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Attitude Towards the use of Information and Communication Technologies (ICT): Learners Perspective in Rural Arts and Science Colleges

A. Mahendiran,
Assistant Professor,
Department of Management Studies,
Thanthai Hans Roever College,
Perambalur, Tamilnadu, India.

Dr. R. Priya,
Head,
Department of Management Studies,
Thanthai Hans Roever College,
Perambalur, Tamilnadu, India.

ABSTRACT

We are living in the fast changing world with the new discoveries and development of innovative ICT devices, softwares and resources. These innovations have a great impact in all walks of human life. In Educational sector, the developments of ICT really made a great positive impact in Teaching, Learning and Administration. The 21st Century students have got many ICT tools and resources for effective Learning, though technological advancements happening in rapid phase, still there is a question whether the access of these technologies is reaching to rural students in the same phase. The intention of this research is to understand the reach of ICT and awareness about the ICT tools, resources among the rural Arts and Science College students with special reference to Perambalur District, Tamilnadu. It was observed that, the majority of the students aware of Digital Technologies but they need proper hands on training about ICT tools and resources which could be used for their learning process.

Keywords: Web2.0, e-portfolio, e-resource, curriculum.

INTRODUCTION:

Information and Communication Technologies (ICT) which helps different stakeholders in the education sector to search, collect, accumulate process, manage and communicate the information in various formats for different purposes (David, 2001). Conventional method of learning has been changed by the use of ICT and created positive impact on the learning process (Watson, M. D. 2005). Innovations in any field would enable the stakeholders to perform well in the respective filed and even in the interdisciplinary area. All stake holders must possess adequate ICT skills to use ICT in better (Sunil Kumar Satpathy, 2011). Any countries economic and social development depends on the strength of the education system (Alam, 2016). Use of ICT in education sector has a proven record in the developed countries such as United States and United Kingdom but in the rural part of developing nations has not reached up to the expected level (Judi et al, 2011). It may be due financial and geographical aspects in rural area. Lack of proper hands on training about ICT is one of the main barriers to the use of ICT (Brodin, J. Et al,2003) (Hasselbring, T.S, 2000). Undoubtedly, the use ICT adds value to the process of learning.

REVIEW OF LITERATURE:

Jagjit Singh (2016) study reveals that the college students mostly using e-resources and ICT facilities available in the college campus. It is very clear that use of ICT gives lot of advantages for students in their learning process. There are different platforms available in internet as open source which enable the learners to exchange

of different types media such as facebook, twitter, youtube, slide share, scribd (Mason & Rennie, 2007). Robert Fox (2011) revealed that the curriculum must incorporate principle learning outcomes [PLOs] for every course that must kindle the students to initiate the learning assignments in the class and complete it in the home with the use of ICT tools and resources. Moreover Digital Port Folio is a kind of technology which offers many benefits and enables the students to understand the concepts easily and to complete their academic related activities (clazie, 2010) . Tan Eik Chor Christopher (2011) has suggested to encourage the students to build their own e-portfolios using Web 2.0 Tools. Technology awareness leads to enhancement of knowledge and skills of the learners (Bhuasiri et al, 2012). Zakaria, Watson & Edwards (2010) carried out a research on the use of Web 2.0 technology. Their findings were positive about the integration of Web 2.0 tools into learning. Natarajan N.O,(2018) conducted a survey about the usage of ICT for Govt Medical College students. He found that 51.50% of Medical Graduate students always using ICT based resources. Jagith Singh (2018) investigated the impact of ICT on college students for using e-resources and it reveals that they mostly use the ICT resources available in the college library. Digital Technologies gives students different types of skills that enable them to conceive, model and express themselves creatively. With Modern Technologies, it is very much easier to model any real world problems and to find solutions; Computational thinking describes the processes and approaches we draw on when thinking about how a computer can help us to solve problems and develop systems. We often draw on logical reasoning, algorithm, abstraction and patterns and generalisation. In fact high level digital literacy is required to thrive and work in the world through the effective integration of Information and Communication Technologies (ICT) across curriculum, students learn to collaborate, globally connect, construct, apply knowledge and seek timely feedback to reflect on learning.

