Research Paper
Impact Factor: 6.462
Peer Reviewed & Indexed Journal
www.ijmsrr.com

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

IMPACT OF ICT BASED PROJECT ON EDUCATION IN BALASORE DISTRICT

Mrs. Pramila Parida
Assistant Professor in Sriram Degree College, Soro, Balasore.

Abstract
This study intended to examine the impact of ICT based project on education in Balasore district of odisha. The sample of the study selected through simple random sampling technique. The sample consists of 200 teachers and 400 students and 40 schools. The data was collected through self prepared tools by providing to teachers and students. It is found that there is a significant difference between the attitudes of students studying with different ICT based programs. . The students studying in Kendriya Vidyalaya have low attitude towards ICT than that of students using other ICT based projects.

Key Words: Impact, ICT, ICT based project, Education.

Introduction

"Education enables the mind to find out the ultimate truth, which gives us the wealth of inner light and love and gives significance of life" –Tagore. Education is the process of facilitating learning or acquisition of knowledge skill, value, moral beliefs and habits. Education is very necessary for each and everyone in order to improve knowledge, way of living as well as social and economic status throughout the life it helps a person to get knowledge and improve confidence level all through the life. It plays a great role in our career growth as well as in the personal growth. Information and Communication Technology (ICT) is increasingly becoming an indispensable part of the education system from the time we get up in the morning till we go to sleep at night. We are surrounded by the means and objects of information and communication technologies like newspaper, radio, television and computer etc. It has changed many aspects of our lives. These changes have caused educational institutions, administrators, teachers, to rethink their roles, teaching methodology, and refresh their vision for the future. The term Information Technology (IT) and Information and Communication Technology (ICT) are often used interchangeably, although the latter term is little known outside the education. We normally think of Information Technology as a use of computers and other equipment to store, retrieve and transmit the data while Information and Communication Technology relate to those technologies that are used for accessing, gathering, manipulating and presenting or communicating information (Toomey 2002, cited in Anderson). According to Galloway and Norton (2011) generally, schools think of IT as being the technology, the equipment and the infrastructure, and ICT as what we do with it, the subject and the way it is used to support learning.

Rationale of the study

It is clearly known that education ensures peaceful existence of the society. The social aim of education is to cultivate the better persons who collectively make a better society. To achieve this aim quality education is the need of the hour. The present age is the age of information dominated by the digital technology. The technology is more pervasive and user-friendly has dominated our lives more and more. The education sector is seen as the natural source for the creation of technological literacy and the development of new technological skills as well as other skills that are needed in the new millennium, like problem -solving skills, collaboration skills, critical reading and information retrieval, etc. For new technologies like ICT, the creation of these new skills has meant the introduction of ICT into educational institutions and the introduction of computer literacy or media literacy courses as well as new teaching and learning methods that befits the optimum use of such technologies. ICT helps in

establishing a better dialogue between pedagogy and technology; practice and research; policies practice and theory. The very expression information and communication technology has a lot of ideas in it and not just using gadgets. ICT is a very comprehensive expression that involves managing of large quantities of information and communicating it to the concerned people.

Review of Related Literature

Review of related literature is an important part of any research work. It explores and analyses the research work already carried out in the related field of study. The past study becomes the foundation upon which present research can be carried out. A literature review is a comprehensive summary of previous research on a topic.

Review of related literature serves the following purposes

1. To define the limits of field. It enables the researcher to define and delimit his problem.
2. To state the objectives clearly and precisely. The knowledge of the related literature provides the researcher up to date information on works done by others.
3. To eliminate the risk of duplication of what has already been done. It also helps in providing ideas, theories, explanation or hypotheses valuable in formulating the problems.
4. To avoid worthless problems, by making to select those areas in which positive findings are likely to result and his efforts would be likely to add to the knowledge in a meaningful way.
5. To equip the researcher, with an understanding of research methodology, which mentions the way of study is to be administered.
6. To avail the researcher to know about the tools and instruments which prove to be useful and promising?

Mansuri (2017) Conducted a Study on:- "Attitude Towards Information Technology: A Study Of Secondary School Teachers" The objective of the study was to study the attitude of SSC and ICSE school teachers towards Information technology and to compare the attitude of SSC and ICSE school teachers towards Information technology.

