

A comparative study on the scope of ICT intervention of Government & private schools of Nagaon District

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1. Introduction:

The present age is characterized by an unprecedented explosion in the major areas of knowledge and aspirations along with rapidly increasing population. Because of rapid technological growth, scientific advancement and development of communication and transportation network, the world is shrinking into global village with blurred geographical, social, economic and political boundaries. Technological advancement has resulted in wide use of electronic communication and information media making easy and quick access to the body of knowledge available anywhere and at any time.

Mobile technologies and seamless communications technologies support 24x7 teaching and learning. ICT is often perceived as a catalyst for change, change in teaching styles, and change in learning approaches and in access to information (Watson, 2005). It refers to technologies that provide access to information through telecommunications. Use of ICT has changed our conventional ways of learning and proposes the need to rethink education in terms of a more current context (White, 2010). ICT capability is fundamental to participation and engagement in modern information society. ICT can be used to find, develop, analyse and present information, as well as, to model situations and solve problems.

Education is the first and best key area for ICT applications. ICTs can help by providing alternative possibilities for education (Casal, 2007). The purpose of ICT in education is generally to familiarize students with the use and workings of computers, and related social and ethical issues. Use of different information communication technologies has become inevitable for students in learning. This has also helped the students to retrieve their required information within a short time.

2. Review of the Related Literature:

The review of earlier studies helps to avoid unnecessary duplication of the study, provides assistance in formulating research problem, specifying objectives, making useful hypotheses, developing theoretical background, use of proper methodology and drawing meaningful conclusions and generalizations.

With these objectives in mind, effort has been made to present the review of related studies. Although it is beyond the capacity of the researcher to gather all the related information about the works already done due to shortage of time, a brief review of related studies is provided below which is further divided into two parts: (i) Studies done Abroad (ii) Studies done in India

2.1 Studies Done Abroad:

Shalendra Kumar & Ben Kei Daniel (2016) conducted their research on the integration of learning technologies into teaching within Fijian Polytechnic Institutions. The research aimed to identify opportunities afforded by these technologies in enhancing student learning, as well as possible adoption challenges. Result showed that respondents strongly valued the contribution of learning technologies in enhancing students' learning.

Wanjala, Elizabeth. K and Mukwa (2011) found that few teachers are using ICTs to manage the classroom and to integrate technology into several of the content areas. Professional development options were varied. They pointed out the most teachers use trial and error methods, learn through course work taken at colleges or universities, and support others or receive personal or expert support as significant methods of learning how to use Information Communication Technologies.

Rachmawati and Johancynthia (2010) conducted on ICT based learning schools to assess the challenges on implementation. Results indicated that ICT based learning the role of teachers were significantly changed from transferring of knowledge into facilitation of learning, from a main source person to becoming a manager of learning. Other challenges are also addressed among which it cites the importance of leading teachers towards implementing ICT based learning in order to improve students' capability and skills.

Zakaria, Watson & Edwards (2010) conducted their research on the use of Web 2.0 technology by Malaysian students. The general

opinion gathered about the integration of Web 2.0 tools into learning was positive. Result showed that students preferred using e-mail to disseminate and share digital contents. Similarly, it was also found that for finding information related to education, students prefer to use search engines instead of asking friends or teachers

Luambano & Nawe (2004) investigated the internet use by students of the University of Dare es Salaam. Findings revealed that majority of the students did not use internet due to the inadequacy of computers with internet facilities, lack of skills in internet use and slow speed of computers. It also revealed that most students who used the internet did not use it for academic purposes. It was suggested that more computers connected to the internet should be provided and training should also be given to the students on the use of internet (p. 16).

Njagi & Isbell (2003) assessed the students' attitudes towards web-based learning resources. The study addressed the differences in attitude change, towards computer technology, for students using web-based resources and those using traditional textbooks. It was pointed out that the majority of the students in both web-based and the traditional textbook groups had owned personal computers and had Internet accessibility at their homes; it is therefore possible that computer usage was equal for all groups.

Crawford (2003) searched the use of electronic information services by students at Glasgow University. The study pointed out the insufficient numbers of PCs for students, problems with password notification and insufficient technical support. A need for sophisticated network was also found (p. 35).