Online Collaboration Tools: In internet one can find huge array of applications, services, products and tools for different purposes of education. Especially tools for teaching learning, parent teacher communication, lesson planning software, tutorial websites, revision blogs, SEN (Special educational Needs) Education Information, professional development qualifications and more. Some of them are: Kahoot, Buncee, Admithub, Remind, FlipGrid, InsertLearning, BookCreator, NewsEumed, AutoDraw and Sway. Web 2.0 tools enable students to publish their portfolio works in online (Tan Eik Chor Christoper, 2011). It allows users to do number of things: They can be used to store data, edit videos, edit photos, collaborate and much more. Some of them are: Animaker Edify, Digimix, ScratchWork, Diveo, Zanifesto, Anchor, Kapwing, Datawrapper and Loom.

SCOPE:

Perambalur District is one of the backward and rural districts in Tamilnadu, India. The main source of income for the people is agriculture. Majority of the students who are pursuing higher education are first generation graduates that too because of GOVT scholarships such as SC/ST scholarships, First Graduate Scholarships and Uzhavar Pathukkappu Scholarships. There are seven Arts and Science Colleges in the District which includes four private colleges. The scope of this research is limited to Arts and Science Colleges in the Perambalur District.

OBJECTIVES:

1. To understand the availability of ICT tools for students learning process.
2. To study the students attitude towards the use of ICT in learning.
3. To study and analyze the awareness of ICT tools, resources and services among the students of Arts and Science colleges

METHODOLOGY:

This research attempts to examine the student's attitude towards the use of ICT in learning in Arts and Science colleges. Questionnaire method was adopted for collecting the data from seven colleges. The questionnaires were distributed to 250 students of different Streams like Arts Degree Students and Science Degree Students. 206 questionnaires were received back out of 250 and the response rate is 82 percent. Collected data were tabulated and analysed using Excel software. The Results were represented as tables and figures.

DATA ANALYSIS:

Gender wise Distribution:

The samples were collected from seven colleges which includes five co-education and two women's colleges.

Table 1: Gender wise Distribution

Gender	Respondents	Respondents [%]
Male	60	29
Female	146	71
Total	**206**	**100**

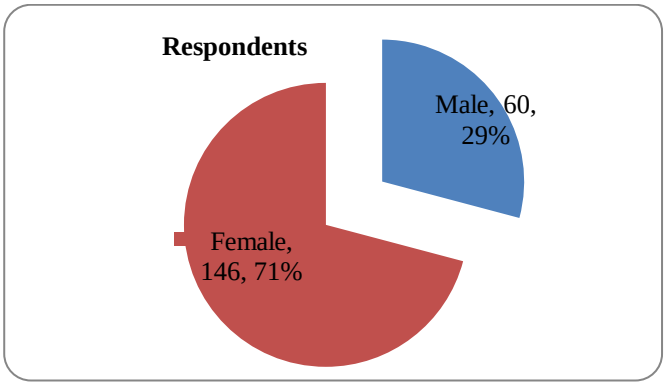


Table 1 shows the gender wise distribution of respondents. Out of 206 total respondents, 60 are males which is 29% and 146 are females which is 71%. The same is depicted in Fig-1. The higher percentages of female respondents might be because of two women's college among the total seven colleges. Questionnaires were collected from students belongs to different Degree Streams such as Arts Degree pursuing students and Science Degree pursuing students.

Table 2: Respondents Degree Stream

Stream	Respondents	Respondents [%]
Arts	75	36
Science	131	64
Total	**206**	**100**

