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## A STUDY ON ICT AWARENESS OF UNDERGRADUATE STUDENTS

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### Abstract

The aim of this study was to determine the level of ICT awareness among undergraduate students in relation to gender, locale, community, and type of management. The survey method was used to conduct the research. The students pursuing undergraduate course in colleges which are located in Guntur district of Andhra Pradesh constitute the population for the present study. The researcher has selected a sample of 600 undergraduate students from the population by using cluster sampling technique. To assess the level of ICT awareness of undergraduate students, the researcher has prepared and standardized an ICT Awareness Scale. The statistical techniques like mean, standard deviation, 't'-test, and ANOVA were used for the analysis of data. The major findings of the study were: 1. Undergraduate students differed significantly in their ICT awareness and majority of them hold moderate level of ICT awareness. 2. There is a significant difference in the ICT awareness of men and women undergraduate students. Women undergraduate students are significantly superior to their men counterparts with respect to ICT awareness. 3. There was no significant difference in the ICT awareness of urban and rural undergraduate students. 4. There is a significant difference in ICT awareness among undergraduate students with respect to community. O.C undergraduate students hold significantly higher level of ICT awareness when compared to B.C and S.C / S.T students. 5. Government undergraduate students were found to have significantly higher ICT awareness compared to their non-government counterparts.

**Keywords:** Study, Undergraduate Students, ICT Awareness.

### Introduction

Science and technology have been vital to the development of human societies throughout history. In modern times, information and communication technology (ICT) has revolutionized the way people access information and educational facilities. It has also helped to bridge the gap between learners in remote and inaccessible areas and provided personalized instruction according to their needs and pace of learning.

As educators, it is important to recognize the role of modern technologies such as the internet, teleconferencing, videoconferencing, interactive video, edusat, e-learning, multimedia, online teaching, and web-based technologies in classroom instruction. The National Curriculum Framework (N.C.F.) of 2005 acknowledges the significance of ICT in education and highlights its potential to connect students and teachers with scientists working in universities and research institutions. This not only demystifies the work of scientists but also increases interest in scientific fields.

ICT in education involves using technologies to collect, store, edit, retrieve, and transfer information in various forms. It is a vital foundation for the development of a country, influencing the physical, mental, emotional, social, and ethical development of individuals. The use of ICT in education promotes the holistic development of students and enables them to make original contributions to human life.

### Background of the Study

The area of ICT awareness among undergraduate students has been widely researched, with varying results. Some studies have found no significant difference in ICT awareness among undergraduate students based on various demographic factors, while others have reported significant differences. However, there has been a lack of research specifically focused on ICT awareness among undergraduate students in Guntur district, Andhra Pradesh. Therefore, the present study aims to investigate the level of ICT awareness among undergraduate students in Guntur district and explore the differences in ICT awareness among students based on gender, locality, community, and type of management. By addressing these research questions, the study aims to contribute to the understanding of the factors influencing undergraduate students' ICT awareness in Guntur district.



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### Statement of the Problem

The present research is intended to study and compare the ICT Awareness of undergraduate students in relation to the variables namely, gender, locality, community and type of management. The present study is entitled as follows:

**"A Study on ICT Awareness of undergraduate Students."**

### Need and significance of the study

The integration of ICT is critical in achieving effective education goals, particularly in India where it is necessary to introduce it in the undergraduate level. It is essential for undergraduate students to be aware of the vital role of ICT in using educational technology efficiently and effectively in classroom instruction and learning. By introducing ICT, we can address education and training problems in a disciplined and systematic approach, facilitating educational innovation through new systems, materials, instruments, and procedures. Research results reveal that when undergraduate students effectively use ICT in their learning, their science achievement levels progressively increase. Promoting ICT awareness and proficiency can make education more productive, individualized, and scientific, extending educational services to remote areas and overcoming cultural handicaps. Integrating ICT in the classroom can facilitate learning, making it more powerful and lasting.

### Scope of the Study

The present study was confined to the Guntur district of Andhra Pradesh. The study included 600 undergraduate students. The study is confined to the measurement of one dependent variable, namely, ICT Awareness.

The study is restricted to four independent variables, namely, gender, locality, community and type of management.

### Operational Definitions of Key Terms

#### Study

It refers to a process for gaining knowledge of the subject.

#### ICT Awareness

ICT awareness refers to the level of knowledge, skills, and understanding individuals have regarding the use of Information and Communication Technology (ICT).

#### Urban undergraduate Students

Students coming from urban areas and pursuing undergraduate course are considered as urban undergraduate students in the present study.

#### Rural undergraduate Students

Students coming from rural areas and pursuing undergraduate course are considered as rural undergraduate students in the present study.

#### Government college UG students

A college that is funded and run by the government is called as Government College in the present study.

**Undergraduate students studying** in Government colleges are considered as Government college UG students.

#### Private college UG students

A college that is funded and run by private organizations or individuals in the name of a society is called as private college in the present study.

**Undergraduate students** studying in private colleges are considered as Private college UG students.

### Variables of the Study

The variables chosen for the present study are Gender, Locality, community and type of management.



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### Objectives of the study

1. To find out the level of ICT awareness among Undergraduate students.
2. To analyze the awareness of ICT among Undergraduate students with respect to Gender, Locality, community, Type of Management.

### Hypotheses of the study

- Ho1:** There is no significant difference in ICT Awareness among Undergraduate students
- Ho2:** There is no significant difference in ICT Awareness among Undergraduate students with respect to gender.
- Ho3:** There is no significant difference in ICT Awareness among Undergraduate students with respect to locality.
- Ho4:** There is no significant difference in ICT Awareness among Undergraduate students with respect to community.
- Ho5:** There is no significant difference in ICT Awareness among Undergraduate students with respect to type of management.

