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RESEARCH ARTICLE

ASSESSING THE ICT SKILLS AMONG COLLEGE STUDENTS WITH DEMOGRAPHIC VARIABLES

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ABSTRACT

This study examined the association of ICT skills among college students. The sample was 888 college students selected from Chennai district, Tamil Nadu, India. Stratified random sampling method was adapted to select the sample for the present study. Scale for assessing ICT skills (SAIS) was constructed and validated by the investigator with Dr.P.C.Nagasubramani. Data collected were analyzed using t- exist between ICT skills and demographic variables such as gender, Residence, locality of home, subject group, type of family, internet users and nature of Institution.

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INTRODUCTION

ICT SKILLS: Information and communication technology or ICT can be defined as a "diverse set of technology tools and resources used to communicate, and to create, disseminate, store and manage information". ICT is used to enhance teaching and learning process. It enables self-paced learning with the help of internet and social media. ICT has become an integral part of the daily life of the students. ICT literacy has become a trend to such an extent that it fulfills the functional requirement of people's and personal lives. Information and communications Technology (ICT) is an extended term for information technology which stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computer and network hardware, software, satellite systems, storage, audio-visual systems, which enable users to access, store transmit and manipulate information. Various services and applications are associated with them, such as video conferencing and distance learning, the role of ICTs is varied as in the filed of education, healthcare, business and libraries. ICT includes a range of hardware and software devices and programs such as assistive technology, scanners, digital cameras, personal computers, smart phones and watches, multimedia programs, image editing software and databases. It is also makes use of communications equipment like internet, email and video conferencing through which people can access and gain information.

ICT gains value in teaching and learning by enhancing the effectiveness of learning. Learners in modern society need to develop sufficient potentials and skills that enable the to take full advantage of the opportunities that ICT can offer ICT plays a significant motivational not only in students learning and collaborative learning methods but also enables students with special needs or difficulties to learn easily. ICTs stand for information and communication technologies and are defined, for the purposes of this primer, as a "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information." These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephony. In recent years there has been a groundswell of interest in how computers and the Internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in both formal and non-formal settings. But ICTs are more than just these technologies; older technologies such as the telephone, radio and television, although now given less attention, have a longer and richer history as instructional tools. For instance, radio and television have for over forty years been used for open and distance learning, although print remains the cheapest ,most accessible and therefore most dominant delivery mechanism in both developed and developing countries. The use of computers and the Internet is still in its infancy in developing countries, if these are used at all, due to limited infrastructure and the attendant high costs of access.

ICT Skills and integration: ICT Skills and Integration ICT has become an important component of education of many nations. In some schools ICT is taught as a subject and for the majority ICT is a teaching tool. ICT enhances teaching and learning process by increasing students' motivation. The use of ICT in classroom helps in the explanation of difficult concepts so students' are able to easily understand those concepts. The integration of ICT in education can takes several forms such as information and computer networks, digital content, internet sites, multimedia and others. ICT integration can be defined as ICT use in classroom teaching. ICT integration in technical and vocational classrooms would involve using instructional software during the course, making presentations, carrying out the tasks in laboratories or workshops or application services. To many of us, ICT integration in classroom is using ICT to deliver knowledge to students, that means many of us probably do not have a clear understanding about ICT integration in classroom. Many studies have confirmed the importance of ICT integration in teaching and learning processes in technical and vocational schools. For instance, Crittenden (2009) asserted that the ICT use among technical educators is to transmit, store, create, share or exchange information by various technologies such as radio, television, video, DVD, telephone, satellite systems, computers and the Internet. ICT tools used in the classrooms of technical and vocational schools and in teaching engineering subjects include computer-aided drawing and design (CAD), 2D/3Dmodeling, simulation products, diagrams, hyperlinked text, video, picture and interactive examples. Similarly, these studies have pointed out that using ICT in the classroom would motivate students studying engineering and sciences. Previous literatures on teachers' skills and ICT integration in the classroom have shown that there are significant positive relationships between teachers' ICT skills and frequency of ICT use. ICT skills are especially important for effective usage of ICT and are the strongest predictor of technology integration in the classroom.

