

Teachers' Perception towards the Use of Information and Communication Technology (ICT) in Secondary School

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Abstract— In current scenario, we find that rapid growth and improvement in information and communication technology (ICT). In the perspective of information and communication technology (ICT) has transformed learner into digital learner, needing teachers to incorporate technology into their educational approaches, where teacher's attitude, perception and technical knowledge plays a significant role in learning. ICT based education can be defined as the use of combination of technology, digital content and instruction in education system to make it more effective and efficient than the traditional education system. The current learning system changes the traditional learning system with the use of technology-based learning. The aim of this paper is to identify the teachers' perceptions for ICT based education in CBSE and UPboard secondary school teachers in classroom learning.

Keyword: Perception, Information and Communication Technology, Secondary School.

I. INTRODUCTION

The Role of Information and Communication Technology cannot be denied in today's teaching and learning process. Education is a process of action and acquaintance in which communication is the medium. Today, the modern teacher provides help to learners in developing their overall skills and motivates the young learners to search for knowledge.

Growth of information and communication technology (ICT) brought in rapid changes in various fields. It had also made entry into school education because of its appropriateness, applicability and versatility in use for classroom teaching. It is well recognized that ICT has great potential for improving the teaching learning process. It facilitates individualized learning and develops problem solving skills. Its interactive nature motivates students to learn. Educationists and teachers believe that with the help of ICT quality of education given to the students can be significantly improved.

In this era of digital communication, both students and teachers have an easy access to sources of information. But, to take advantages of ICT, firstly, the teachers need to be aware of various information technologies and their potential uses in the field of education. It is pertinent to expose the teachers to information technology so as to realize its benefits for them and for their students. Secondly, teachers will have to update their knowledge and skills in using ICT to make fullest utilization of hardware and software resources available. With changing teaching methods in curriculum transaction, it is essential that teachers have to leave their apprehensions behind about technology mediated instruction and adopt new technologies.

Thirdly, from the point of view of policy makers and educational administrators there is a need to redesign and reconstruct the educational systems based on the new educational paradigms so that both teachers and students develop necessary knowledge and skills sought in this digital age. Many countries are emphasizing on approaches to include ICT in education to improve its outcomes by focusing competencies such as divergent thinking, logical reasoning, and handling of tough situations, working as a member of a team, and communicating effectively (Anderson & Weert, 2002). Governments, especially, in developing countries have been trying to improve their national programs to integrate ICT into education.

Perceiving the use of technology in a positive way helps the teachers, students and the administrative body an important step in improving the quality of teaching and learning. And as we know technologies have the potential to support education across the curriculum and provide opportunities for effective communication between teachers and students in ways that have not been possible before.

II. REVIEW OF LITERATURE

Padmavathi (2013) conducted a survey study of secondary school teachers' perception, competency and use of computers. In study, it was found that the real use of computer by teachers seems to be different a lot by age, gender, computer possession, teaching subject matter, teachers' competency and training. It is concluded that home access to computers, skill training and competency of teachers are the main determinants of integration of ICT in school education.

Qasem & Viswanathappa (2016) investigated that teacher perceptions are a main forecaster of the use of innovative technologies in instructional settings. Early studies have noted that integrated learning can be as successful as either online or head to head instruction, especially in teacher preparation programs. Blended learning can direct to enhanced training, increased access and elasticity, and improved cost-effectiveness.

Ali (2018) conducted study on Teachers' perception of ICT integration as a pedagogic reform in classroom instruction. This study explores students' technological similarity as perceived by teachers and how they get used to their teaching pedagogies to suit the student surroundings at primary level. Findings show that young tech savvy students have grown up recommending the power of social connectedness through technology and look forward to ICT inclusive tutorials. The finding proves that many teachers participating in this study were appreciative about the chances ICT has for classroom use. It concludes bearings on academicians and school and paves ways research in ICT inclusion and pedagogical reforms.

In a study on teachers' perception on use of technology in the classroom, Ertmer, Ottenbreit-Leftwich, & York (2007) found that teacher beliefs, confidence and ability to use technology and commitment influence technology integration in the classroom. Zhao (2007) study on social studies teachers supports that teachers' views influenced their use of technology in the classroom. Most teachers were willing to use technology and expressed positive experiences with technology integration. Training is found to increase their use of technology in the classroom, and to use it more creatively.

Anne Mundy, Kupczynski and Kee (2012) studied teacher's perceptions of technology use in the schools in the USA. Teachers expressed that there was a important increase in the areas of student meeting, student enthusiasm and student acceleration of learning was observed after the completion of a teacher empowerment programme. Gulbahar and Guven, (2008) studied ICT usage in schools by the social studies teachers in Turkey. The study highlights that teachers are aware of the potential of ICT but they are facing the problem of lack of ICT accessibility and opportunity for in-service training programmes.

Gorder (2008) in his study on the Teachers' Perceptions of Instructional Technology Integration in the Classroom reported that teachers who use technology regularly are more likely to integrate technology in the classroom. He observed significant differences in technological application and combination based on grade level while there were no differences based on sexual category, age, teaching knowledge, content area, and educational level. Jatileni and Jatileni (2018), research work aims to contextually investigate the Namibian primary school teachers' perception on the use of technology in teaching and learning. They examine effect of gender on the use of ICT in teaching and learning.

