

IMPACT OF ICT IN EDUCATIONAL INSTITUTIONS – A STUDY IN KARNATAKA

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Abstract: Knowledge is power of teachers in conducting the power point classes. Information communication and technology [ICT] is a tool to reach the knowledge of students in an efficient way. This study attempts to effectiveness of adopting the ICT classes in Government Degree Colleges in Karnataka State. A sample of 80 faculties from 09 different universities in Karnataka has selected by using convenience sampling technique. The current paper aims to studying various dimensions in the view point of faculties, such as perception of students about the ICT classes, satisfaction level of teachers and relationship between support of administrative authority and satisfaction level of the ICT classes to teachers. The study identifies the result of regression analysis indicates the relationship between the support of administrative authority and level of satisfaction of sample beneficiaries is significant [$P = 0.000 < 0.05$] with β [beta] value is 0.587.

Key Words: Information Communication Technology, Rashtriya Uchchatar Shiksha Abhiyan and Ministry of Human Resource Development.

1. INTRODUCTION:

Information technologies have affected every aspect of human activity; have a potential role to play in the field of education and training. The need of new technologies in teaching learning process grows stronger and faster. The knowledge is essential in every walk of human life. Teacher’s knowledge is greatest power; power point presentation is innovative tool to enrich knowledge of students.

According to Irsad Hussain 2008; Students are able to work in collaborative and interactive learning environments effectively communicating, sharing information and exchanging ideas and learning experiences with all in the environment. In fact, High and medium income family students are capable of availing technologies education on their own in outside of the college. As a majority of India’s population is poor and the poor people family students are incapable of accessing the technologies education by this own cost, they are solely depending on college teaching. Technology helps the teachers and students to up-to-date the information and knowledge

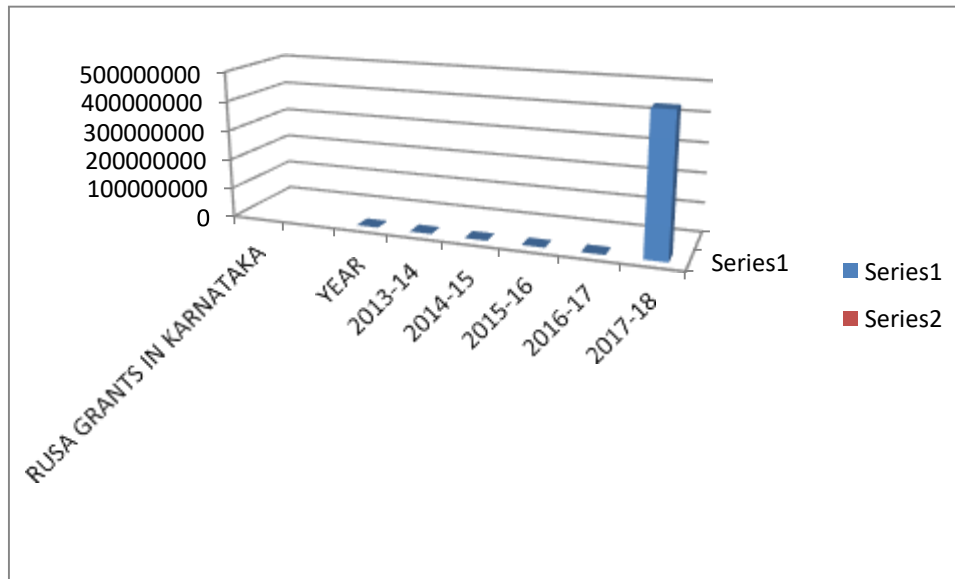
Brason (1991) stated that students learn not only by the teacher but they also learn from teacher and by interacting one another. Accurate and right information are necessary for effective teaching and learning; (Haag, 1998).

Adoption of Information Communication Technology in class room settings offers several benefits. Since, it builds a quality of learning. The ICT has influenced on learning through ensuring numerous types of interaction. [ilodigwe- 2017]. The Information Communication Technology classes is provides quality of education in different ways, by learner motivation and engagement by facilitating the acquisition of basic skills and by enhancing teacher training. [Syed Noor-UL-Amin].

Table – 01 RUSA GRANTS IN KARNATAKA

Year	Fund Received From RUSA	AGR
2013-14	32,82,500	-
2014-15	0.0	-
2015-16	87,2,25,000	-
2016-17	41,8,12,500	47.94
2017-18	467,000,000 (allocated)	1016.89
Cumulative	599,3,20,000	1064.83

(Source: MHRD website and the new Indian express dated Sept 12, 2018)



The above table and graph present the information about the amount sanctioned by the MHRD department to Karnataka State for adoption of innovative teaching method in higher education from the year 2013-14 to 2017-18. Therefore, the annual growth rate has drastically increased from the year 2016-17 to 2017-18; it has increased from 47.94 % to 1016.89 %. The Karnataka State is the second highest RUSA grants received state in our country after Uttar Pradesh for the development of higher education.

