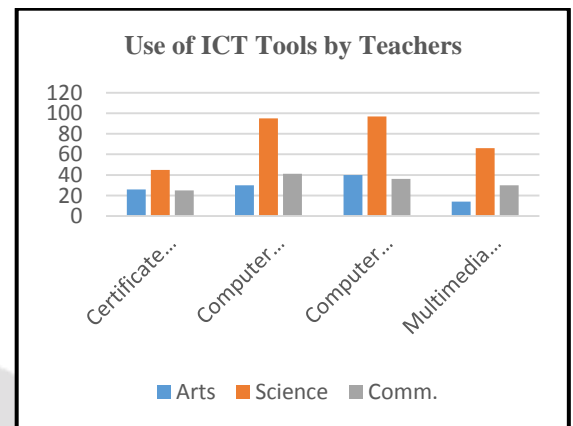


Chart – 3.3 Use of ICT tools by teachers

Majority of teachers were using computer in classroom teaching. In the above mentioned table (3.3) 93.51% of teachers were using various computer devices, among these only 51.89% teacher were having certificate in computer, so average more than 49% of the teachers were using computer without certificate in computer or any training.

3.4 Teachers Perception on Software.

Efficient use of computer is only possible when we are know how to use software. Researcher has included question regarding commonly used software like operating system, MS. Office, open source software, some other popular software and media player software.

Table 3-4: Teachers Perception on Software.

Sr. No.	Software Analysis	Arts	Science	Comm.	TOT.	Software %
1	Window as Operating System	38	99	45	182	98.38%
2	MS. Office	40	95	43	178	96.22%
3	Open Source Software	06	26	04	036	19.46%
4	Other Software	14	56	11	081	43.78%
5	Media Players	33	95	41	169	91.35%
6	Using Antivirus Software	37	81	39	157	84.86%

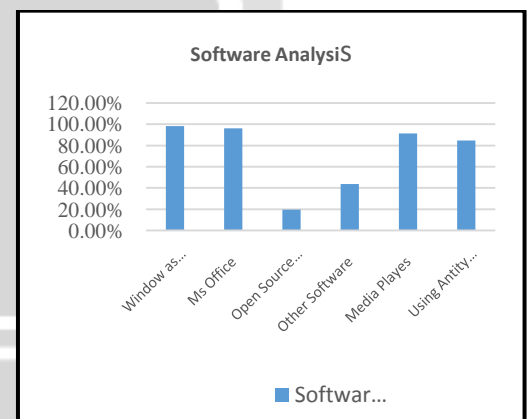


Chart – 3.4 Teacher perception on Software

Above mention table (3.4) reflects that 98.38% of teachers were using various version of windows operating system, various options were included like Windows, Linux. 96.22% of teachers were using MS Office, 91.35% teachers were using various media player software, 84.86% of teachers were using antivirus software, and 43.78% teachers are using other software like Photoshop, PageMaker, Flash, CorelDraw, etc.

Only 19.46% teachers using open source operating system and other open source software like Word press, Moodle. Open source software are not so much popular or user friendly.

The average use of Computer and devices in teaching is 80.91% and software is 72.34%. From the data we can assume that gender, age, and training don't effects on use of ICT in Higher Education.

3.5 Teacher's Perception on Internet.

3.5.1 Teaching.

Internet is widely available and people are using it for many purpose. I have included questions in questionnaire regarding use of internet by the teachers to know their perception regarding internet.

Table 3-5. Teachers Perception on internet

Sr. No.	Use of Internet in Teaching	Arts	Science	Comm.	TOT.	Yes %
1	Using Google Apps	33	94	45	172	92.97
2	Using Internet for Education	38	91	28	157	84.86
3	Downloading Educational Material	37	94	43	174	94.05
4	Using Educational Website	37	74	40	151	81.62

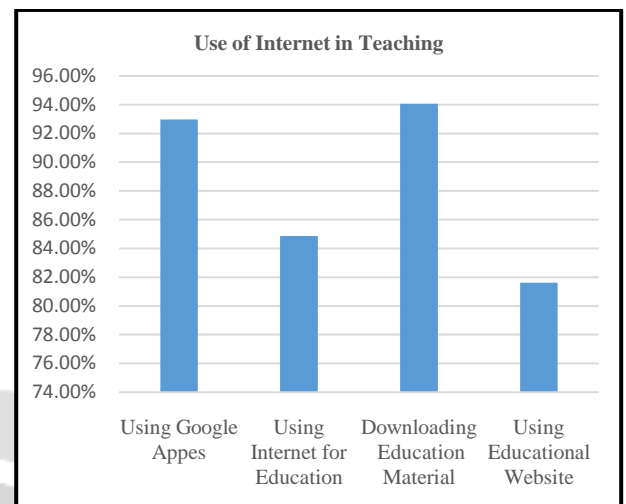


Chart – 3.5.1. teacher’s perception on internet

Above table (3.5.1) indicates 92.97% teachers were using various Google Apps like Translator, Drive, Map, Calendar, Form, Photo, Drop Box, etc.

