

# A STUDY ON “THE IMPACT OF ICT ON EDUCATIONAL PERFORMANCE”

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## ABSTRACT

This paper attempts to analyse the role and performance of Information and Communication Technology (ICT) in enhancing quality of education in College in Bangalore. The study covers various department in Surana College encompassing 17 teachers, 50 female and 50 male student respondents. It has proven that adoption of ICT as a strategic management tool is a welcome sign for the surveyed College. The study result indicates that ICT was successful in predicting the future of new technology for the purpose of teaching-learning and transaction of curriculum and thereby enhancing quality of education. The study result revealed a close association among the factors like ‘relative advantage’ of ICT and quality of education. It is interesting to note that no gender disparity exists of effects of ICT on quality of education. However, the magnitude of quality of education lies in its ability to organize ICT through establishment of proper infrastructure in the Colleges. This study also showed how ICT has received extensive recognition as a strategy for up gradation of quality of education through acquired relative advantage, compatibility, demonstrability and image by overcoming the factors avoidance and complexities of new technology (ICT).

Keywords: ICT, new technology, quality of education.

## INTRODUCTION

Education is considered as the keystone in each and every society. The development of any country depends largely on the quality of education. India is no exception. The ancient education system of India was primarily based on the ‘Gurukul System’. But now-a-days Indian education has undergone various stages from the Vedic age to the post-independence period. Modern education is not restricted within the classroom. The recent development of technology has brought out the whole world outside the classroom. Information and Communication Technology (ICT) plays a crucial role in this respect. It is treated as the integral part for educational reforms and innovations at secondary and higher secondary level schools and colleges. The National Policy on Education (1986), as modified 1992, stressed upon employing educational technology to improve the quality of education. The policy statement led two major centrally sponsored schemes, namely, Educational Technology (ET) and Computer Literacy and studies in School & Colleges (CLASS) paving the way for a more comprehensive Centrally sponsored scheme- Information for a more communication Technology (ICT in short) of schools in 2004. ICT stands 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.” The set technologies include computers, the Internet, e-mail, web based PC, Mobile phone, wireless sets, projectors, interactive boards, broadcasting technologies (radio and television) and different interactive boards. Thus ICT is a system that gathers different information or data to communicate over some distance with the help of modern technology. The integration of ICT into education has been assumed as the potential of the new technological system. ICT is not only the backbone of the Information Age, but also an important catalyst and tool for inducing educational reforms that change our students into productive knowledge workers. It is generally argued that knowledge obtained by the students is formal and the level of grasping new concepts is very low. Therefore, we are facing a potentiality of application of ICT and thinking of how this alarm situation could be improved society’s educational systems as constructivist’s theory both teachers and students develop the necessary knowledge and skills sought in this digital age. Hence, most countries around the world are focusing on approaches to integrate of ICT in

learning and teaching to improve the quality of education by emphasizing competencies such as critical thinking, decision making, and handling of dynamic situations, working as a member of team, communicating effectively. Several studies have been conducted by different educationists, to evaluate the role of ICT on quality of education in secondary and higher secondary levels. All these studies though touched upon the issue of ICT in education, however to our knowledge no comprehensive attempt has yet been made to make the impact assessment of ICT in education. An attempt has been made in this paper to analyse the impact of ICT in the enhancement of quality of education in Colleges in Bangalore. For the sake of convenience, the whole paper is divided into four sections. Section-I explains the objectives, section II- hypotheses, section III- materials and methods; section – IV includes conclusion and suggestions.

## ADVANTAGES

It has made a remarkable progress in following areas-

- Widening the availability of quality education materials
- Increasing access to institutions through distance learning
- Enabling a knowledge network for students
- Teacher's Training
- Merging New Technologies with Existing Technologies in Use
- Enhanced Use of Mobile Technology
- Content Development by Learning Objects and Repositories

## LIMITATIONS

### • Availability of Infrastructure to Support ICT

It is a great challenge for schools to have availability of adequate infrastructure to support the deployment of ICTs. High initial cost of purchasing and setting up the requisite infrastructure, the maintenance and upgrade costs are a great hurdle in remote areas. The cost and effort of supporting such infrastructure also emerge as roadblocks to the successful usage of ICTs in schools, especially in poor and remote areas.

### • Funds Availability to Implement ICTs

Availability of funds to set up and to start implementing these projects is still an issue of concern for developing countries like India.

### • Capacity Building of Teachers

There is a need to get techno savvy teachers so that their potential can be increased by using various contents available at ICT platform.