2. REVIEW OF LITERATURE:

Rabiji Murati [2017], the study suggested that if technology with standard software application used its everyday life, it s very helpful to extension of previous knowledge then to build the independent capacity to teach successfully. The Information technology is a continuous process of acquiring the skill and knowledge.

Ghavifekr and Rosdy [2015], The study found that gain thorough knowledge and be able to access to internet for developing a global point of view and creates a dynamic and innovative learning environments for students to become more effectively and efficiently motivated to improve the attitude of students and capability of lifelong learning. For the purpose of this 101 teachers are selected from primary and secondary schools in Kuala Lumpur in Malaysia. A survey questionnaire includes 43 items was used to analyze the effectiveness of ICT integration in teaching and learning in public schools in Kuala Lumpur. The results of Mann –Whitney U test shows that there is no significant difference between teachers perception ICT integration of teaching in Primary and Secondary school and the effectiveness of ICT integration for students in learning with the city and rural area [P value is less than 0.05].

Fateme Samiei Lari (2014), the study highlights comparison between traditional teaching and impact of power point presentation towards language learning in classes of student’s attitudes. Study sample consisted of 56 students selected from secondary school in Lar, in the south- east of Iran. Out of 56 female students, 28 students are in each group randomly selected and taught separately by using video projector, power point classes etc., for experimental and control and also taught tradition method such as Text book. It was interestingly noted that independent t sample test result showed that both group P value is less than 0.005 about power point presentation is better than traditional method of teaching.

Abdurrahman Ghaleb [2010], the study investigated that teacher’s perception about using the technology in United Arab Emirates School Classrooms. Study sample consisted of 40 female and 60 male teachers from two schools in Al-Ain Educational Zone, Abu Dhabi. Study results showed that teachers at both schools are integrating technology in their classes’ activities. They use a variety of technologies to promote students. Therefore, methods of learning are differed from male teachers to female teachers in some cases. The results discloses of teachers integrate technology in their classes with different degrees and effectiveness in spite of the barriers like technical problems, large number of students, lack of professional developing training, lack of motivation and financial support and negative teacher and parent attitudes towards impact of technology on teaching learning. Finally male and female teachers recommend the following points for increase the effective technology integration: (1) regular professional development workshops, (2) enhancing curriculum with technology-enhanced materials such as CDs and videos, (3) increasing collaboration between schools across the country, and (4) giving enough freedom for teachers in the selection and coverage of curiculum materials

Irshad Hussain and Muhammad Safdar [2008], The study found that students and teachers role of using the technologies in education. It increases sharing the information, good communication between teachers and students, exchanging the ideas and learning experiences in study environment to students. An information technology facilitates teaching learning process in more productive fashion. The Teacher is a facilitator and guides the learner in their study playing role of a coach or mentor.

3. NEED FOR THE STUDY:

The review of literature points out that the highest priority accorded to Power Point Classes in colleges in these days could have some reasons: 1) students had more positive attitude about the course and greater self-efficiency with the power point. 2) Students are highly motivated (Joshua 2005). India has the second highest populous countries in the world and as a majority of India's population are poor. According to the article 32 of the Indian constitution assures that the government should provide good education atmosphere to every Indian citizen. As a matter of fact, the Government of India and the Government of Karnataka have allotted huge funds to government Degree colleges to adopt the ICT for the teaching. The review of literature reveals that many studies have examined in the view point of students. And no study so far has tried to focus on teaching faculty perspective about support from administrative authority for conducting the PPT classes, impact on student community and level of satisfaction after conducting PPT classes in government degree colleges. Therefore, the present study entitled "Impact of ICT Classes in Government Degree Colleges-Perception of the Faculty" an unique direction.

4. OBJECTIVES OF THE STUDY:

- To analyze the faculty perception towards students about ICT class on the basis of gender;
- To analyze the satisfaction level of Faculties based on age with PPT Class;
- To examine the relationship between the Support of the Administrative Authority and satisfaction level of Faculty;
- To assess the differences in the support of the Administrative Authority on the basis of gender;

5. HYPOTHESES OF THE STUDY :

Based on Objectives no. 01

H1: There is no significant difference in the perception towards students about PPT Class on the basis of gender;

Based on Objectives no. 02

H2: There is no significant difference in the perception of faculties about level of satisfaction on the basis of age;

Based on Objectives no. 03

H3: There is significant no relationship between Support of Administrative Authority and satisfaction level of Faculty;

Based on Objectives no. 04

H4: There is no significant difference in the support of Administrative Authority on the basis of gender;

6. RESEARCH METHODOLOGY:

Research Methodology has adopted descriptive, analytical and comparative methods for the study.