84.86% teachers were using internet in education like International Journals, College and University websites, UGC research Guide lines, collecting information regarding national and international workshop, seminars, BISAG programs, etc.

94.05% teachers were using internet for downloading educational material. 81.62% teachers were surfing educational websites.

From above table (3.5.1.2) we can say that 88% of teachers were using Internet for various educational purposes

3.5.2 Supplementary use of Internet.

Teachers were using internet other than education. In questionnaire I have added some question to know, the supplementary use of internet by teachers. It divides in four parts.

Part one contains list of various Social Networking sites like Face book, Twitter, Google Plus, Hi5, etc. 78.38% teachers were member of Social Networking sites.

Part two contains list of various mobile communication groups like skype, Viber, WeChat, Hike, WhatsApp Messenger, etc. 74.59% teachers were member of various mobile communication groups.

Table 3-5.2.: Supplementary use of internet by teacher

Sr. No.	Supplementary use of Internet	Arts	Science	Comm.	TOT.	Yes %	No. %
1	Member of Social Website	30	80	35	145	78.38	21.62
2	Member of Group	31	69	38	138	74.59	25.41
3	Internet for Booking	19	62	27	108	58.38	41.62
4	Internet for Payment	20	63	25	108	58.38	41.62

Part three contains list of various on line booking facilities available on internet, like Railway ticket booking, Air ticket booking, Hotel room booking, etc. 58.38% teachers were using such facilities.

Part four contains list of various list purchase commodities. Researcher has tried to find out whether teacher is using online purchase and payment facilities of internet or not. Among respondents 58.38% teachers were using internet online purchase and payment facilities. From table 3-5.2 we can say that average 67.43% teachers were using internet for additional purpose.

3.6 Teacher’s Opinion for Internet.

3.6.1 Assertive Opinion.

As coin has two sides, same way internet has its own advantages and disadvantages.

Table 3-6.1: Teacher’s opinion about internet

Sr. No.	Opinion about Internet	Arts	Science	Comm.	TOT.	Assertive Opinion %
1	Save time	33	97	39	169	91.32%
2	Easy to use	36	95	41	172	92.70%
3	Ocean of Knowledge	37	96	41	174	93.89%

4	Help us to learn new things	36	90	41	167	90.00%
5	Increases our level of Confidence	36	90	41	167	90.00%
6	Increases our level of awareness	34	90	40	164	88.68%
7	Vital to our job	35	85	40	160	86.38%
8	Vital to our life	36	90	41	167	90.00%
9	Provide us valid information	36	86	34	156	84.43%
10	Provides us an Authentic Information	34	85	38	157	85.00%

Researcher has included some questions to know teacher’s opinion about internet like:

- Internet saves time.
- Internet is easy to use.
- Internet is an ocean of knowledge.
- Internet is help us to learn new things.
- Internet Increases our level of awareness.
- Internet Increases our level of confidence.
- Internet is Vital to our job.
- Internet is Vital to our life.
- It provides us valid information.
- Internet provides us Authentic Information.

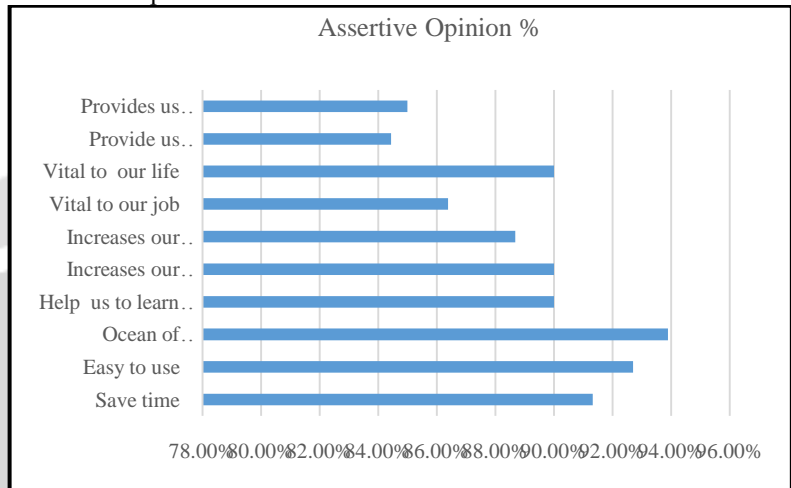


Chart – 3.6.1 Teacher’s opinion about internet

From the table 3.6 we can say average 89% teacher has considered internet as ocean of knowledge.