Panigrahi (2011) finds that the perception of teachers' towards wide utilization of ICT. One hundred senior secondary school teachers from Haryana state were selected with sampling technique. The study finds that there is no significant difference between the perceptions of urban and rural teachers and male and female teachers.

Manisha (2012) studied the attitude of secondary school teachers on using new technologies in Northern Goa. The sample was drawn from 150 secondary school teachers working in 45 schools. The study indicated that there is no dissimilarity in attitude by sexual category or experience but significant difference was noticed with respect to age, computer possession and computer knowledge of the respondents.

Narasimhan (2012) studied the attitude of secondary school English teachers in Srikakulum district of Andhra Pradesh. The English teachers under study showed a positive attitude towards using information and communication technology in teaching of English.

On the basis of above review, to improve the use of ICT in the secondary school it is important to understand teachers' perspectives towards improving ICT skills and change teachers perception about ICT.

III. STATEMENT OF THE PROBLEM

The title of the study will be as follows-

“Teachers’ Perception towards the Use of Information and Communication Technology (ICT) in Secondary School”

III.I. OBJECTIVES OF THE STUDY

The objectives of study are:

1. To study the teachers’ perception towards the use of technology in secondary school.
2. To compare the teachers’ perception towards the use of ICT in CBSE and UP board school teachers in secondary school.
3. To compare the teachers’ perception towards the use of ICT in rural and urban secondary school teachers.

III.II. NULL HYPOTHESES

Following null hypotheses will be framed and tested at 0.05 level of significance.

1. There will be no significant difference in teachers’ perception towards the use of ICT in CBSE and UP boardschool teachers in secondary school.
2. There will be no significant difference in teachers’ perception towards the use of ICT in rural and urban secondary school teachers.

IV. METHODOLOGY

- **Method:** Descriptive survey method is used in this study.
- **Population:** All the teachers of secondary school of Jaunpur district is constitute the population of study.
- **Sample and Sampling Technique:** 200 secondary school teachers selected from the population by using the random sampling technique.

IV.I. TOOL OF THE STUDY

The data was collected using –

- A tool to assess the teachers’ perception towards the use of ICT in secondary school.

IV.II. STATISTICS TO BE USED

The statistical technique such as mean, standard deviation, t-test used for analysis of the data.

V. DATA ANALYSIS

Data is analyzed with thehelp of statistical software SPSS version 20.0.

V.I. OBJECTIVE1

To compare the Teachers’ perception towards the use of ICT in CBSE and UP board secondary school.

H₀1: There will be no significant difference in Teachers’ perception towards the use of ICT in CBSE and UP board secondary school teachers.

Table 1: Mean S.D. and t- value of Teachers’ perception towards the use of ICT by CBSE and UP board secondary school teachers in classroom learning.

Group	Number	Mean	S.D.	df	t- value	Remark
CBSE	85	97.26	6.781	198	5.068	Significant at 0.05 level
UP	115	91.44	8.825			

The above table indicates the mean scores of Teachers’ perception towards the use of ICT by CBSE and UP board secondary school teachers in classroom learning which are 97.26 and 91.44 along with their SD with 6.781 and 8.825 respectively. The

calculate t value ($t=5.068$, $p>0.05$) indicate that there is no significant difference between the mean scores of Teachers' perception towards the use of ICT by CBSE and UP board secondary school teachers in classroom learning at 0.05 level of significance. Thus, the null hypothesis i.e. there is significant difference between Teachers' perception towards the use of ICT by CBSE and UP board secondary school teachers in classroom learning are rejected. The CBSE board school teacher's perception towards use of ICT is more than UP board school teachers in integrating ICT during classroom teaching and learning process.

V.II. OBJECTIVE 2

To compare the Teachers' perception towards the use of ICT in rural and urban school teachers.

H₀2: There will be no significant difference in Teachers' perception towards the use of ICT in rural and urban secondary school teachers.

Table 2: Mean, S.D. and t- value of Teachers' perception towards the use of ICT by rural and urban secondary school teachers in successful integration of ICT in classroom learning.

Group	Number	Mean	S.D.	df	t- value	Remark
Rural	98	94.79	8.850	198	1.432	Not significant at 0.05 level
Urban	102	93.08	8.115			

The above table indicates the mean scores of Teachers' perception towards the use of ICT by rural and urban secondary school teachers in successful integration of ICT in classroom learning which are 94.79 and 93.08 along with their SD with 8.850 and 8.115 respectively. The calculate t value ($t=1.432$, $p<0.05$) indicate that there is no significant difference between the mean scores of barriers faced by Rural and Urban secondary school teachers in classroom learning at 0.05 level of significance. Thus, the null hypothesis i.e. there is no significant difference between barriers faced by Rural and urban secondary school teachers are accepted. The mean indicates that the urban teachers face same perception than rural teachers in Teachers' perception towards the use of ICT by rural and urban secondary school teachers in successful integration of ICT in classroom learning.

VI. CONCLUSION

These studies focused on understanding the teachers' perception towards use of ICT in secondary school that perceived the usage of ICT in secondary schools teachers and as such has limited generalize ability. Findings from the paper provide deep insights into the teachers' perception that are hindering the usage of ICT in teaching and learning environments. Thus, the conclusion of this paper is as following:

- 1- The CBSE board school teacher's perception towards use of ICT is more than UP board school teachers in integrating ICT during classroom teaching and learning process.
- 2- The urban and rural teachers have same perception towards use of ICT in integrating ICT during classroom teaching and learning process.

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