

**USE OF ICT IN SCHOOL EDUCATION: A MICRO STUDY WITH SPECIAL
REFERENCE IN THE DISTRICT OF BURDWAN, WEST BENGAL, INDIA.**

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ABSTRACT

This paper attempts to analyze the opinion of teachers and the administrative personnel of education department about the use of ICT in school education. The study covers 100 teachers comprising of 50 trained (25 male & 25 female) and 50 untrained (25 male & 25 female) categories as well as 50 administrative personnel's (25 male & 25 female). The results of chi-square test expressed that teachers and administrative personnel of education department are in the same level of opinions about the use of ICT in school education. From the study, it is revealed untrained teachers are more in favor to use ICT in school education than trained teachers. Again male teachers both in trained and untrained categories are more confident to use ICT in school education than female teachers both in the said categories.

Key Words: ICT, Teachers, Administrative Personnel, Chi-Square test, Revealed, Confident.

Introduction

ICT (Information and Communication Technology or Technologies) is a term which includes any communication device or application, encompassing: radio, television, cellular phones, computer, network hardware and software, satellite systems and so other services and applications like videoconferencing, videotaping and distance learning through modern technological gadgets. The concept for using ICT in education is not very old. For instance, radio

and television have been used for over 40-50 years for open and distance learning. Now it is the high time for the society to concentrate in the use of modern ICT technologies. From the standpoint of economical background, it is found that still now printed matter (books, articles, magazines etc.) is used in larger proportion both in developed and developing countries. Availability and accessibility are another reason for the dominance of printed matter over ICT. The use of computers and the internet is still in its infancy in developing countries like India (en.wikibooks.org)

Objectives

The study entails the following objectives -

- (i) To know the definition of ICT, its advantages and disadvantages;
- (ii) To examine the relevance of using ICT in school education;
- (iii) To access the view of teachers as well as administrative personnel of education department about the using of ICT in school education;
- (iv) To enumerate the opinion of administrative personnel about the using of ICT in school education.

Hypotheses

The hypotheses selected in our study are –

Null hypotheses

The null hypotheses are as follows –

H_0^1 : These are no differences in opinion about the use of ICT in school education among the teachers and the administrative personnel of education department.

H_0^2 : These are no differences in opinion about the use of ICT in school education among the administrative personnel of education department under male and female categories.

Alternative hypotheses

The alternative hypotheses are as follows –

H_1^1 : There exists significant difference in opinion about the use of ICT in school education among the teachers and the administrative personnel of education department.

H_1^2 : There exists significant difference in opinion about the use of ICT in school education among the administrative personnel of education department under male and female categories.

Data Source and Methodology

The study is mainly analytical in nature. The primary data has been collected during 2013-2014 from 50 administrative personnel (25 male & 25 female) of education department and 100 teachers comprising of 50 in trained and 50 in untrained categories both in urban as well as rural areas in Burdwan district of West Bengal. A self made structured questionnaire was used by considering different kinds of views of teachers associated with the use of ICT in school education.

Materials and Methods

1. The chi-square test is used to determine any significant variation of opinions among the teachers and the administrative personnel of education department.
2. The student's $-t$ test is performed to find the attitude of administrative personnel's under male and female categories about the use of ICT in school education.
3. Tabular representations are used to make a comparative static analysis of collected data.
4. Charts and diagrams are used to make more comprehensive for the representation.

Analysis and Discussion

Use of ICT in school education: A Non-parametric Analysis

The present study has attempted to make an assessment of perceptions of the teachers and administrative personnel's of education department about the use of ICT in school education in terms of non-parametric chi-square analysis. To assess the view of administrative personnel's under male and female categories of using ICT in school education, student's $-t$ test is used. The opinions of the respondents collected from the field survey can be expressed in the following table (Vide table-1).

Table No.1: Opinion of different respondents selected for the study about the use of ICT in school education

Respondents	In favor of the use of ICT in school education	Not in favor of the use of ICT in school education	Total

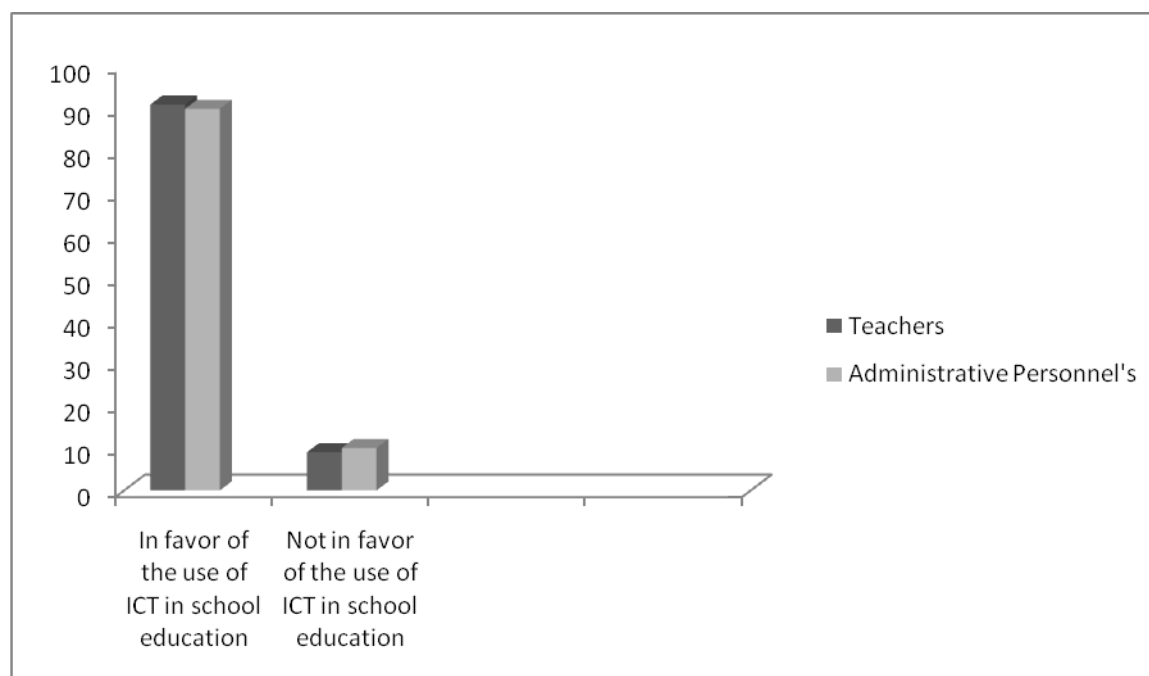
Teachers	91(91)	9(9)	100(100)
Administrative Personnel	45(90)	5(10)	50(100)
Total	136(90.7)	14(9.3)	150(100)