Data Sources: Both the Primary and Secondary Data has been collected for analyzing this article.

Primary Data: Primary data has been collected using questionnaires to gain insight into the effectiveness of Power Point Classes in Government Degree Colleges. The Primary data collected through a sample survey method. 80 questionnaires are filled by respondents, out of 80, 40 faculties in this Refresher course of commerce and remaining 40 are 117th Orientation Programme Participant Faculties in various universities at Academic Staff College, University of Mysore, Mysore, Karnataka State on the basis of convenience sampling method.

Secondary Data: Secondary data has been collected from DCE website, MHRD website and new Indian express newspaper etc.,

Statistical tools and techniques:

To analyze both the primary and secondary data has used appropriate statistical techniques like: Annual Growth Rate, Percentage, Mean, Std Deviation, Independent samples t- test, ANOVA, Leven's test and Regression analysis are used to test the hypotheses.

Measures:

The study is grouped under 03 sections:

- Faculty Perception towards Students
- Support of Administrative Authorities
- Satisfaction Level of Faculty

Table- 02 Reliability Analysis

The reliability test was conducted to ensure the validity of the instrument. The reliability analysis using Cronbach’s Alpha showed reliability as given in the following table:

Variable	No. of items	Mean	Std. Deviation	Cronbach’s Alpha
Faculty Perception towards Students	12	3.67	0.50	0.69
Support of Administrative Authorities	7	3.43	0.74	0.86
Satisfaction Level of Faculty	10	3.58	0.76	0.89

The results of the reliability analysis of the instrument are provided in table number 02. The Cronbach’s Alpha varies between 0.69 and 0.89 which indicates high internal consistency of the variable.

Table –3 Reliability Statistics

Cronbach’s Alpha	No of Items
0.834	29

This table highlights the result of reliability analysis in all the variables. The Alpha value is 0.83 which indicates high level consistency of the variable. The following table shows the mean score and standard deviation for the variable teacher perception towards student for ICT Classes.

Table- 4 Faculty Perception towards Students:

Sl. No.	Factors	Mean score	SD
A	The lesson with power-point is interesting	4.1000	.72216
B	It was easy to follow and understand	3.9125	.84485
C	It held student attention throughout the class	3.7375	.96448
D	It helped students to learn more language elements	3.5125	1.05535
E	It required extensive note-taking	3.5375	.96710
F	It helped to use class time efficiently	3.9875	.89292
G	Students prefers lessons without power point	2.9500	.95334
H	Students could take better notes during the lesson	3.6500	.90148
I	It helped to review key points during the lesson	4.6625	1.08369
J	Students prefers lessons with power point	3.4750	.94098
K	Students enjoyed lot in class room	3.7375	.95126
L	Students more confident for the exam	3.3375	0.9801
Aggregate mean score and standard deviation		3.6743	0.5033

Source: Field survey The table shows that the Faculty perception towards Students about ICT classes in degree colleges with highest mean score of 4.6625 that ‘it helped to review key points during the lesson’. However, with a mean score of 3.3375 that student more confident for the exam is low. As the standard deviation is less than one except the statement of “It helped students to learn more language elements” and “it helped to review key points during the lesson” it indicates Consistency in the views expressed by the faculty about Student perception towards ICT Classes.

(ii) Support of Administrative Authorities: The table 4 shows the mean score and standard deviation for support of administrative authority for conducting the ICT Classes variable and the scores are as under:

Table 5: Mean score and standard deviation for Support of Administrative Authorities:

Sl. No.	Factors	MeanValue	SD
A	Responsiveness of Principals	3.8125	.79705
B	Co - operation and attitude of administrative staff	3.3375	.96710
C	Class room management	3.7375	.93786
D	Special training from special trainers	3.3875	.98718
E	Encouragement of experimentation	3.4750	.98051
F	Maintenance of Electronic Equipment's	3.1000	1.13182
G	Quality of Equipment	3.1750	1.09977
	Aggregate mean score and standard deviation	3.4291	0.7352