### • Resistance to Change

Resistance is commonly observed while attempting to introduce ICTs into schools, quite often from the teachers themselves, since they may think that they shall become redundant once technology comes in or that it is too late for them to acclimatize to a new environment. Educators themselves may become skeptical about the effectiveness of using ICTs in school/college education.

## Lack of Awareness

There is a general lack of awareness about ICTs in education, its utility, and how they can be accessed and utilized economically and effectively. This lack of awareness and knowledge about ICTs and their use in education, is observed even on the part of policymakers, administrators and educators, hence, makes it on the whole difficult, to deploy ICTs in the field of school/college education.

### • Internet Usage

There are both the sides of coin as Internet contains tremendous potential for education, it also has its own pitfalls. For example, facilitating all the students with Internet access is an expensive proposition for most Government schools/colleges. This is witnessed more in rural centers and remote areas, where Internet connections are often erratic, if available at all.

### • Language Barriers

English is the foremost used language of the Internet. It is estimated that 80 percent of online content is in English. A large percentage of the educational software produced in the world market is in English.

### • Monitoring and evaluation:

Most of the issues, and problems associated with ICTs in education initiatives are known by policy-makers, donor staff, and educators. However, maintenance of data on the nature and complexity of these issues remains limited, because the system lacks good monitoring and evaluation tools and processes.

## I. Objectives

The following objectives are formulated in our study:

- i. To compare the views of educator regarding effect of ICT in improving quality of education to study the impact of ict.
- ii. To study the view of male or female students about the applicability of ICT in colleges.
- iv. To suggest the best possible outcome regarding effectiveness of ICT.

### Limitation of the study:

1. Time constrain
2. Study is limited to the sample size 17 educators from various department of Surana College and 50 male and 50 female students only.

## II. Hypothesis

On the basis of above two hypotheses the specific hypothesis is;

Ho: There exists no association between ICT and quality of education.

The alternative hypothesis can be written as H1: There exists significant association between ICT and quality of education.

### III. Material and Methods

The study is mainly analytical in nature. A well-structured questionnaire has been used to collect primary data from various departments of Surana Colleges in Bangalore during 2018. A sample size of 17 teachers, 20 female and 20 male students is drawn in order to throw some light on the impact of ICT on quality of education (QE) in Bangalore.

Secondary data: Referred various NAAC records available in different websites.

**TABLE:1**

#### Variables Explanation:

#### Selected variables and their explanations influencing quality of education through ICT

<b>Relative Advantage</b>	It indicates the degree to which an innovation will offer benefits surpassing those of its predecessor
<b>Compatibility</b>	It implies the level at which the new innovation acts in accordance with previously existing values, attitudes, experiences of using predecessors
<b>Complexity</b>	It indicates the degree to which an innovation is difficult to understand or use.
<b>Demonstrability</b>	This means the extent to which an innovation may be experimented with on a limited basis and observable to others
<b>Image</b>	It means positive image of college in short and long run due to introduction and implementation of ICT
<b>Avoidance</b>	It is defined as the degree of the potential version or avoidance reaction to an innovation like ICT

#### KENDELL'S CONCORDANCE

**TABLE 2 :**

To compare the view of educator /teacher regarding ICT effectiveness in improving the quality of education							
teachers	Avoidance	Image	complexity	Demostrability	Compatability	Relative Advantage	
1	6	5	4	3	2	1	21
2	6	2	5	3	4	1	21
3	6	5	4	3	2	1	21
4	6	5	3	4	1	2	21
5	6	5	3	4	1	2	21
6	6	5	2	4	1	3	21
7	6	5	4	3	2	1	21
8	3	4	5	6	2	1	21
9	6	5	4	3	2	1	21

10	3	4	5	6	2	1	21
11	6	5	4	3	2	1	21
12	6	5	4	3	2	1	21
13	3	4	5	6	2	1	21
14	6	5	4	3	2	1	21
15	3	4	5	6	2	1	21
16	3	4	5	6	2	1	21
17	6	5	4	3	2	1	21
	87	77	70	69	33	21	
	K	6					
	M	17					
	W	0.6816609					
	R	0.661764706					
	X2	57.94117647					
	Df	5					
	p-value	3.23459E-11	0.05				

