AN INVESTIGATION OF USING ICT IN SCHOOL OF TINSUKIA DISTRICT, ASSAM

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ABSTRACT

The purpose of the study was to explore the uses of ICT tools in educational institutions of Assam with special reference to the Tinsukia District. The study further seeks answers to the following questions: Are the educational institutions in Tinsukia district equipped with adequate ICT facilities? Data was collected through a questionnaire method via an online survey from the primary to higher Secondary school teachers and students of the Tinsukia district. It was collected from 30 schools both private and government schools. The findings showed that schools still lagging in the use of ICT tools though many schools both private and government have implemented ICT in the schools there was a lack of proper ICT-trained teachers and Internet facilities in the schools. The schools of Tinsukia district need to give more emphasis on the training of teachers for ICT uses and to bring the ICT tools in proportion to the number of students in the school with proper Internet facilities.

KEYWORD: ICT, Tinsukia, digital, stakeholders, school.

INTRODUCTION

ICT stands for Information and Communication Technology. ICT refers to technologies used to handle telecommunications, broadcast media, intelligent building management systems, audio-visual processing, and transmission systems. It encompasses a wide range of hardware, software & networking components that enable information to be communicated & accessed efficiently. To promote the use of ICT in the school education system, the govt. of India introduced the ICT schools scheme in the year 2004, by merging the scheme of educational technology 1972 & computer literacy & studies in secondary schools. The history of ICT in education in India dates back to the late 20th century when computers started becoming more accessible. In the 1980s and

1990s, initiatives like the 'Computer Literacy and Studies in Schools' (class) program aimed to introduce computers to schools. The national policy on education in 1986 emphasized the importance of integrating technology into education. The 2000s saw the launch of various government initiatives like the National Task Force on Information Technology and Software Development and the national mission in education through ICT in 2009, which aimed to leverage ICT to enhance the quality of teaching and learning. Additionally, private organizations and NGOs have played a significant role in promoting ICT in education through various initiatives and partnerships. Over the years, the use of ICT in education has expanded, with the introduction of digital classrooms, online learning platforms, and initiatives like the Digital India campaign further driving its integration into the education system. ICT education refers to the integration of technology into the teaching & learning process. It includes tools & resources like computers, the internet, software applications & multimedia to enhance education delivery, promote active learning & improve outcomes. ICT allows schools to use advanced technology & equipment in the classroom to give students a better learning experience. The main objective of ICT is to provide correct information comprehensively with different examples. It helps learners to broaden their information base. It provides variety in the presentation of content, which helps learners to learn according to their own pace. It helps in better understanding & long-term retention of information. Overall, integrating ICT in education has the potential to transform teaching and learning, preparing students for success in the digital age.

OBJECTIVES

1. To investigate the trained and untrained ICT teachers in schools of Tinsukia District
2. To assess the knowledge of the teachers and students on the use of ICT facilities in the school of Tinsukia District.
3. To find out the attitude of using internet services and tools by the teachers and student

REVIEW LITERATURE

Hadisalehi (2012) attempted to investigate the barriers and challenges that prevent teachers from integrating ICT in the classroom. The researchers have highlighted that insufficient technical support at schools and little access to the internet and ICT were the major barriers that prevent teachers from integrating ICT into the teaching curriculum. The researchers also found that a shortage of class time was another significant barrier discouraging teachers from using ICT in the classroom.

Tondeur et al. (2007) found the existence of a gap between the proposed and the implemented curriculum for ICT. They stated that teachers mainly focus on the development of technical ICT skills, whereas the ICT curriculum centers on the integrated use of ICT within the learning and teaching process.

Kumar (2001) highlights the immediate need for the automation of academic libraries in India covering the concept, need, and purpose of library automation, advantages, and requirements of the right hardware and software to initiate the library automation programmer in an academic library.

Sinha and Bhattacharjee (2003) Discussed in detail the planning of automation at Assam University, Silchar, and highlighted various problems with the selection of hardware, software, staff training, retro-conversion of old records, and requirement of adequate funds for the implementation of the automation of Assam university library under the Inflibnet Programmed.

Fu (2013). It reviews studies that have touched upon the merits of ICT integration in schools, barriers or challenges encountered in the use of ICT, factors influencing successful ICT integration, as well as the importance of school culture in the use of ICT.