Oliver (2002) investigated the role of ICT in higher education in 21st century. He stated that ICT offers a student centered learning, supporting towards knowledge construction and distance education, or even learning at the leisure time. It expands the pool of teacher and students as well. It summarizes that we should see marked improvements in many areas of educational endeavours. Learning should become more relevant to the needs of stakeholders' needs; learning outcomes should become more deliberate and targeted. ICTs within education have a strong impact on, what is learned and how it is learned.

2.2 Studies Done in India:

Rajakumaran, Soureche and Viswanathan (2010) examined a study to assess the “Role of ICT in Teaching and Learning Mathematics”. It was found that ICT enable the students to manipulate diagrams dynamically and it encouraged them to visualize the geometry as they generate their own mental images. It is also enhanced opportunity for students to be introduced to interesting problems and associated mathematical subject matter much earlier than before possible.

Neeraj and Anitha (2010) did a study on “Computer and Internet awareness in school going students”. The study found that the required level of awareness about computer and the internet was missing. The real power of the computer is revealed in the internet. However, the penetration of computer and internet was still far from desired.

Krishnaveni and Meenakumari (2010) focused on “Usage of ICT for Information Administration in Higher education Institutions.” Results revealed that a comprehensive set of functional areas of information administration. It was found that current level of usage indicated a clear integration of ICT for managerial or information based administration in higher education institutions. Enhancing the usage of ICT on these functional areas and especially for general administration will enable enhancement of overall information administration in higher education institutions of global environment. It is serving as a base for education planers to deploy technology-based administration in higher education institutions.

Antony Gracious (2009) studied on “e-Training the future world of education”. The results revealed that e-training was very easier, faster, 56 reduces the distance and is much sophisticated. Therefore, the experts are able to present their e-resources, e-lectures through online and the learners listeners can learn it by visualizing from their places, as well as, interact through video conferencing and share the resources through email immediately. This study suggested that there is no doubt, ICT and its components will replace the future teacher education and in service programs with e-training.

Anil Ambasana (2009) conducted a research on “Utilization of computer technology in remedial instruction”. Results concluded that computer – assisted instruction programme in remediation task was found to be successful as the students were able to overcome the difficult points in the content. Hence, they were able to increase their achievement

significantly. Utilization of computer technology in remedial instruction was found effective.

Kmalanayan (2008) designed a study on “Implications of Information Technology for teacher education and research”. It was pointed out that information technology in education is created the need for all teacher education faculties to be proficient in the use and integration of ICT into mainstream teacher education programme delivery.

Nimavathi and Gnanadevan (2008) conducted a research to examine on “Effectiveness of Multimedia programme in teaching science”. Results were found that multimedia programme prepared by the researcher is more effective for the achievement in science of ninth standard students. The students learning through multimedia programme were found to be better than the students learning through the conventional methods of teaching.

Nachimathu and Vijayakumari (2007) did research on “Modern ICT trends in teaching technology”. They pointed out most of the teacher educators are not able to use the media technologies due to lack of training. He suggested that the teachers have to be equipped with the skills and abilities from time to time to handle the latest technology as the quality and competence of teachers affect instruction with a strong impact on student learning.

Kumar (1998) designed an experimental study to examine the relative effectiveness of three methods of instruction, exposition method and programmed learning. The results found that (i) The multimedia method was more effective than either the programmed learning method or the expository method. (ii) The programmed learning method was more effective than the expository method. (iii) Retention in learning by the multimedia method was higher than by the other two methods. (iv) Retention in learning by the programmed learning group and the expository group was equal. (v) There was no interaction between the three methods of instruction and the levels of intelligence.

3. Objectives of the Study:

The following objectives were set for the present study:

1. To study the awareness among the Government and private high school students regarding ICT.
2. To compare the scope and implementation of ICT intervention at the

different institutions of both the government and private schools of urban area of Nagaon District.

Hypothesis:

H₁: There is a significant difference between Government and private school students with regard to their awareness.

H₂: There is a significant difference between Government and private schools in terms of their scope and implementation of ICT.

4. Methodology:

The data collected were in the form of a primary data, i.e. a self-structured questionnaire developed and standardised by the investigators themselves and secondary data were collected from various journals, newspapers, internet sources etc. Initially, thirty (30) questions were formed related to ICT intervention but later these were reduced to twenty- two (22) questions.

Delimitation of the Study:

- a. The proposed study is delimited to the students of Class IX and X; with age group of 14 to 16 only.
- b. With regard to schools, the study is delimited to only 5 Government high and 5 private high schools of urban area in Nagaon District.