Source: Field survey

The table shows that the Faculty perception towards Support of Administrative Authority about ICT classes in degree colleges with highest mean score of 3.8125 that Responsiveness of Principals. However, with a mean score of 3.1000 that “Maintenance of Electronic Equipment’s”. As the standard deviation is less than one except the statement of “Maintenance of Electronic Equipment’s” and “Quality of Equipment” it indicates consistency in the views expressed by the faculty about Student perception towards ICT Classes. The following table shows the mean score and standard deviation for the variable Satisfaction Level of Faculty;

Table 6: Mean score and standard deviation for Satisfaction Level of Faculty

Sl. No.	Factors	Mean score	SD
A	Solve the study problems of students	3.8500	.78111
B	Make best use of time	3.8750	.81714
C	Guide and help students in searching the qualitative material	3.8625	.80730
D	Diagnose the learning problem and outcomes from students	3.4875	.95459
E	Co-operation from students	3.7250	.98051
F	Responsiveness of students in PPT classes	3.7500	1.01258
G	availability of modern equipment	3.0750	1.23016
H	Personal care by students for electrical equipment	2.9125	1.22416
I	Improvement of knowledge to students	3.6500	.85832
J	Quality of Screens/ White board in class rooms	3.0500	1.21071
	Aggregate mean score and standard deviation	3.5788	0.7610

Source: Field survey

The table shows that the faculty satisfaction Level about ICT classes in degree colleges with highest mean score of 3.8750 that make best use of time. However, with a mean score of 3.0500 that “Quality of Screens/ White board in class rooms”. As the standard deviation is less than one except the statement of “Responsiveness of students in PPT classes”, “availability of modern equipment”, “Personal care by students for electrical equipment” and Quality of Screens/White board in class rooms”, it indicates consistency in the views expressed by the faculty about Student perception towards ICT Classes.

Table - 07 Subject wise of the Respondents

Name of the Subjects	No. Of Respondents	%
Commerce	51	63.8
Management	4	5.0
Physics	1	1.3
Mathematics	1	1.3
Computer Science	1	1.3
Social Work	3	3.8
Kannada	7	8.8
Economics	4	5.0
English	1	1.3
Zoology	1	1.3
History	1	1.3

Political Science	1	1.3
Geography	4	5.0
Total	80	100.0

The above table presents the information about subject wise teaching faculties participated in our study. Out of 80 respondents, commerce faculties participation is more our study [63.8%].

Table - 08 Age group of Respondents

Particulars	No. of Faculty	Percentage
25-30	20	25.00
30-35	17	21.30
35-40	19	23.80
40-45	11	13.80
45-50	13	16.30
Total	80	100.00

The above table highlights, age wise teaching faculties in our study. Among the teaching faculties 25 percent belongs to the age group of 25- 30, 21.30 percent belongs to the age group of 30-35, 23.80 percent belong to the age group of 35-40, 13.80 percent belongs to the age group of 40-45, 16.30 percent belongs to the age group of 45-50 respectively. However, between the age group of 25-30 participation is more in other age group faculties of this study.

Table -09 Teaching Experience of Faculties

Experience	No. of Faculty	%
below 5 Years	25	31.3
5-10	22	27.5
10-15	12	15.0
15-20	10	12.5
20-25	11	13.8
Total	80	100.0

As far as experience concerned, a respondents belonging to below 5 years' experience faculties are head the list with 31.3 percent followed by between the 5 to 10 years' experience faculties with 27.5 percent and all other experience group representation is below of 15 percent that the sample respondents are from a cross section of various experience groups.

Table -10 University wise Participation of Faculties

Sl. No.	Name of the University	No. Of Respondents	%
1	University of Mysore	36	45.0
2	Mangalore University	20	25.0
3	Akka mahadevi Woman's University	01	1.3
4	Kuvempu University	07	8.8
5	Davanagere University	02	2.5
6	Rani Channamma University	05	6.3
7	Tumkur University	04	5.0
8	Darwad University	02	2.5
9	Bangalore University	03	3.8
	Total	80	100.

The above table presents the information about university wise representation of respondents. Out of 09 universities, 36 respondents belong to University of Mysore, 20 respondents belong to Mangalore University, 01 respondent belong to Akka Mahadevi University, 07 respondents belong to Kuvempu University, 02 respondents belong to Davanagere University and Darwad University respectively, 05 respondents belong to Rani Channamma University, 04 respondents belong to Tumkur University and 03 respondents belong to Bangalore University. However University of Mysore respondents are highest [45%] among all the University representative teachers followed by Mangalore University Faculties [25%].