Pawar (2019). Information and Communication Technology plays a crucial role in influencing students' learning outcomes when teachers are digitally trained and adept at integrating ICT into the curriculum. Schools utilize various ICT tools for communication, creation, distribution, storage, and information management. In certain educational contexts, ICT is intertwined with the teaching and learning process, such as the transition from slates to interactive whiteboards, student use of Smartphones or other devices for learning, and the adoption of a blended learning model. By digitally empowering and training teachers on ICT utilization, these approaches can enhance higher-order thinking skills, offer creative and personalized avenues for students to demonstrate their understanding, and better equip students for technological advancements in society and the workforce. When planning ICT initiatives, it is essential to consider factors like cost-benefit analysis, infrastructure maintenance, and ensuring teacher support to ensure effective ICT implementation.

Author (2020) The author emphasizes how ICT tools can enhance teaching and learning experiences by fostering interactive and engaging learning environments, supporting personalized learning, and promoting critical thinking skills among students. The article also underscores the importance of teacher training and professional development in utilizing ICT effectively, while addressing challenges such as access disparities and the digital divide. Overall, the article provides valuable insights into the role of ICT in education, offering practical recommendations for educators to leverage technology to improve the quality of education and prepare students for success in the digital age.

Galanouli & Mcnair (2001) Prompt the investigation of learners' attitudes towards ICT-based help during teaching practice sessions when they are in the field. More than likely, the dissertation would be about existing research that was conducted about the significance of ICT in education, the problems that the integration of ICT in the teaching profession might arise, and the need for support for future teachers when they are dealing with ICT.

Senkbeil (2021) Investigates ICT-related variables as predictors of ICT literacy beyond intelligence and prior achievement, the literature review would likely delve into what ICT literacy is and break it down into its most relevant aspects. Such a program is likely to incorporate digital skills, information literacy, and critical thinking in the digital environment, as well as the use of ICT tools for communication, teamwork, and solving problems.

Das (2020), conducted a study on, the challenges of using ICT for inclusive education in northeast India, the inclusion of ICT in education is essential especially in school education because school education is considered the foundation stage of education. The application of ICT in the field of education has covered a vast area i.e., from pre-primary to higher education, research work, communication, information, etc., In the present era without technology, we just can't imagine full-fledged or quality education.

Amin (2023), conducted a study on, the inclusion of ICT in education: its needs and challenges in secondary schools of char areas of Assam, inclusive education refers inclusion of all the students irrespective of their sex, race, color, poverty, disability and they have given equal opportunity in education and to be considered as being an integral part of the learning community.

METHODOLOGY

A questionnaire was designed after conducting a comprehensive review of the related literature. We choose this survey to assess the ICT resources available in schools across Tinsukia district. The survey was conducted among students and teachers from various schools within Tinsukia district. We were using an online questionnaire to gather responses from participants. The questionnaire was accessible through a secure link provided to the schools in Tinsukia district. There were 30 schools from where we collected the data. Results were presented with the help of tables and different figures.

Data collection

Table 1 *Schools and their responses*

YOUR NAME	NAME OF THE SCHOOL	YOU ARE	TOTAL NO OF STUDENTS	TOTAL NO OF TEACHER	NO OF CLASSROOM	AVAILABILITY OF COMPUTER LAB	COMPUTER AVAILABLE	INTERNET CONNECTION	PROJECTOR AVAILABLE	SMART BOARD AVAILABLE
1	S1	S	2000	30	24	YES	20	YES	NO	NO
2	S2	S	1300	45	15	YES	25	YES	YES	YES
3	S3	T	1500	17	10	YES	20	YES	NO	YES
4	S4	S	40	30	24	YES	10	NO	NO	NO
5	S5	T	265	18	14	NO	1	NO	NO	NO
6	S6	T	645	42	15	YES	6	YES	YES	YES
7	S7	T	265	12	12	YES	10	YES	YES	YES
8	S8	T	500	20	10	YES	7	YES	YES	NO
9	S9	S	1600	45	45	YES	50	YES	YES	YES
10	S10	S	180	15	3	YES	80	YES	YES	NO
11	S11	S	850	30	15	YES	35	YES	YES	YES
12	S12	S	1500	27	29	YES	65	YES	YES	NO
13	S13	S	68	34	26	MAY BE	18	YES	YES	YES
14	S14	T	73	4	4	NO	0	NO	NO	NO
15	S15	S	3000	20	15	YES	10	YES	YES	NO
16	S16	S	104	7	5	YES	6	YES	YES	YES
17	S17	S	260	27	14	NO	0	YES	NO	NO
18	S18	T	1013	19	19	YES	10	YES	YES	YES
19	S19	T	120	4	5	NO	0	NO	NO	NO
20	S20	S	110	8	5	YES	0	YES	YES	YES
21	S21	T	544	20	14	YES	0	YES	YES	YES
22	S22	T	28	7	2	NO	0	YES	NO	NO
23	S23	T	210	27	6	NO	0	YES	NO	NO
24	S24	S	500	19	13	YES	0	NO	NO	NO
25	S25	S	27	4	5	NO	0	YES	YES	YES