Source: Field survey, 2013-2014

Note: Figures in the bracket indicates the percentage to total.

Table -1 describes the opinions of the teachers as well as administrative personnel's about the use of ICT in school education. From the above analysis (Vide table-1), we can conclude that most of the teachers as well as administration personnel's of education department are in favor of the use of ICT in school education almost in equal proportion.

Diagram – 1: Opinion of teachers and administrative personnel selected for the study about the use of ICT in school education



From the diagram-1, it is evident that most of the respondents i.e. the teachers and administrative personnel's selected for the study are in favor of the use of ICT in school education.

The calculated value and the observed value of chi-square are shown in the table below (Vide table – 2).

Table No. 2: Testing of the hypothesis H_0^1 / H_1^1

The calculated value and the observed value of chi-square are shown in the table below (Vide table – 2).

Variables compared	Calculated value (X^2)	Critical value (5% level)	Critical value (1% level)	Degrees of freedom	Significant level	
					1%`	5%
Opinion of teachers and academic personnel's about the use of ICT in school education.	0.04	2.70	6.63	1	P>0.01	P>0.05

Source: Authors' calculation based on field survey 2013-2014

It should be noted (Vide Table – 2) that the observed value of chi-square (χ^2) i.e. 0.04 is smaller than the critical value both at 1% and 5% level of significance (i.e., $\chi^2_{.01, d.f.1} = 6.63$ and $\chi^2_{.05, d.f.1} = 2.70$ for degrees of freedom 1). Therefore the null hypothesis is accepted and the alternative hypothesis is rejected both at 1% and 5% level of significance. So we can conclude that there is no difference in opinion about the use of ICT in school education among the teachers and administrative personnel's of education department. (Devi, 2012)

Table – 3: Attitudes of teachers under trained (M & F) and untrained (M & F) categories towards the use of ICT in school education. A multiple response analysis.

Respondents	Type of Teachers	No. of samples selected	Gender	In favor of using ICT	Not in favor of using ICT	In favor of using ICT(combined)	Not in favor of using ICT(combined)
Teachers	Trained	25	M	23 (92)	2 (8)	43 (86)	7 (14)
		25	F	20 (80)	5 (20)		
	Untrained	25	M	25 (100)	0 (0)	48 (96)	2 (4)
		25	F	23 (92)	2 (8)		
		100		91	9	91	9

Source: Authors' calculation based on field survey 2013-2014.

It is evident that (Vide table – 3), most of the teachers (91%) are in favor of the use of ICT in school education. From the study, it is revealed that untrained teachers (96%) more want to use ICT in school education in comparison to trained teachers (86%). Again it is evident that male teachers (96%) are more in favor to use ICT than female teachers (86%). Again, male teachers both in trained as well as untrained categories (i.e. 92% & 100%) are more confident to use ICT in school education than female teachers both in trained and untrained categories (i.e. 80% & 92%).

Table No. 4: Attitudes of Administrative Personnel's of education department under male and female categories towards the use of ICT in school education: Student's t-test in terms of Multiple Response Analysis. (Testing of the hypothesis H_0^2 / H_1^2)

Administrative Personnel	Sample(N)	Mean	S.D.	t-value	Significant level	
					5 %	1 %
Male	25	16.21	3.76	1.42	P< 0.05	P< 0.01
Female	25	14.15	2.94			

Source: Authors' calculation based on field survey 2013-2014.

From the above analysis (vide table-4), it is clear that calculated value of 't' is smaller than the table value with little variation of Mean and S.D. among the opinions of the respondents. Therefore, we can conclude that there exists no significant variation of attitudes of male and female categories of Administrative Personnel about the use of ICT in school education.

Conclusion

The opinion of teachers comprising of trained and untrained categories as well as administrative personnel of education department comprising of male and female categories are considered for discussion. The result of the study revealed the teachers as well as administrative personnel of education department have positive thinking about the use of ICT in school education although, there exists slight variation of magnitude of responses among them. The male teachers both in the trained as well as in the untrained categories than the female teachers are more interested in

use of ICT which is really praiseworthy. Again, by considering the analytical approach done during the study, we can conclude that the attitude of administrative personnel's under male and female categories about the use of ICT in school education is almost in the same proportion.

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