3.6.2 Problems of Internet.

I have included list of problems in questionnery that teachers were facing while using internet like:

- Problem of Privacy.
- Problem of virus from internet.
- Speed of internet.
- Poor quality of eService.
- Problem of Disconnection.
- Hacking of website and data.
- Updating of website.
- Advertisement disturbance etc

Table 3-6.2.: Teacher’s opinion about internet

Sr. No.	Teacher's opinion about internet problems	Arts	Science	Comm.	TOT.	Yes %
1	Privacy of Information	4	20	5	29	15 %
2	Virus	8	85	9	102	55 %
3	Speed of Internet	10	90	11	111	60 %
4	Poor Quality of eService	11	28	13	52	28 %
5	Disconnection	7	92	8	108	58 %
6	Hacking	31	10	35	76	41 %
7	Updating of Websites	33	78	37	148	80 %
8	Advertisement	34	82	38	154	83 %
9	Poor Quality of Web page	36	25	41	102	55 %

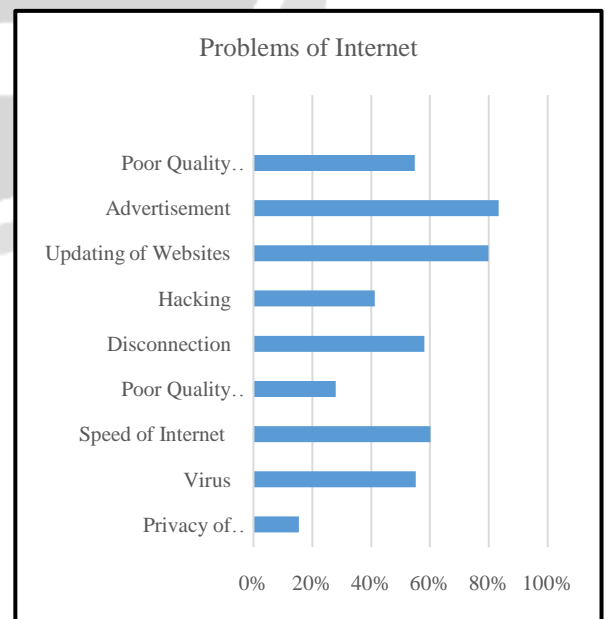


Chart – 3.6.2 Teacher’s opinion about internet

60% teachers were not satisfied with speed of internet. 58% teachers had complain of internet connectivity. 83% teachers were facing problem of advertisement while surfing on internet. 55% teachers were agree that quality of internet is poor. 52% teachers were agree with poor quality of eService. 55% teachers were agree that while working on internet they faced virus problems. 83% teachers were complained regarding disturbance of advertisement while surfing. 55% teachers were not satisfy with quality of WebPages. 80% teachers were agree that the websites were not regularly updated.

3.7 Teacher’s Website, Blog And Email.

As we know that internet is very appropriate medium for collecting educational information. Teacher can download the information from the internet in various formats and can also put study material online for the students, in form of Blog, Website, and email.

Many websites offer creating and hosting free website and blog. In a questationary I asked about teacher’s own website or blog result shown in table 3.7.

Table 3-7. : Teacher’s Blog & Website

Sr. No.	Blog & Website	Arts	Science	Comm.	TOT.	Yes
1	Own Blog	07	18	06	31	16.76
2	Own Website	01	04	04	09	04.86

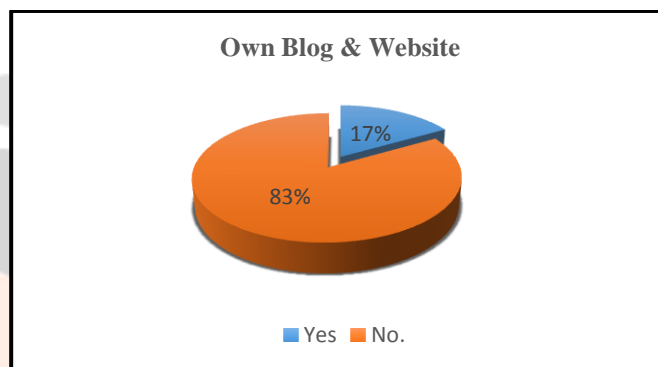


Chart – 3.7. Teacher’s Blog & Website

Table 3.7 shows that very few teachers were having their own website and blog. Only 4.86% teachers were having own websites. Only 16.76% teachers were heaving own blog. it is found that 97% teachers were having email account.