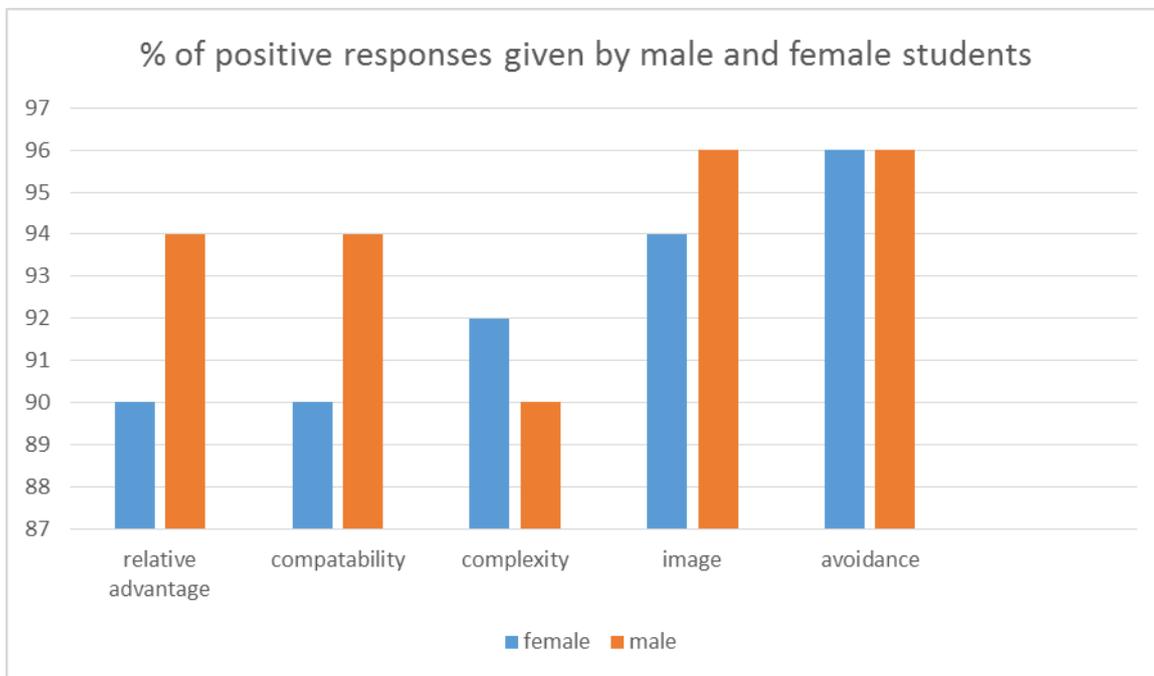
From the ranks given above by 17 faculties, we see that  $W = .681$ , which indicates some level of agreement between the judges. We also see that and that the  $p\text{-value} = 3.23459E-11$  LESS THAN  $\alpha = 0.05$ , thereby allowing us to reject the null hypothesis that there is no agreement among the judges.

**TABLE 3:**

To study the view of male and female students to know the effectiveness of ICT in colleges

No. of respondents given positive response					
	Female	%	Male	%	
RELATIVE ADVANTAGE	45	90	47	94	
COMPATIBILITY	45	90	47	94	
COMPLEXITY	46	92	45	90	
IMAGE	47	94	48	96	
DEMOSTRABILITY	48	96	48	96	
note:					
Total 50 male and 50 female students were assesed for the purpose of study					

From the above table it is clear that 90-96 % of students out of sample size of 50 female and 50 male student has positive response as regards usage/effectiveness of ICT in surana college.



#### IV. Conclusion and suggestions:

This paper highlights the role of ICT in enhancing quality of education. The result reveals that there has been significant positive influence on quality of education through ICT by taking into consideration the factors – ‘relative advantage’, ‘compatibility’, ‘demonstrability’ and ‘image’ with some variation. In table 2: 17 teachers have ranked the effectiveness of ICT based on given variables. We see that  $W = .681$ , which indicates some level of agreement between the judges. We also see that and that the  $p\text{-value} = 3.23459E-11 < \alpha = 0.05$ , thereby allowing us to reject the null hypothesis that there is no agreement among the judges. From table 3: it is clear that 90-96 % of students out of sample size of 50 female and 50 male student has positive response as regards usage/effectiveness of ICT in surana college. Though the study reveal or indicates significant positive influence on quality of education through ICT, it can be concluded that ICT can be effective only when teachers are digitally literate and trained to use ICT, these approaches can lead to higher order thinking skills, provide creative and individualized options for students to express their understandings, and leave students better prepared to deal with ongoing technological change in society and the workplace.

#### Suggestion:

1. ICT should become integral to the teaching-learning interaction, through such approaches as replacing chalkboards with interactive digital whiteboards, using students’ own smartphones or other devices for learning during class time, and
2. The “flipped classroom” model where students watch lectures at home on the computer and use classroom time for more interactive exercises.
3. Interactive white boards allow projected computer images to be displayed, manipulated, dragged, clicked, or copied. Simultaneously, handwritten notes can be taken on the board and saved for later use.
4. Student engagement is generally higher when ICT is available for student use throughout the classroom.