Table-11 Gender Composition of Respondents

Particulars	Frequency	%
Male	51	63.8
Female	29	36.3
Total	80	100

The above table presents the information about gender Profile of sample respondents of this study. Out of 80 respondents, 51 respondents are male and 29 respondents are female. Among the respondent’s male respondents are higher than the female respondents.

Table -12 Locality of Respondents

Particulars	No. of Respondents	%
Rural	36	45.0
Urban	29	36.3
Semi Urban	15	18.8
Total	80	100.0

The above table presents the locality of respondents. Out of 80 respondents, 36 respondents belong to rural areas, 29 respondents belong to urban areas and 15 respondents belong to semi urban areas. Hence rural degree college faculties are more than urban and semi urban degree college faculties.

Table - 13 Technology Instruments in colleges

Name of the Instruments	Yes	%	No	%
Edusat	49	61.3	31	38.8
Computer Lab	50	62.5	30	37.5
Projectors	59	73.8	21	26.3
Auditorium with tech	33	41.3	47	58.8
Speakers	46	57.5	34	42.5
Total	237		163	

The above table and line graph shows the availability of technology instruments in degree colleges. Out of 80 degree colleges, 49 colleges have Edusat instruments and 31 colleges has there no Edusat instrument, 50 degree colleges have computer lab specialty and 30 colleges does not have computer lab. 59 degree colleges have projectors for power point classes and 21 colleges have not projector specialty. 33 degree colleges have auditorium with technology and 46 degree colleges has Speaker specialty for conducting the functions.

HYPOTHESIS - 1

Ho: There is no significant difference in the perception towards students about PPT Class on the basis of gender;

H₁: There is a significant difference in the perception towards students about PPT Class on the basis of gender;

Table – 14 Independent Samples T test

	N	Mean	Std Deviation	Std Error Mean
Male	51	3.764	0.465	.0650
Female	29	3.517	0.538	.0998

(Sources: SPSS Output)

6. FINDINGS RELATING TO DEMOGRAPHIC FACTORS :

- The survey has shown that among the respondents, 25.5 percent belong to the age group of 25-30 years.
- Gender wise, 51 male respondents and 29 female respondents participated in our study. Among the respondent’s male respondents are higher than female respondents.

- From the study, it is found that out of 80 respondents, 36 respondents belong to rural areas, 29 respondents belong to urban areas and 15 respondents belong to semi urban areas. Hence, rural college faculties are more in our study.
- The study has revealed that respondents who has got below 5 years' experience are more participated of our study
- Out of 09 universities, UOM faculties represent 45% of the total, Mangalore University faculties represent 25% and rest of 30% remaining 7 university faculties.
- The study highlights availability of technical equipment in government degree colleges. Except auditorium with technology more than 61% technical equipment (Edusat. Comp lab, Projectors and Speakers) are there in degree colleges.

7. FINDINGS RELATING TO TESTING THE HYPOTHESES:

- The difference in the perception of beneficiaries about students learning from PPT Classes on the basis of gender was arrived at by using Independent Sample T test. The t test results show that the perceptual differences among male and female respondents. (Pvalue is less than 0.05)
- The difference in the beneficiaries' satisfaction level on the bases of age, was found by using ANOVA. The findings showed that there is no significant difference between age. and P values, which are 0.418.
- The study found the results of regression analysis indicates relationship between the support of Administrative authority and level of satisfaction of sample beneficiaries (β 0.587; $P = 0.000 < 0.05$). The level of satisfaction of sample beneficiaries has a significant relationship with the support from administrative authority.

8. CONCLUSION:

Technology is a growing part of any society today. This study found that there is no strong relationship between support from authority and satisfaction of faculties for ICT classes (i.e., R square value is 34%, remaining 56% was variation between support of authority and satisfaction) and it was interestingly noted that male and female respondent's perception is indifferent (Leven's test). Therefore, co-operation, Motivation and conducting the training about ICT to unlearn faculties, proper maintenance of equipment and utilizing the teacher knowledge power is responsibility of administrate authorities.

Teacher is the greatest innovator. Both the male and female teachers opined that ICT method teaching is very helpful to students so that adopting the innovative method of teaching when it is possible is more important with traditional teaching methods. Support of higher authority and adopt the innovative method of teaching by teachers as two faces of the same coin. To conclude that government of India and State government have spent huge amount to create the innovative atmosphere in government degree colleges. This study clearly illustrates that most of the colleges are there in semi urban areas in Karnataka. It is interestingly noted that the study has disclosed that more than 10 years experienced teachers are there in government degree colleges. To conclude adopting the revolutionary technology in teaching is sustainable & ethics of teaching profession.

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