26	S26	T	50	8	5	NO	0	YES	NO	NO
27	S27	T	35	13	4	NO	0	NO	NO	NO
28	S28	T	79	4	6	NO	0	NO	NO	YES
29	S29	S	400	5	17	YES	0	NO	YES	NO
30	S30	S	1000	17	16	YES	0	YES	NO	NO

NOTE: Due to privacy concerns, student name was denoted as 1,2,3….., school name was denoted as S1, S2, S3…. Student as S, teacher as T

Table 2: Arrangement of their responses in Yes/No format

AVAILABILITY OF COMPUTER LAB		AVAILABILITY OF SMARTBOARD		AVAILABILITY OF INTERNET CONNECTION		AVAILABILITY OF PROJECTOR	
YES	NO	YES	NO	YES	NO	YES	NO
19	11	13	17	20	10	17	13

DATA ANALYSIS:

1 Respondent's Age:

Thirty responses were selected to obtain data from various schools in the Tinsukia district. out of 30 respondents, data shows that 2 (6.7%) respondents were between 5-12 years old,6(20%) were between 13-18 years old, and 3 (10%) respondents were between 19-25 years old, 14(46.7%) respondents were between the age 26-45 years old, and last 5(16.7%) respondents were above 45 years old.

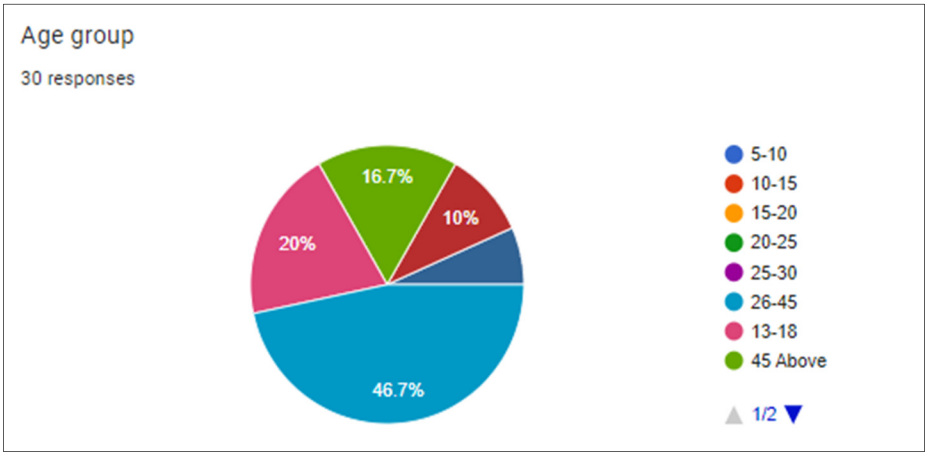

Figure 1: Respondent Age

2. Smart boards used in the classrooms:

Thirty responses were selected to obtain data from various schools within the Tinsukia District. Out of 30 responses data shows that 13(43.3%) schools are using smart boards in the classrooms and 17(56.7%) schools are not using smart boards in the classrooms.