4 DISCUSSIONS AND CONCLUSION

This paper examines determination of College Teachers’ Perceptions, Aptitude and Attitudes towards Use of Icts Tools and Computer Assisted Teaching at Higher Education particularly in arts and commerce college’s teaches of Anand district. The teachers’ perceptions, competency and use of IT, ITS and internet by the arts and commerce teachers of grant in aid and self-finance colleges of Anand district - Gujarat State. Results of the present study suggest that majority of the teachers acknowledged the importance of using computers in teaching. The mean perception of the teachers regarding the use of computers for teaching-learning was found to be favorable. While some studies found no gender deference in attitude towards computers (Gressard and Loyd, 1986; Kellenberger and Hendricks, 2000; Bakr, 2011), other studies indicate that gender plays a role (Herman’s et. al., 2008). Findings of this study revealed that there is no significant difference in perception of computer in terms of gender. This indicates that both male and female teachers have the same perception, aptitude and attitude towards use of computers in education. Also in terms of use of computer for classroom teaching no significant difference between male and female teachers was observed which suggests that gender plays no role in use of computers for teaching.

In the literature, there are different studies on teachers’ attitudes and teachers’ age. While some studies found that there was no significant relationship between teacher’s age and attitudes (Massoud, 1991; Woodrow, 1992), other studies found that teachers’ age had critical effect on the teachers’ attitude (Blankenship, 1998; Cavas et al., 2009). In this study, no significant difference was found in the means of different age group regarding the perception of computers. This shows that teachers of all age groups perceived the importance of computers, ICT tools and internet equally.

The study reports that average 70% arts and commerce teachers used computers, ICT tools and internet more frequently. Teachers are using computer, ICT tools and internet facilities very proficiently.

Data shows that Microsoft software are more popular than open source or free software. Teachers are member of social groups, using internet in mobile, using internet for booking and purchasing, so teachers are using technology very efficiently.

Data shows that 90% teacher has given opinion that internet is very useful. On the other hand they complain on speed of internet, connectivity, hacking etc.

Data also show that only 6% of teachers are having own website and 16% teachers are having blogs so, for them it is difficult to put study material online for the students. By observing all table data we can say that commerce teaches are more comfortable with technology. Researcher has found that average 70% teachers are using computer and ICTs but still 30% teachers are not using computer and Internet.

It is found that only 21% teachers has received research project and 49% teacher has participated in ICT related workshop or conference. This show that teachers are less interested in research.

5.1 Limitations

The participants who took part in this study were teachers in urban and semi-urban colleges of Anand district and the outcome might be different if participants from rural colleges. Thus, this places a limitation on the generalization that could be made on the findings of this study. The sample study relies on the self-reported information of the respondents.

REFERENCES:

- [1] Active Internet Users, I Cube 2006, Syndicated Research of Technology Group@IMRB, March 2006
- [2] Active Internet Users, I Cube 2006, Syndicated Research of Technology Group@IMRB, March 2006
- [3] Indian Express (7-1-2001), Internet Users in India.
- [4] Engendering ICT: Ensuring Gender Equality In ICT for Development [World Bank 2003]
- [5] Using ICT to Develop Literacy and Numeracy: Research Summary [Institute of Education, University of London 2001]
- [6] Technology, Innovation, and Educational Change—A Global Perspective. A Report of the Second Information Technology in Education Study, Module 2 [Kozma 2003]
- [7] Gay, G. and Lentini, M.(1995). Use of communication resources in a networked collaborative design environment. Journal of computer-mediated communication, 1(1),<http://www.ascusc.org/jcm/voljcm/vol1/issue>.
- [8] Gay, G. and Lentini, M.(1995). Use of communication resources in a networked collaborative design environment. Journal of computer-mediated communication, 1(1), <http://www.ascusc.org/jcm/voljcm/vol1/issue>
- [9] .The Internet the Basics ,Jonsan whittaker (2002) Published by Routledge.
- [10] ICT in Education by Victoria L. Tinio (2006) United Nations Development Programme ureau for Development Policy.
- [11] Free Open Source Software - A General Introduction [Wong 2004] .
- [12] The Use of Information and Communications Technology (ICT) in Learning and Distance Education [Intelecon Research 2000]

WEBLIOGRAPHY:

- [1] The Use of Information and Communications Technology (ICT) in Learning and Distance Education [Intelecon Research 2000] <http://www.youtube.com/user/ICT6>.
- [2] [www. indax.com/internet.html](http://www.indax.com/internet.html).
- [3] www.findarticles.com.
- [4] www.gujaratindia.com/stateprofile.
- [5] <http://www.vibrantgujarat.com/district-profiles.htm>.
- [6] <http://www.sakshat.ac.in/>.
- [7] <http://www.ugc.ac.in/>.
- [8] www.internetworldstate.com.
- [9] www.juxtconsult.com.
- [10] www.marketingvox.com
- [11] www.rightserver.com