Integrating Technology in Classroom

- If used correctly, will help prepare students for their future careers, which will inevitably include the use of wireless technology.
- Integrating technology into the classroom is definitely a great way to reach diversity in learning styles.
- It gives students the chance to interact with their classmates more by encouraging collaboration.
- Technology helps the teachers prepare students for the real world environment. As our nation becomes increasingly more technology - dependent, it becomes even more necessary that to be successful citizens, students must learn to be tech-savvy.
- Integrating technology in education everyday helps students stay engaged. Today's students love technology so they are sure to be interested in learning if they can use the tools they love.
- With technology, the classroom is a happier place. Students are excited about being able to use technology and therefore are more apt to learn.
- When mobile technology is readily available in the classroom, students are able to access the most up-to-date information quicker and easier than ever before.
- The traditional passive learning mold is broken. With technology in the classroom the teacher becomes the encourager, adviser, and coach.
- Students become more responsible. Technology helps students take more control over their own learning. They learn how to make their own decisions and actually think for themselves.
- Student can have access to digital textbooks that are constantly updated and often more vivid, helpful, creative, and a lot cheaper than those old heavy books.
- personal and social responsibility
- planning, critical thinking, reasoning, and creativity
- strong communication skills, both for interpersonal and presentation needs
- cross-cultural understanding
- visualizing and decision making
- knowing how and when to use technology and choosing the most appropriate tool for the task
- Technology in the Classroom Makes Learning More Fun
- Technology Prepares Students for the Future
- Improved Retention Rate
- Technology Helps Students Learn at Their Own Pace
- Technology Connects with Students

Need for Educational Technology

The pace of change has brought about by new technologies has a significant effect on the way people live, work, and play worldwide. New and emerging technologies challenge the traditional process of teaching and learning, and the way education is managed. Information technology, while an important area of study in its own right, is having a major impact across all curriculum areas. Easy worldwide communication provides instant access to a vast array of data, challenging assimilation and assessment skills. Education is a lifelong process therefore anytime anywhere access to it is the need

- Information explosion is an ever increasing phenomena therefore there is need to get access to this information
- Education should meet the needs of variety of learners and therefore IT is important in meeting this need
- It is a requirement of the society that the individuals should possess technological literacy
- We need to increase access and bring down the cost of education to meet the challenges of illiteracy and poverty through Information technology
- Access to variety of learning resources
- Immediacy to information
- Any time learning
- Collaborative learning
- Multimedia approach to education
- Distance learning
- Online library
- Authentic and up to date information
- Better accesses to children with disabilities

MATERIALS AND METHODS

Procedure: This study implemented survey method the self reported questionnaires were used to collected the data for two variables of the study along with the personal data sheet. The selected college students of (N=900) were given the standardized questionnaire under personal supervision. In spite of supervision it was found that some questionnaires were

partially responded and hence only 888 were considered for the analysis.

Sample: Random sampling technique was used to the sample, the sample was collected from about 888 college students studying in the colleges in Chennai district, Tamil Nadu, India. There are about 1464 colleges which include Arts and Science colleges, Physical education colleges, Oriental colleges, Schools of Social work, and Colleges of Education are functioning under the administrative control of the Directorate of Collegiate Education. The number of college students studying in Government, Government aided and Self-Finance College, arts and science colleges in Chennai District is approximately about 86,500 . By using the Stratified Random Sampling Technique, I have only about selected only 888 Students from about10 Colleges from Chennai, Tamil Nadu.

Tools description: Scale for assessing ICT skills(SAIS) was constructed and validated by the Investigator with Dr. P.C. Nagasubramani. The investigator felt that very small tool as only available to study the Scale for assessing ICT skills. To conduct intensive study, since the investigator decided to construct and standardize scale, tome a sure the Attitude towards using Social media of the college students. Likert type scale is a three point scale of "very much", "to most extent" and "some extent". This scale contains 80 items which have been collected from various sources like experts in school administration, principals, of schools and colleges, Books, Journals and web sources.

Objective

To find out whether there is any significant difference between the ICT skills of college students based on the background variables; namely

- Gender
- Residence
- Locality of home
- Subject group
- Type of family
- Internet Users
- Nature of Institution

Hypothesis

There is no significant difference between the ICT skills of college students based on the background variables; namely

- Gender
- Residence
- Locality of home
- Subject group
- Type of family
- Internet Users
- Nature of Institution

RESULTS AND DISCUSSION

Hypothesis

"There is no significant difference in the ICT skills between the male and female college students".

Table 1. T – test values for the ICT skills scores of the male and female college students

Sub- Samples	N	Mean	SD	't' Value	Level of significance	S / NS
Male	452	112.65	10.67	0.41	0.05	NS
Female	436	112.21	10.53			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.28. The 't' value is found to be 0.41 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in terms of their ICT skills.

Hypothesis (7-b)

"There is no significant difference in the ICT skills between the hosteller and day scholar college students".

Table 2. t – Test values for the ICT skills scores of the hosteller and day scholar college students

Sub-Samples	N	Mean	SD	't' Value	Level of significance	S / NS
Hosteller	399	114.89	9.96	0.42	0.05	NS
Day scholar	489	114.36	10.02			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.29. The 't' value is found to be 0.42 which is lesser than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the hosteller and day scholar college students in terms of their ICT skills.