### Methodology

#### Research Method adopted

To achieve the objectives of the study, the descriptive survey method was deemed appropriate. This method allowed for the collection of data that could be used to analyze and compare the ICT Awareness of undergraduate students with respect to the selected variables.

#### Population of the Study

The study was concerned with the undergraduate students of Guntur district in Andhra Pradesh. Hence all the undergraduate students studying in Guntur district of Andhra Pradesh in India constitute the population for the present study.

#### Sample and Sampling Technique

In the present study, the researcher selected a sample of 600 undergraduate students by using Cluster sampling technique.

#### Tool used for the Study

The study utilized the researcher-prepared and standardized ICT Awareness scale, which includes 40 objective type questions to evaluate the level of ICT Awareness among undergraduate students.

#### Data Collection

The required data was collected by administering the tool on the selected representative sample.

#### Statistical techniques used

Arithmetic mean, Standard deviation and t-test and ANOVA were used for the analysis of data to derive the conclusions.

#### Analysis of data

##### Testing of Hypothesis 1

**Table 1: Level of ICT Awareness among Undergraduate students**

Level of ICT Awareness	Frequency	Percentage
LOW	215	35.8
MODERATE	273	45.5
HIGH	112	18.7
TOTAL	600	100

Table 1 provides an overview of the levels of ICT awareness among undergraduate students. The data shows that 35.8% of the students have a low level of ICT awareness, 45.5% have a moderate level of ICT awareness, and 18.7% have a high level of ICT awareness. From this information, it can be concluded that the majority of the undergraduate students have a moderate level of ICT awareness.

Hence the hypothesis 1 was rejected and concludes that undergraduate students differ significantly in their ICT Awareness.



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### Testing of Hypotheses 2,3, and 5

**Table 2: Comparison of ICT Awareness of undergraduate students - Variable wise**

To test the validity of the hypotheses Ho2, Ho3 and Ho5, means and standard deviations (S.D's) were calculated separately for the sub samples of each variable and then t-value was calculated in each case. The results are presented in Table-2. The level of significance chosen for the testing of null hypothesis is 0.05.

Variable	Sub-group	N	Mean	S. D	t-value	Significance (0.05) level
Gender	Men	175	16.96	7.272	2.123	significant
	Women	425	18.25	6.543		
Location	Rural	426	17.80	6.551	0.398	Not significant
	Urban	174	18.05	7.338		
Type of management	GOVT	240	19.90	7.206	6.157	Significant
	PRIVATE	360	16.52	6.134		

As per the results of the Table 2, it can be inferred that the calculated t-value is not significant at 0.05 level in the case of Locality. Hence the hypothesis Ho3 was accepted and concluded that there is no significant difference in the ICT Awareness of undergraduate students with reference to Locality.

As per the results of the Table 2, it is evident that the calculated t-value is significant at 0.05 level in the case of gender, field of study and type of management. Hence the hypotheses Ho2 and Ho5 were rejected and concluded that there is a significant difference in the ICT Awareness of undergraduate students with reference to the variables gender, type of management.

### Testing of Hypothesis 4

**Table 3: ICT Awareness among Undergraduate students with respect to community**

ICT AWARENESS			
Tukey B <sup>a,b</sup>			
COMMUNITY	N	Subset for alpha = 0.05	
		1	2
SC/ST	223	16.86	
BC	250	17.98	17.98
OC	127		19.45

ANOVA					
ICT AWARENESS					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	548.648	2	274.324	6.063	0.002
Within Groups	27011.725	597	45.246		
Total	27560.373	599			

significant at 0.05 level

Table 3 shows that there is a significant difference in ICT awareness among undergraduate students based on their community (F-ratio=6.063, p=0.002 < 0.05). Therefore, the null hypothesis Ho4 is rejected, indicating that community has a significant impact on ICT awareness among undergraduate students.



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### Finding of the study

The following are the findings drawn from the present study on the attitude towards ICT of undergraduate students.

1. Undergraduate students differ significantly in their ICT Awareness.
2. Men and women undergraduate students differ significantly in their ICT Awareness.
3. Rural and urban undergraduate students do not differ significantly in their attitude towards ICT.
4. There is a significant difference in ICT awareness among undergraduate students based on their community.
5. There is a significant difference in the ICT Awareness of private and government college undergraduate students. Government college undergraduate students are significantly superior to their Non-Government counterparts in the ICT Awareness.

### Educational Implications of the Study

The findings of the present study on ICT Awareness among undergraduate students hold significant educational implications for various stakeholders such as educational policy makers, institution authorities, teachers, and parents. It is crucial for these stakeholders to take appropriate measures to improve the ICT awareness of undergraduate students, considering the variables of gender, locality, community, and type of management. By improving ICT awareness, students can effectively use educational technology in classroom instruction and learning, which can lead to enhanced academic achievement and overall development. Additionally, stakeholders should ensure equitable access to ICT resources to overcome the digital divide and ensure that all students have the opportunity to benefit from modern technologies.

### Suggestions for Further Research

Future research on ICT awareness among undergraduate students may involve exploring the factors that influence their awareness and the impact of ICT awareness on their academic performance.

- The present study only focused on specific subgroups of undergraduate students, so future research may need to investigate the factors that influence ICT awareness among a more diverse range of students.
- Extending the study to other levels of education such as high school, intermediate, and post-graduation would provide a better understanding of ICT awareness across different educational levels.
- Conducting the study in a larger geographical area would give a more comprehensive understanding of ICT awareness among undergraduate students.
- Future research should aim to provide a more holistic understanding of ICT awareness among students to help improve educational practices and policies.

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