Population:

The present study was conducted in five (5) Government high schools and five (5) private high schools of urban area of Nagaon District. All students who were pursuing their education in the session 2017-18 in different private and Government high schools constitute the population of the study.

Sample and Sampling Techniques:

After defining the population, the most important task is to draw an adequate representative sample from the population. Sample can be defined as a smaller representative proportion of the population, the selection of which requires careful planning and appropriate procedure.

In the proposed study sampling will be done in two levels-

- (i) Selection of sample schools, and
- (ii) Selection of sample students

For the present study, stratified random sampling technique has been used. Keeping in view the adequacy and representative quality of the sample 200 regular students (100 from Government and 100 from private) studying in class IX and X were selected from five (5) government and five (5) private high schools.

5. Data Analysis:

Respondent's Age and Gender: Data shows that 200 respondents were between 14 to 16 years old. Out of 200 respondents, 100 respondents were from the govt schools and 100 were from private schools fifty (50%) were male and fifty (50%) were female. (See Figure 1)

Figure: 1: Shows frequency distribution of gender.

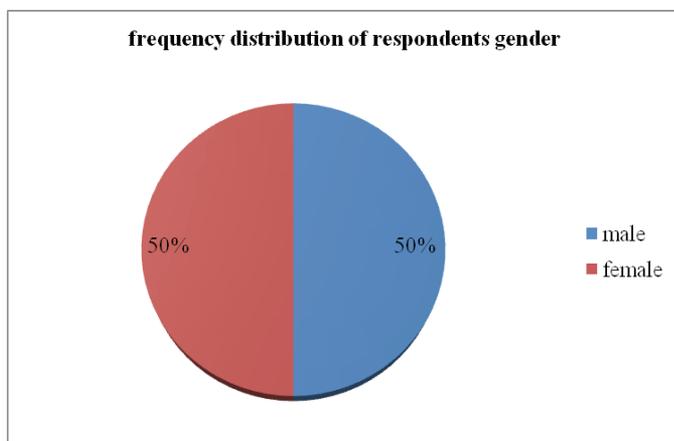


Table 1: Shows Implementation of ICT in Government Schools

Sr. No	Total no. Of computer	With internet access	Interactive white board	Data projector
1	10	2	2	1
2	12	3	2	2
3	12	5	2	1
4	10	3	1	1
5	12	3	1	2
Sum total	56	16	8	7
Mean	--	3.2	1.6	1.4
Median	--	3	2	1

Mode	--	3	2	1
Standard deviation	--	3.1	0.55	0.55

Table 2: Shows the Implementation of ICT in Private Schools

Sr no.	Total no. Of computer	With Internet access	Interactive white board	Data projector
1	40	25	10	5
2	35	20	10	4
3	40	20	8	5
4	30	15	8	4
5	35	20	10	5
Sum total	180	100	46	23
Mean	--	20	9.2	4.6
Median	--	20	10	5
Mode	--	20	10	5
Standard deviation	--	3.54	1.1	0.55

Table 1 & 2 shows ICT Implementation in Government and Private Schools.