Fanai and Chhangte (2016) conducted a Study on: - "Attitude of the Secondary School Teachers towards ICT with Respect to Teaching Experience" The present study attempts to find out the attitude of secondary school teachers of Aizawl district, Mizoram towards ICT.

Fanai and Chhangte (2016) conducted a Study on: - "Attitude of the Secondary School Teachers towards ICT with Respect to Teaching Experience" The present study attempts to find out the attitude of secondary school teachers of Aizawl district, Mizoram towards ICT.

Bano (2016) conducted an experimental study to see the effect of smart classroom learning environment on the performance of first-grade students in English. The study was done on 30 students and pre-test post -test design was used. A performance test was constructed for data collection. Data were analysed with the help of t-test. The results revealed that there was a significant effect of classroom learning environment on the performance of first-grade students in English.

Inderpreet Kaur Chachra (2015) studied the effect of smart classroom assisted teaching on the academic achievement of students of different intelligence level in social science. She selected 100 students and categorized them on the basis of intelligence_ below average, average and above average category. It was an experimental study. The result was analysed with the help of t-test. The finding suggested that

there was a significant effect of a smart classroom on achievement on all the three levels of students.Chetan Sharma (2014) conducted a case study on e-governance in India. The aim of the study was to draw out learning from ICT based projects implemented in West Bengal. The project title was 'KYAN (Vehicle of Knowledge)'. It was computer-based learning (CAL) system. The study was based on literature view and various field evaluations conducted in sample districts in West Bengal. The findings of the study revealed that 98% schools had given a positive response after implementing the project. It had improved the attendance of students. 50 % teachers responded that their confidence has increased and it has changed the attitude of teachers and learners. It has increased the group activities in the classroom.

Prakash Chandra Jena (2013) investigated the effect of smart classroom learning environment on academic achievement in science. 60 secondary school students were taken as a sample for the study. It was an experimental study in which two groups randomized pre-test and post-test design was employed. 30 high and 30 low achieving students were taken as a sample. The findings indicated that there was a significant effect of smart classroom learning environment on the achievement of low as well as high achievers in science. They performed better in smart classroom learning environment comparison to traditional learning environment.

Vijaya Mishra (2012) explored the efficacy of Vidya Vahini project in the schools of U. P. Board. She critically examined the project in relation to its aims and objectives in the light of emerging challenges in education and its effectiveness with respect to students and teachers. It was an evaluative and descriptive research. Purposive sampling was used to select the teachers and students. 200 teachers who were trained under Vidya Vahini project selected as a sample and 200 students were also selected as a sample in the same manner. Document analysis, interviews, questionnaires, opinionnaires and checklist were used for the collection of data. The data were analysed qualitatively.

Statement of the problem

A Study of influence of various ICT based projects on Education

Operational Definition of the Key Terms

Information and Communication Technology (ICT) **–** The term that includes all technologies for the communication of information.

ICT based Projects- It encompasses a variety of techniques, tools, content and resources aimed at improving the quality and efficiency of the teaching-learning process.

Education- In the present study, the word 'Education' comprises of curriculum, curriculum transaction, teaching strategies and learning styles of the students.

Objectives of the study

1. To find out the influence of ICT based projects on curriculum.
2. To find out the influence of ICT based Projects on curriculum transaction.
3. To find out the influence of ICT based Projects on teaching process
4. To analysis the influence of ICT based projects on attitude of students towards ICT.

Hypothesis

1. There is no significant difference among the opinion of teachers regarding the influence of ICT based projects on various aspects of teaching strategies.

2. There is no significant difference among the attitudes of students studying with different ICT based programs.
3. There is no significant difference among the attitudes of teachers studying with different ICT based programs.

Delimitations

1. The study is delimited to Balasore only
2. The study is delimited to English medium secondary school only.
3. The study is delimited to class 9th students only.
4. The study is delimited to smart class solutions only.

Research Design- The survey design in the present study is used to know the existing status of the various ICT based projects presents running in schools. It also studies the incorporation of ICT in the school curriculum and procedure adopted for its transaction.

Population

In the present study, all the CBSE and ICSE board secondary schools where these projects are running and all the Kendriya Vidyalaya of Balasore district are included as population for the present study. All the students and teachers of class 9th using these projects in their teaching-learning are the population for this study.

Sample

10 schools related to each project have been selected as the sample. 5 teachers teaching through these projects have been selected from each school and 10 students of class 9th have been selected from each school. Overall 40 schools, 200 teachers and 400 students comprise the sample.