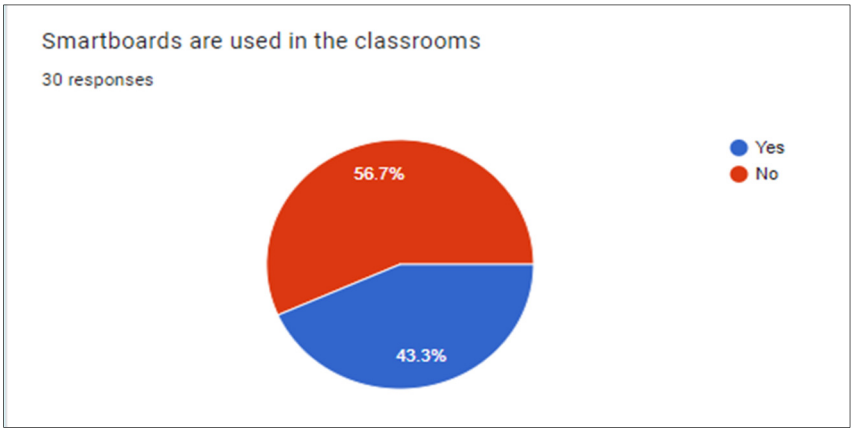

Figure 2: Pie Chart Shows Percentage of Smart Board Used in Classrooms

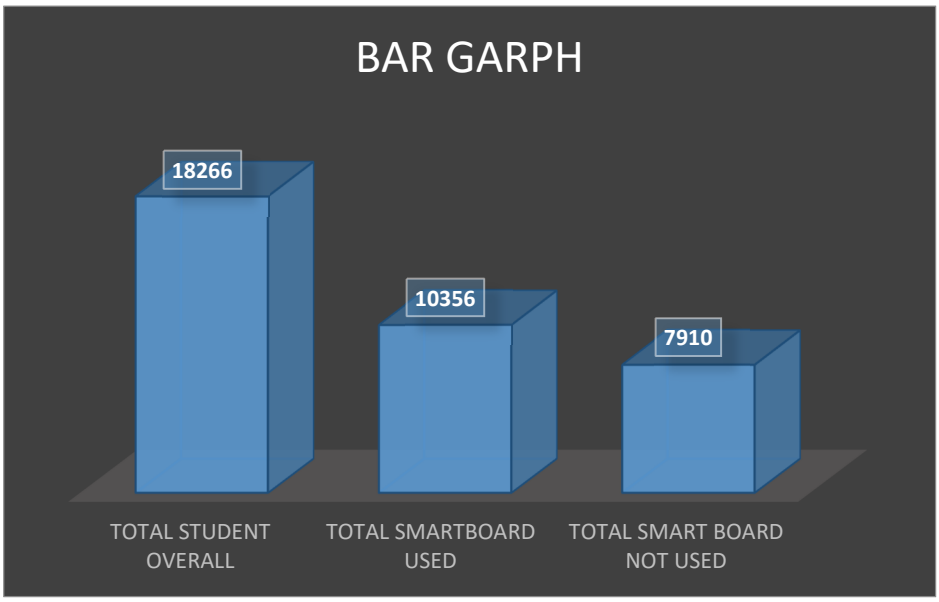

Figure 3: The Bar Graph represents the Total Number of Students, Smart Board Used, and Smart Board not Used.

3. Computer laboratory in the school:-

The pie chart shows about computer laboratories of 30 schools in the Tinsukia district. Out of 30 schools in the Tinsukia district, 19(63.3%) schools have computer laboratories, 10(33.3%) schools have no computer laboratory, and 1(4.4%) schools have or have no computer laboratory.