Hypothesis (7-c)

"There is no significant difference in the ICT skills between the rural and urban area college students".

Table 3. t – test values for the ICT skills scores of the rural and urban area college students

Sub-Samples	**N**	**Mean**	**SD**	**'t' Value**	**Level of significance**	**S / NS**
Rural	426	111.42	10.26	1.04	0.05	NS
Urban	462	112.21	10.68			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.30. The 't' value is found to be 1.04 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their ICT skills.

Hypothesis (7-d)

"There is no significant difference in the ICT skills between the arts and science group students".

Table 4.31 t – Test values for the ict skills scores of the arts and science group students

Sub-Samples	N	Mean	SD	't' Value	Level of significance	S / NS
Arts	395	112.43	10.21	3.73	0.05	S
Science	493	115.64	10.92			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.31. The 't' value is found to be 3.73 which is lesser than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in terms of their ICT skills. Moreover, the science group students (Mean = 115.64) are found to be better than their arts group counter parts (Mean = 112.43) in their ICT skills.

Hypothesis (7-e)

"There is no significant difference in the ICT skills between the college students who belong to joint and nuclear family".

Table 4.32. t – Test values for the ict skills scores of the joint and nuclear family college students

Sub-Samples	N	Mean	SD	't' Value	Level of significance	S / NS
Joint	222	114.82	10.24	0.95	0.05	NS
Nuclear	666	115.12	10.67			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.32. The 't' value is found to be 0.95 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the college students who belong to joint and nuclear family in terms of their ICT skills.

Hypothesis (7-f)

"There is no significant difference in the ICT skills between the college students who belong to internet users and non users".

Table 4.33. t – Test values for the ict skills of the college students who belong to internet users and non users

Sub-Samples	N	Mean	SD	't' Value	Level of significance	S / NS
Users	652	116.75	11.52	4.07	0.05	S
Non Users	236	112.89	10.86			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.33. The 't' value is found to be 4.07 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their ICT skills. Moreover, the internet users (Mean = 116.75) are found to be better than their non users counter parts (Mean = 112.89) in their ICT skills. Hence Students who are using computers most often will have high ICT skills.

Hypothesis (7-g)

"There is no significant difference in the ICT skills between the college students studying in different type of management,

a. Government and Aided
b. Government and Self-finance
c. Aided and Self-finance

Table 4.34. t – Test values for the ict skills scores of the college students in different type of institution

Sub- samples	N	Mean	SD	't' Value	Level of Significance	S / NS
Government	136	113.24	10.43	0.25	0.05	NS
Aided	290	113.46	10.56			
Government	136	113.24	10.43	0.65	0.05	NS
Self finance	462	113.87	10.82			
Aided	290	113.46	10.56	0.37	0.05	NS
Self finance	462	113.87	10.82			

S - Significant
NS - Not Significant

The details of the calculations are given in Table 4.27. In respect of Government and Aided college students ('t' value = 0.25), in respect of Government and Self-finance college students ('t' value = 0.65) and in respect of Aided and Self finance college students ('t' value = 0.37) the 't' values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in terms of their ICT skills.

DISCUSSION

The present study observed no significant difference between, gender, locality, residence, type of family and type of college (govt, govt aided &Self-finance college) with respect to ICT skills among the college students, Sasikala. A (2011) also reported no significant difference between gender and type of family with regard to ICT skills in their study. The present study observed no significant difference between, gender, locality, residence, type of family and type of college (govt, govt aided &Self-finance college) with respect to ICT skills among the college students, Sasikala. A (2011) also reported, that there is no significant difference between gender and type of family with regard to ICT skills in their study.

Conclusion

The following are the implications the present exploration based on the present findings of the study. The findings of the present study revealed that most of the students belonging to Arts and Science College The professors should take an initiative to motivate the college students to acquire ICT skills and positive attitude towards using social media. To increase e-resource learning, a liberal and democratic access should be given to the college students , the teacher should have good values, morals and ethics towards her profession, so that their knowledge, wisdom and positive inclination towards learning can be transferred to successive generation. The present generation is knowledgeable, accessible towards e-resource social media and ICT and it provided with facility and qualitative education, they can unravel and create new things, as well as stand high globally The government as well as the society has to contribute towards the establishment of good

infrastructure with regard to e-resources, social media and ICT skills and their accessibility to the college students has to be provided with new and effective methods of teaching and learning process in e- resources knowledge and ICT skills. Efficient and highly qualified teachers should be appointed in college to train the students in this aspects also. The students should be motivated to inculcate positive attitude towards e – resource knowledge, ICT skills, social media and implement it most effectively for collaborative learning.

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