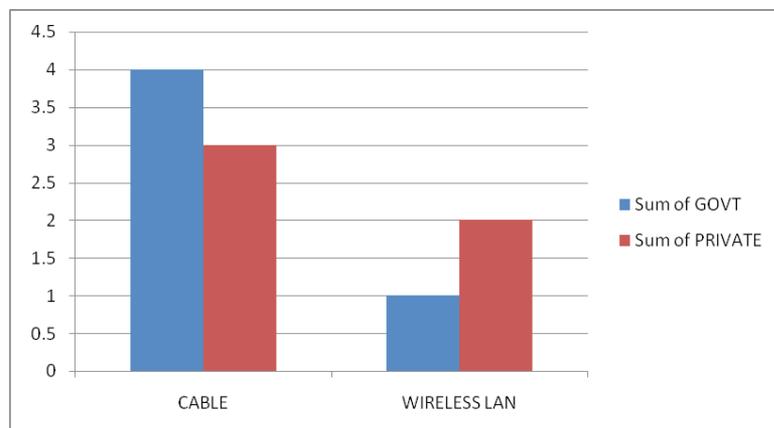


Figure: 2 Mode through which school accesses ICT

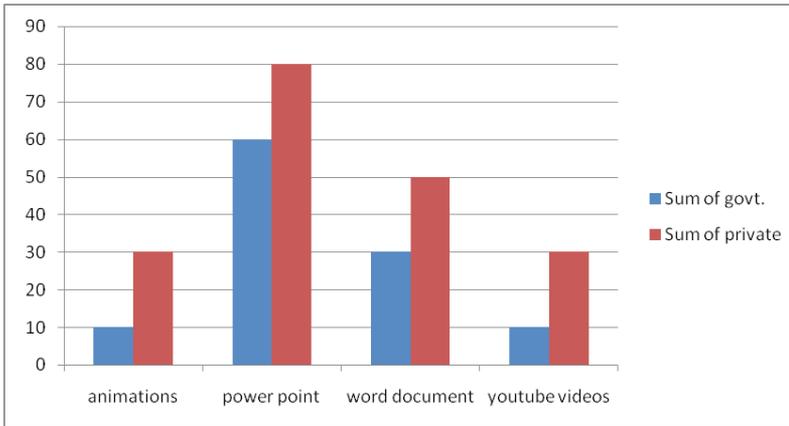


Figure: 3 ICT used in Classroom

It is clearly seen from figure 3 that there is a difference in use of ICT in classroom. The results show that private schools use more of the ICT tools in classroom during their lectures than that of the Government schools.

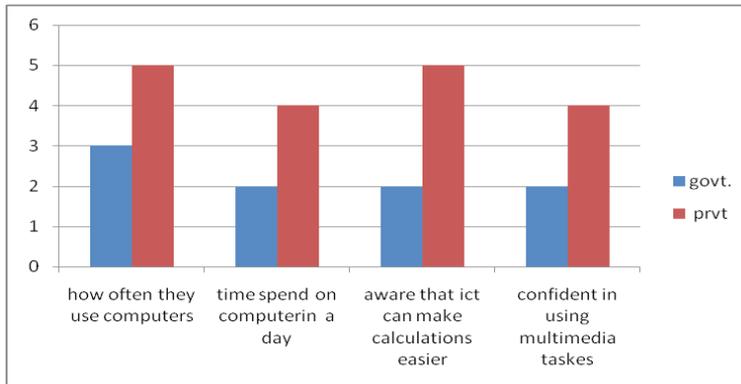


Figure 4: Students level of Awareness regarding ICT.

Figure 4 clearly shows that there is a visible difference among the students of Government & private schools in terms of their awareness regarding ICT.

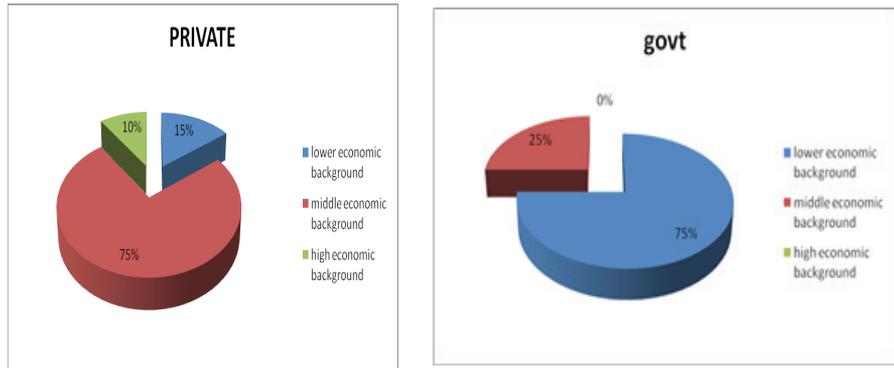


Figure: 5 Shows Economic Background of The Students

6. Hypothesis Testing:

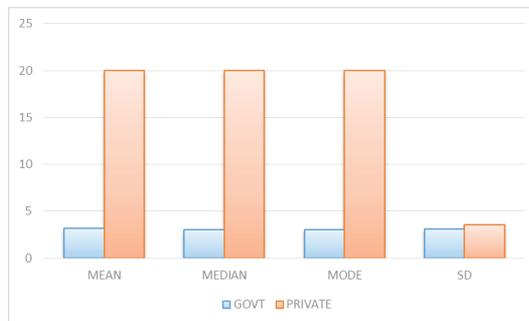


Figure (A): Shows Mean, Median, Mode, SD of Government& private schools in terms of internet access. Results shows that there is a visible difference in the both the Government and private schools in terms of internet access.