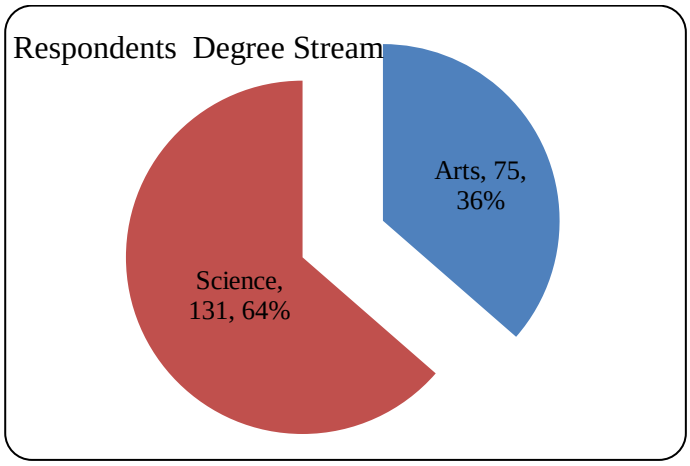


Table 2 shows 75 respondents belongs to arts degree [BA English, BLit Tamil, BCom, BBA] which is 36% and 131 students belongs to Science Degree [BSc Physics, BSc Chemistry, B.Sc Maths., etc] which is 64% of the total respondents. The same is represented in Fig-2.

Availability of ICT and other resources:

Respondents were inquired about the availability of ICT and other resource. Majority of them were like to use ICT for their learning process. Table 3 shows that 87% of respondents are like to use ICT for their learning, 86% of them have computer to use, 81% have smart phone, 83% have internet access, only 54% have tablet PC or notebook computer because most of them have smart phone or computer, Also 57% have Wi-Fi facility in the college for internet access and 58% have smart class room.

Table 3: Availability of ICT

Question	Total Respondents	Yes	%	No	%
Do you like to use ICT?	206	180	87	26	13
Do you have a computer to use?	206	178	86	28	14
Do you have a Smartphone?	203	165	81	38	19
Do you have a tablet PC/notebook computer?	206	111	54	95	46
Do you have Internet access?	206	172	83	34	17
Do you have Wi-Fi facility in your college for internet access?	206	118	57	88	43
Is smart class room available in your college?	206	120	58	86	42

Use of ICT Devices by Arts and Science Students:

Table 4 is the ANOVAs single factor analysis which shows that there was a statistically significant difference between Arts and Science groups as determined by one-way ANOVA ($F(1,8)=4.9115$, $p=0.05$).

Table 4: ANOVA: Single Factor

Anova: Single Factor						
SUMMARY						
Groups	**Count**	**Sum**	**Average**	**Variance**		
Arts Students	5	75	15	29.3125		
Science Students	5	131	26.2	98.3875		
ANOVA						
Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Between Groups	313.6	1	313.6	4.911511	0.057523	5.317655
Within Groups	510.8	8	63.85			
Total	**824.4**	**9**				

Use of ICT for Learning/ Fun:

We tried to find how many of them are using ICT for learning purpose such as Searching online for useful information related their studies, Searching online for information and learning about a particular subject topic, Learning with educational software and Sending or reading emails and also how many of them are using ICT for fun such as playing games, watching movies, chatting with friends or relatives etc.

Table 5: ICT for Learning

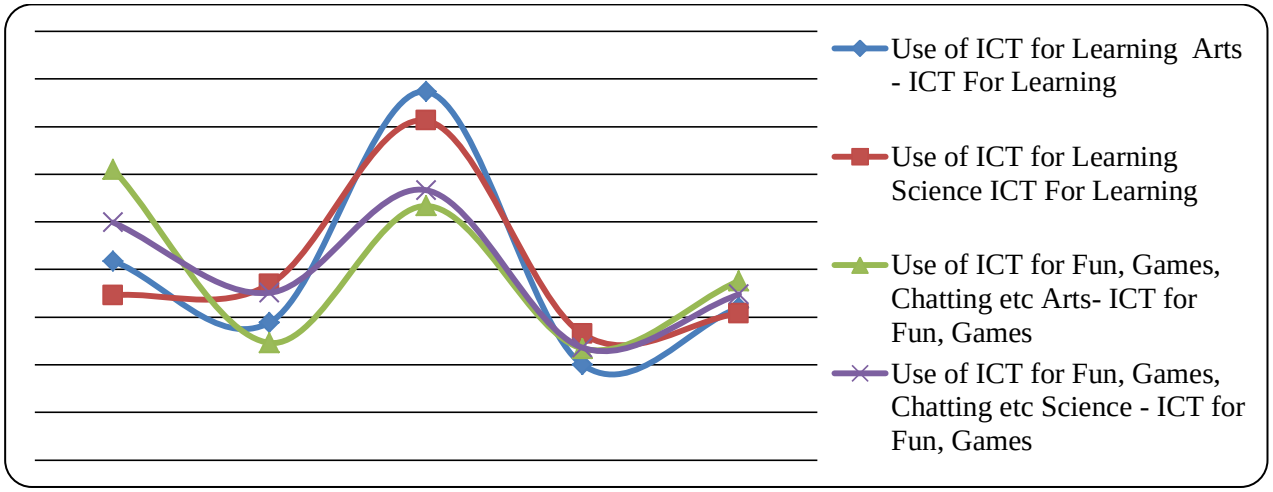
Frequency	Arts [%]	Science [%]
Never	21	17
Rarely	14	18
Sometimes	39	36
Often	10	13
All the time	16	15
Total	**100**	**100**