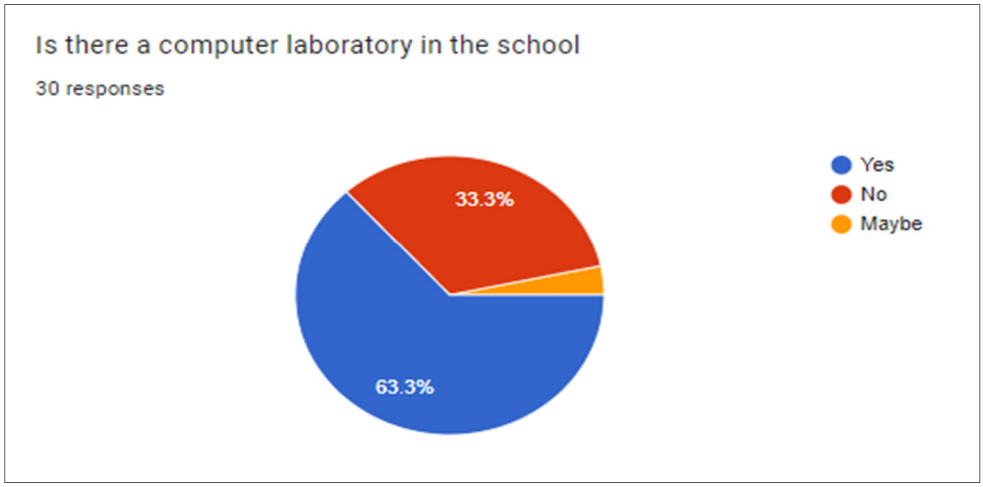

Figure 4: computer laboratory used in school

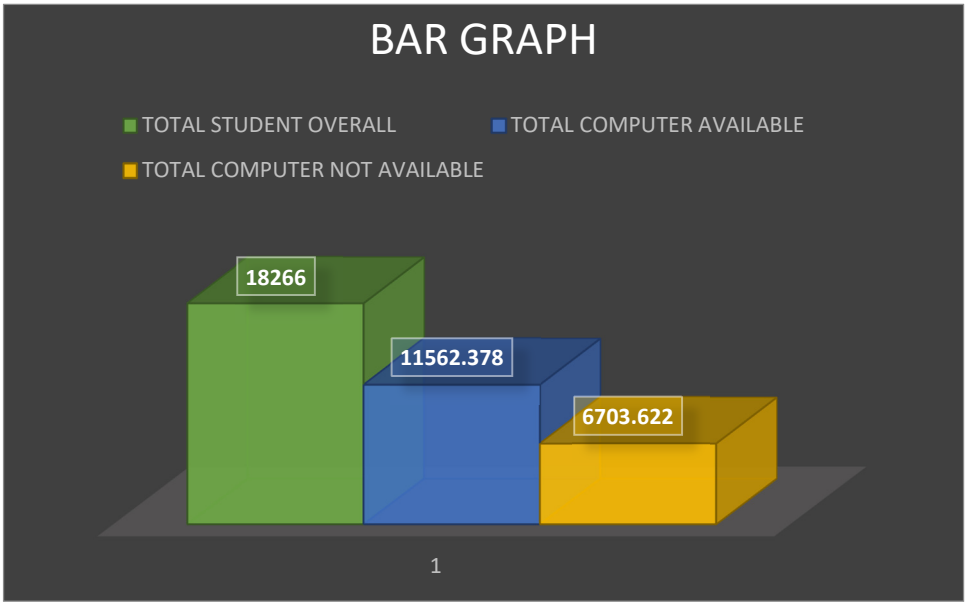

Figure 5: The Bar Graph shows the Total number of students, Computer lab available and not available

4. Computer teacher in the school:

Thirty responses were selected for obtaining data from various schools of Tinsukia district Out of 30 respondents data shows that there are 14(46.7%) schools have computer teachers,2(6.7%) have maybe and 14(46.7%) schools have not computer teachers.

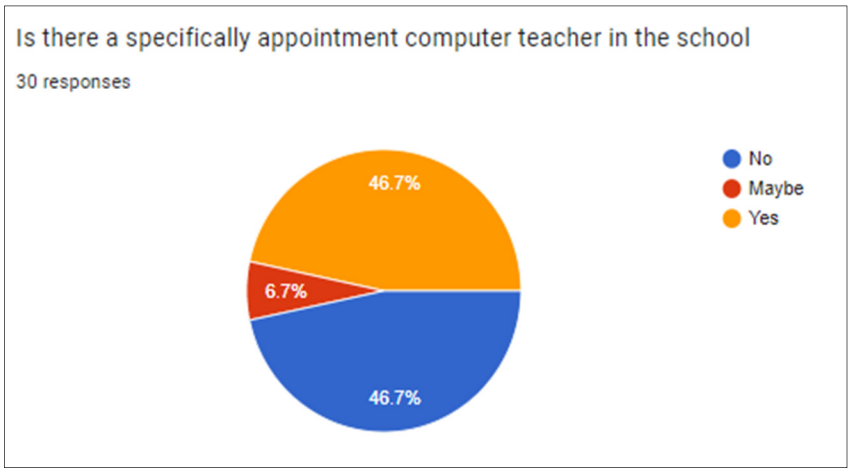

Figure 6: computer teacher in school

5. Availability of projector:

The below pie chart shows the data available ability of projectors in the classrooms of 30 schools. The data indicates that a majority of schools classroom 16(53.3%) have projectors available for use. however, a significant portion 14(43.3%) of classrooms do not have projectors available, potentially limiting the use of visual aids in those settings. The small number 1(3.4%) of respondents are unaware of the availability of projectors in schools. Overall, the data suggests that while a considerable number of schools have projectors available, there may be room for improvement in ensuring equitable access to such resources across all educational settings.