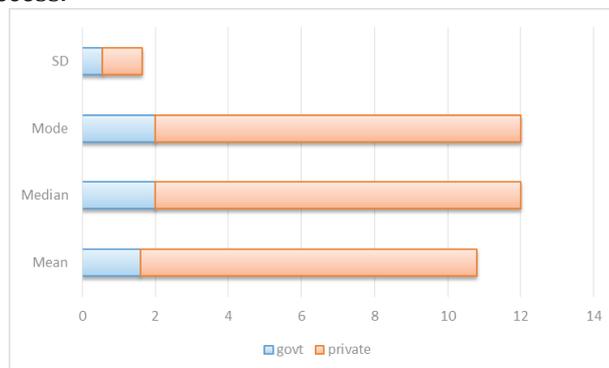


Figure (B): Shows Mean, Median, Mode, SD of Government& private schools in terms of use of interactive white board. Results clearly show a difference in terms of implementation of ICT in Government and private schools.

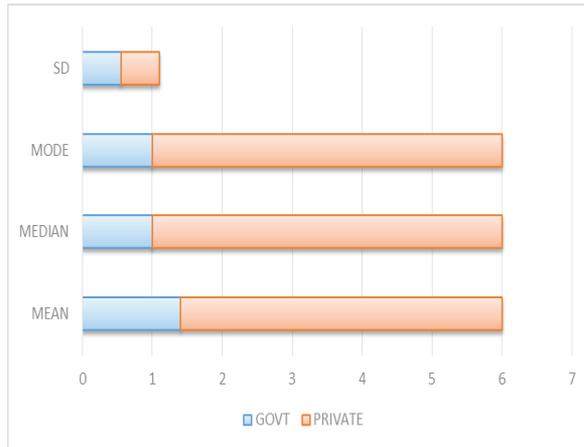


Figure (C): Shows Mean, Median, Mode, SD of Government and private schools in terms of use of Data Projector. A difference is seen in terms of use of data projector in Government& private schools.

From the above given tables and figures it can be seen that there is a significant difference in between Government and private school students with regard to their awareness and there is also a significant difference between Government and private schools in terms of their scope and implementation of ICT. Therefore, the hypothesis formulated can be accepted.

6. Findings of the Study:

- The majority of students were between 14 to 16 years of age.
- The students of Government schools do not have much access to the internet in comparison to that of private school students.
- In the Government, schools there are less availability of ICT tools in comparison to that of private schools.
- The implementation of ICT in private schools is more that of the Government schools.
- Majority of students from Government schools reported that they spend a very less time on computer. Most of them also responded that do not use the internet for learning purpose.
- The study found that the available PCs in computer labs of Government schools are inadequate for meeting the needs of student and they feel problem in accessing computers.

- In this study, the respondents reported that their teachers sometimes use ICT during lecture.

7. Suggestions:

- Keeping the importance of ICT in view, the study concluded that teachers should make maximum use of ICT during their lecture, because it has a great impact on student's learning.
- The number of PCs should be increased in the Government schools so that students can avail much of its facilities.
- Teachers should also be given training on ICT so that they can make use of it in the classroom.
- More computers connected to the internet should be provided and training should also be given to the students on the use of internet.

8. Conclusion:

The integration of ICT can promote significant changes in the practices of teaching and learning and is beneficial for students. ICT has provided opportunity for the learner to receive maximum information. The use of ICTs in education has a positive impact on teaching, learning, and research. ICT can affect the delivery of education and enable wider access to the same. The present study conforms with **Luambano & Nawe (2004)**, as findings reveal that majority of the students did not use internet due to the inadequacy of computers with internet facilities, lack of skills in internet use and slow speed of computers.

It also reveals that most students who used the internet did not use it for academic purposes. The present study also conforms to the study done by **Crawford (2003)**, the study pointed out the insufficient numbers of PCs for students, problems with password notification and insufficient technical support.

The present study also conforms to **Neeraj and Anitha (2010)** on Computer and Internet awareness in school going students, the study reveals that the required level of awareness about computer and the internet is missing. The real power of the computer is revealed through the internet. However, the penetration of computer and internet is still far from desired. ICT increases flexibility so that learners can access the education regardless of time and geographical barriers. It can influence the way students are taught and how they learn. It would provide the

rich environment and motivation for teaching learning process, which seems to have a profound impact on the process of learning in education by offering new possibilities to both the learners and teachers.

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