Tools to be used in research

In any type of research, tools are needed to collect data in order to come to conclusions. Depending upon the purpose of this study various tools were used for the acquisition of the relevant data. As per requirement, there was no available tool, so the researcher constructed his own tools. In the present study following tools were used:

- Document analysis.
- Observation schedule.
- Questionnaire for use of ICT in curriculum(self-prepared)
- Statement for teacher's opinion about ICT.
- Attitude scale related to ICT for teachers(self-prepared)
- Attitude scale related to ICT for students(self-prepared)

Procedure of Data Collection

Data were collected from the sample school, teachers, and students by using self-prepared tools of researcher.

Analysis and interpretation of data

Data collected through different tools have been organized in the form of tables and put to analysis.

For objective 1. The curriculum has been analysed by observing the curriculum and syllabus of the subject.

Table-1. Inclusion of ICT in Curriculum

S.N.	Inclusion of ICT in Curriculum	% of schools
1	Inclusion of ICT in Curriculum	100
2	Change in content	NIL

Table-2. Use of ICT based projects in Curriculum

S.N.	Types of incorporation	% of schools
1	Integrated in Curriculum	30
2	Externally Supported the Curriculum	45
3	As a teaching Aids	25

For Objective 2. A questionnaire was used to collect the types of training provided to the teacher to handle the ICT based projects, devices used by the teachers during the teaching-learning process**.**

Table-3. Types of training given to teachers for using ICT based projects

S.N.	Types of training	% of schools
1	Training related to handle ICT based projects	**100**
2	Training related to basic ICT tools	**35**
3	No training	**NIL**

Table-4.Types of devices used to support curriculum transaction

S.N.	Devices	% of Schools
1	Desktop computers without internet	100
2	Desktop computers with internet	78
3	Interactive whiteboards	100
4	Digital camera	100

For Objective 3. The opinion of the 200 teachers have been taken on different statement.
For Objective 4. Researcher used attitude scale to collect data from students. Here the table shows the % of student's attitude towards ICT based project.

Table-5

Level of computer attitude	No of teacher	Responds	%
Extremely High	50	9	18
High	50	19	38
Above average	50	13	26
Average	50	5	10
Below average	50	3	6
Low	50	1	2
Extremely low	50	0	0

Findings of the Research

The major findings of the study are following

1. There is an inclusion of ICT in the curriculum but there is no change in the content. The ICT based projects have been incorporated into the curriculum in different ways. 30% schools have

integrated ICT based projects in the curriculum, 45% schools support curriculum externally whereas 25% schools are using them as teaching aids.

2. 100% teachers were given training to handle the ICT based projects but only 35% teachers were given the training of basic ICT tools like MS-Office.
3. Almost all the schools where ICT based projects are running have interactive whiteboards, desktop computers and digital camera while 78% schools have Desktop with internet connection for curriculum transaction.
4. 100% science teachers are using ICT based projects in the teaching followed by 70% math's teachers, 60% social science and 50% English teachers.
5. ICT based projects had a significant influence on teaching strategies. It influenced the framing of objectives, the process of lesson planning, mode of lesson planning, selecting the contents, way of presentation of the contents, selection of teaching strategies and methods, process of evaluation and also helped in achieving the objectives. Teachers agreed that ICT based projects had influenced the aforementioned processes.
6. Out of 400 students, 157 students, that is 37.25% have favorable attitude, 191, that is have an average attitude, 52 students, that is 13% have an unfavorable attitude towards ICT.

Conclusion

The present study focused on the learning style of the learner and its results reflect that the effective implementation of ICT in classrooms leads to the improvement of learning style of the learner. The present study can be enriching for grooming the teachers as it focuses on the importance of ICT in teaching strategies. It implies that ICT should be used in all aspects of the teaching process that includes the formulation of objectives, planning of lesson, content selection, teaching method and evaluation process.