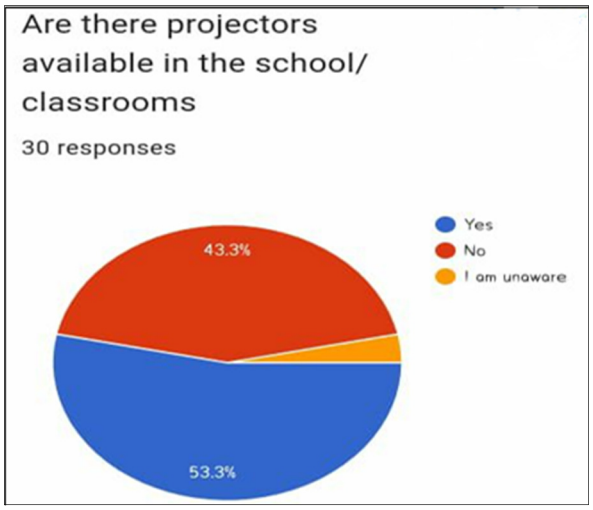

Figure 7: Percentage of projectors available

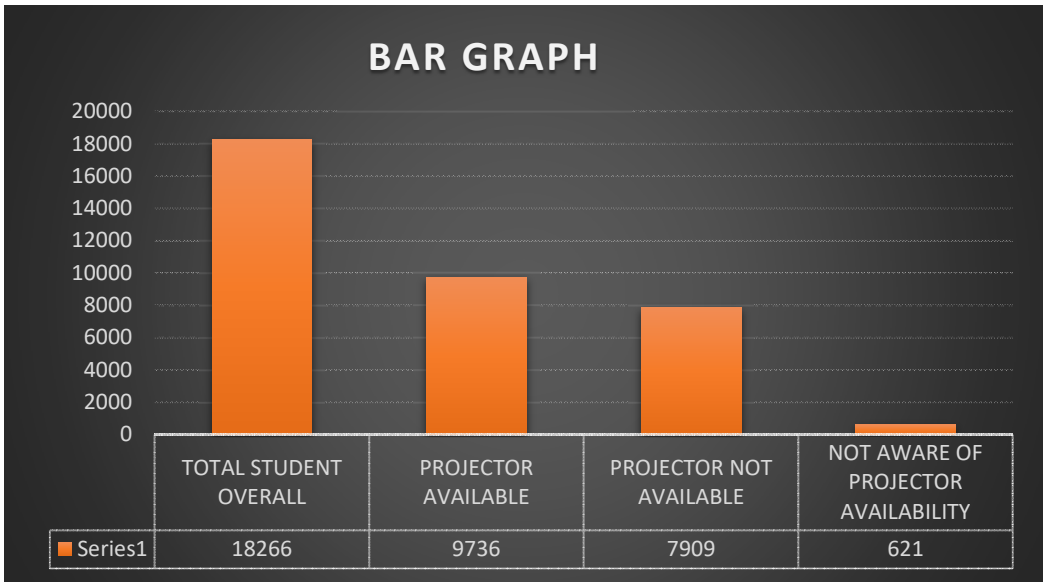

Figure 8: The bar graph shows the Total number of students, projector available, projector not available, and who are not aware of it

FINDINGS

The major findings of the ICT survey conducted in 30 schools of Tinsukia District of Assam show that the educational institutes of Tinsukia District are still lagging in the field of integration of ICT tools with academics. Out of 30 respondents, data shows that 2 (6.7%) respondents were between 5-12 years old,6(20%) were between 13-18 years old, and 3 (10%) respondents were between 19-25 years old, 14(46.7%) respondents were between the age 26-45 years old, and last 5(16.7%) respondents were above 45 years old. The study found that out of a total of 30 schools 13 (43.3%) schools are using smart boards in the classrooms and 17 (56.7%) schools are not using smart boards in the classrooms. In this study, it has also been found that 19(63.3%) schools have computer laboratories, 10(33.3%) schools do not have computer laboratories and 1(4.4%) schools may or may not have computer laboratories. The study also found that out of 30 schools, 14(46.7%) schools have computer teachers, 2(6.7%) may or may not have computer teachers and 14(46.7%) schools have no computer in schools. Regarding the availability of projectors, a majority of schools in classroom 16 (53.3%) have projectors available for use. However, a significant portion of 14(43.3%) classrooms do not have projectors available, potentially limiting the use of visual aids in those settings. The small number 1 (3.4%) of respondents are unaware of the availability of projectors in schools.