Table 5 shows that, the of use of ICT for learning with different frequencies are: All the time (Arts : 16%, Science 15%), Often (Arts 10%, Science 13%), Sometimes (Arts 39%, Science 36%) Rarely (Arts 14%, Science 18%) and Never (Arts 21%, Science 17%).

Table 6: Use of ICT for Fun

Frequency	Arts [%]	Science [%]
Never	31	25
Rarely	12	18
Sometimes	27	28
Often	12	12
All the time	19	17
Total	**100**	**100**

Fig: 3



Similarly Table 6 shows the use of ICT for fun with different frequencies are : : All the time (Arts : 19%, Science 17%), interestingly the same percentage of respondents are using the ICT for fun Often (Arts 12%, Science 12%), Sometimes (Arts 27%, Science 28%) Rarely (Arts 12%, Science 18%) and Never (Arts 31%, Science 25%). Fig-3 depicts both the Arts and Science students who use ICT for Learning and for Fun related activities.

Impact of ICT in Students Learning Process:

The important aspect of this research is how much percentage of the rural college students agree and strongly agree that the use of ICT have great impact of their learning process and it is shown in the table 7. 24% of respondents agree and 25% strongly agree; put together 49% of them believe and confident that the use of ICT helps improves their learning process, ICT accelerate learning (Agree – 32%, Strongly Agree -20%), Use of ICT improves my CGPA learning (Agree – 32%, Strongly Agree -20%), Teacher should use ICT during teaching (Agree – 25%, Strongly Agree -15%), Use of ICT for getting information is better than library (Agree – 36%, Strongly Agree -24%), I cannot study without the use of ICT tools (Agree – 20%, Strongly Agree -27%), I find it time consuming to use ICT in learning (Agree – 20%, Strongly Agree -17%).

Table 7: Impact of ICT

Question	Respondents	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Use of ICT have great impact on my learning process	206	17	14	20	24	25
ICT accelerate learning	206	11	17	20	32	20
Use of ICT improves my CGPA [Aggregate Mark]	206	11	17	20	32	20
Teacher should use ICT during teaching	206	12	15	33	25	15
Use of ICT for getting information is better than library	206	9	11	20	36	24
I cannot study without the use of ICT tools	206	15	15	23	20	27
I find it time consuming to use ICT in learning	206	17	17	28	20	17

Impacts of ICT by Gender wise:

Another result obtained from this research was 42% male respondents had given that use of ICT accelerate, improves and have great impacts on my learning process but female percentage is 50% which is 8% greater than the male respondents and the same has been represented in table 8.

Table 8: Impacts of ICT by Gender wise

Gender	Respondents	Other Options [1-4]	Strongly Agree	Strongly Agree (%)
Male	60	35	25	42
Female	146	73	73	50
Total	**206**	**108**	**98**	**48**

CONCLUSION:

ICT is often perceived as a catalyst for change, change in teaching styles, change in learning approaches and in access to information (Watson, 2005). The findings of this research indicate that most of the students are more interested to use ICT devices and resources for their learning processes such as searching useful information for the reference of subject topics, to complete assignments, to send and receive emails, downloading of eBooks etc. 53% of students believe that the use of ICT have a great impact on their learning processes. At the same time, majority of them are not well versed in creating blogs, websites and apps etc. This may be due to lack of proper hands on training in technical aspects of ICT devices and resources to the students.

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