On the basis of findings of research it may be concluded that ICT based projects have significantly affected the process of education. The study reflects that though, ICT has been infused into the curriculum, but there is no change in the content of the syllabus. The syllabus had no special provisions and modifications for promoting judicious integration of ICT in it. The method of inclusion of ICT in the curriculum also varied from school to school, depending upon the policies of the organization. Some of the schools have integrated ICT into the curriculum while others use it externally or as teaching aids only. It has made the curriculum transaction more effective by using interactive whiteboards and technology integrated content delivery in the classroom. The attitude of teachers for using ICT has been found favourable but there are a good percentage of teachers whose attitudes are still average or low. The teachers hesitate in using ICT in their teaching process probably because of the lack of awareness towards technology and absence of enough training for using such ICT programs. The schools lacking in proper training facilities, enough infrastructure for ICT, absence of well defined policies regarding the use of ICT projects in the classroom promotes unfavorable attitudes towards ICT programs among their teachers and students. The unclear policies of the school management have also affected the formulation of curriculum and its transaction. ICT based projects have also influenced the techniques of teaching. ICT based programs helped the teachers in selecting better methods of teaching various subjects. The teachers unanimously agreed that these ICT projects have positively affected various domains of the teaching process. ICT based programs projected different and innovative measures for the formulation of objectives, process of lesson planning, selection of teaching method and strategies and even the process of evaluation. The ICT projects had remarkable positive influence on all the domains of learning style of the students namely, enactive, figural, verbal, reproducing and constructive.

Reference

1. Abuhmaid, A. (2011). *ICT training courses for teacher professional development in Jordan. TOJET:* The Turkish Online Journal of Educational Technology, 10(4).
2. Akir, Ziad I. (2007). *Impact of ICT on teaching and training:* A qualitative systematic view. Dissertation Abstract International, 67(7), Jan. 2007
3. Albirini, A. A. (2006). *Teacher's attitudes toward information and communication technologies: the case of Syrian EFL teachers.* Journal of Computers and Education, 47, 373-398.
4. Allan H.K. Yuen, Nancy Law and K.C. Wong (2003). *"ICT Implementation And School Leadership: Case Studies Of ICT Integration In Teaching And Learning,"* Journal of Educational Administration, 41(2), 2003, pp. 161.
5. Al-Zaidiyeen, N. J., Mei, L. L., & Fook, F. S. (2010). *Teachers' attitudes and levels of technology use in classrooms:* The case of Jordan schools. International education studies, 3(2), 211.
6. Ananiadou, K., & Claro, M. (2009). *21st century skills and competences for new millennium learners in OECD countries.*
7. Anderson, J. (2010). *ICT transforming education: A regional guide.* Bangkok, TA: UNESCO.
8. Anderson, J., & Glenn, A. (2003). *Building capacity of teachers/facilitators in technology-pedagogy integration for improved teaching and learning.*
9. Anderson Neil (2009). *Equity and Information and Communication Technology (ICT) in Education.* New York: Peter Long
10. Angel Rathnabai, S. (2014). *Effectiveness of ICT Infused Instructional Design IIID in methodology of teaching mathematics at secondary level.*
11. Ainley, J., Banks, D., & Fleming, M. (2002). *The influence of IT: perspectives from five Australian schools. Journal of Computer Assisted Learning,* 18(4), 395- 404.
12. Aristovnik, Aleksander (2012). *The Impact of ICT on Educational Performance and its Efficiency in Selected EU and OECD Countries: A Non-Parametric Analysis.* Turkish Online Journal of Educational Technology - TOJET, 11(3), 144- 152, Jul 2012
13. Asfaw, Melesse,(2006). *Information and Communication Technologies in Ethiopia: Socio-Personal factors affecting adaptation and use.* Dissertation Abstract International, 67(7), Jan. 2006
14. Afshari, M.,Bakar, K. A., Luan, W. S., Samah, B. A., & Fooi, F. S. (2009). *Factors Affecting Teachers' Use of Information and Communication Technology.* Online Submission, 2(1), 77-104.
15. Aktaruzzaman, M.,Shamim, M. R., & Clement, C. K. (2011). *Trends and issues to integrate ICT in teaching and learning for the future world of education.* International Journal of Engineering & Technology, 11(3), 114-119.
16. Awan, R. N. (2011). *What Happens to Teachers ICT Attitudes and Classroom ICT Use when Teachers are made to Play Computer Games?.* International Journal of Information and Education Technology, 1(4), 354.
17. Ayebi-Arthur, K. (2010). *Relationship between Students' Attitudes toward ICT and Their Achievement in ICT at the University of Cape Coast. Online Submission.*
18. Bandyopadhyay, S., & Thakur, S. S. (2016). *ICT in Education: Open Source Software and its Impact on Teachers and Students.* International Journal of Computer Applications, 151(6).