DISCUSSION

After comparing the research with other work, it was found that all the research papers had a common objective on them. If the Schools of different districts like Tinsukia, Changlang, Namsai, and others had adequate ICT facilities in them or not, the teachers and students would be aware of the uses of ICT tools or not. And if the school had enough internet facilities to provide ICT tools in both private and government schools of the above district. The research paper of Changlang district has adopted the method of survey using questionnaires both by visiting the Schools physically and via online platforms. The research paper of Tinsukia district has adopted the method of survey using questionnaires via an online secure platform. The findings of the study also have many similarities as the schools in both private and government had a disproportionate number of ICT tools available and internet facilities. Schools of all the researched districts still lag in many terms of internet facilities, properly trained teachers, and adequate knowledge of ICT use in the Schools of both government and private Schools.

Comparing the two studies, both Salehi and Salehi (2012) and the recent survey in Tinsukia schools highlight common barriers to ICT integration, such as insufficient technical support and limited access to ICT tools. However, while Salehi and Salehi focused on broader challenges, the Tinsukia survey delved into specific ICT infrastructure availability, revealing varying levels of engagement across different school types and mediums of instruction. Additionally, the Tinsukia school survey highlighted varying levels of engagement with technology, with 36.7% of students and 43.3% of teachers showing positive responses. The availability of ICT infrastructure like computer laboratories and projectors was higher in Tinsukia schools compared to Salehi and Salehi's findings, indicating some progress in ICT integration.

ICT is important in Tinsukia school because it is an important tool for students' future learning experiences. ICT helps students to learn new things and understand them properly. The New Education Policy implemented new things in learning for better understanding and proper growth so in every school it is important for the teachers as well as students to learn new things properly and understand them better. In Tinsukia district, we can see there are many schools including private and government. There are many students enrolled for their studies and to fulfill the aim of these students and give the proper direction for their future achievements it is important to implement ICT tools in every school. The district also took as a center point of communication

between Assam and Arunachal. It helps both state students to learn new things. So it is highly needed that every school in Tinsukia district can activate ICT tools in their schools for better education.

SUGGESTION

Based on the findings of the ICT survey conducted in Tinsukia District it's evident that there is significant room for improvement in integrating ICT tools with academics in the educational institutes of the district, here are some of the suggestions:

1. Organize comprehensive training programs for teachers to be familiar with ICT tools so that they can integrate them effectively inside the classroom, this will also empower teachers to utilize technology to enhance the learning experience for students.

2. Since only 43.3% of schools are currently using smart boards in the classroom efforts should be made to increase access to this technology across all educational institutes, this could involve government initiatives, partnerships with NGOs or private organizations, or seeking funding for procurement.

3. Given that only 46.7% of schools have dedicated computer teachers, there is a need to recruit more qualified personnel to teach ICT subjects. This will enable schools to offer structured ICT education and support students in harnessing the potential of technology.

CONCLUSION

To conclude we can state that from the findings of this research paper that still in, many schools in Tinsukia District there is lack sufficiently trained teachers schools there is a requirement to employ more trained teachers so that they can empower the students with the knowledge of appropriate uses of ICT tools.

From the findings, it was found that both the teacher and the students find it tough to properly access ICT use in schools due to the lack of internet facilities in the schools. Many schools in Tinsukia District both Public and private schools have taken the initiative to integrate ICT tools in the school environment but still, in many areas, it needs more properly trained teachers to inculcate the ICT uses in the school properly.

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APPENDIX

ICT MATERIALS AVAILABLE IN TINSUKIA DISTRICT SCHOOLS:

Note: To keep the school name anonymous it has been denoted as S1, S2, and so on

Photo of school S1

Photo of school S2