USE OF ICT IN PRIMARY SCHOOLS: A STUDY

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Abstract

The paper entitled "Use of ICT in Primary Schools: A Study" is a study based on use of ICT tools in Primary Schools through which we can transform education at primary level. The main objective of the study was to assess how ICT is helping teachers in taking education to next level. The study was conducted on 120 teachers which were selected from 20 schools of district Kishtwar. The schools and the teachers were randomly selected (Lottery Method). Gender equality was maintained wherever possible. The data were collected by using a Non-Standardized questionnaire developed by the researcher. The data was analyzed by using percentage method. The major findings of the study were that about 80% (96 teachers) were of the view that ICT is taught as a separate subject in their respective schools whereas 20% (24 teachers) were of the view that ICT is not taught as a separate subject in their respective schools, 5.8% (07 teachers) were of the view that ICT is used in class teaching in front of the students in their respective schools whereas 94.2% (113 teachers) were of the view that it is not used in class teaching in front of the students in their respective schools.

Keywords: Education, Lecture method, curriculum, e-learning platforms, internet.

Introduction:

Fundamentally, it's a central tool that supports teaching and learning at all stages of education and across all areas of the curriculum. We live in a world

consumed by technology: a world that provides incredible opportunities for young students who are just setting out on their educational journey. And as such ICT isn't just an essential component to the overall operation of the school, it can also help to improve achievement levels, inspire creative thinking and encourage the development of skills that will prove invaluable in the real world.

Be it independently or as part of a group, ICT allows the students to explore, observe, engage, solve problems and make exciting discoveries for themselves. It stimulates collaboration and interaction amongst peers and also between students and teachers. ICT resources not only provide the tools for promoting and developing these skills but also encourages them to engage confidently in imaginative learning and makes teaching and learning more effective and fun for everyone involved.

Here are just a few other reasons why technology in primary schools is so important:

Information Technology (IT) has influenced all aspects of human life in many ways with the promise of new and improved ways of thinking, living and working. Education is not an exception.   Any person will become proficient in any field if the knowledge of that field is given from its childhood.   Thus there is need to implement Information and Communication Technology (ICT) technique in primary schools. Putting ICT into schools is to make tomorrow's work force competitive in an increasingly high-tech world. To achieve this, learning computer skills are claimed to be a priority. Instead of being 'transmitters of knowledge', teacher has to play a facilitating role in an environment where students using computers could become active learners .Technology comes in a range of forms in Primary Schools. It is used in education to improve or enhance the quality of a student's education and improved academic opportunity and success. Included in this range the tools which are used by the teachers to deliver courses, develop course materials and manage classroom administration. Add to that list the office tools used to handle finances, maintain communication, and keep records and process documents. Information and Communication Technology (ICT) is nothing but it includes computers, software, special hardware, Multimedia enabled devices and a wide range of communications facilities. ICTs   are   used   to   creating   new collaborating learning tools and having free and open access to worldwide

information. ICTs have the ability to effectively support student learning. ICTs use in primary schools can expose students to additional resources, such as online encyclopedias, dictionaries, government-sponsored educational sites, learning games and online tutoring. ICT make possible following differences,

• New physical arrangements• Effective interaction between the student and the teacher

• Efficiency of school will increase.

• Increasing achievement level of students.

• Students will able to learn individually.

• It will influence on student's language.

• Students take joyful education. Doing so will provide students with better education and understanding of how technology can benefit various aspects of their lives. It has potential to reiterate concepts learned in the classroom and allows students to think about these concepts in a different way. Use of ICT in primary schools is necessary to improve access to education, quality of education and reduce the cost of education.

Extends the learning experience – raises standards across the curriculum to improve the delivery of lesson content and allows students to engage in class in a variety of ways.

Extends learning – takes teaching and learning beyond the four walls of the classroom for an anytime, anywhere approach. Meaning students and teachers can continue to work and access resources even from home.

Enriches the curriculum – provides access to a whole host of information and encourages collaborative working and communication with others. The world is effectively brought into the classroom and pupils become more engaged in their learning.

Expands learning horizons – access to fast internet connections allows for learning materials to be viewed, downloaded and worked through quickly. As well as this, the use of tools such as Skype for Business can be a great way of broadening the learning horizon by collaborating with others anywhere in the world!

Helps with assessment – pupil data can be recorded and analyzed more efficiently for accurate assessment of pupils' learning abilities. It then allows teachers to see which areas of learning need a higher level of support.

ICT tools are the set of currently developed technologies that allow more efficient communication of information, which have modified the way of accessing knowledge and, in turn, human relations, today it is playing a key role in the development of new educational policies and projects. ICT has become an essential tool in offering students a comprehensive education at all times, enabling them to develop all their digital skills and abilities, thus enriching the teaching-learning process with dynamic and innovative methodologies.

During the pandemic, there were times when it was impossible for us to go to class to work normally, so teleworking and online classes were promoted. It was at that time that ICT tools took on a much more important role in education. Being able to continue working remotely has been essential to maintain the academic level of the students and, within all this chaos, to maintain a bit of normality. The instantaneousness of these tools has made it possible to continue working at the same pace, carrying out virtual classes, uploading deliveries to different educational platforms, and even taking exams from home with quizzes.

ICT helps pupils to develop new skills and become more creative. ICT stimulates the development of imagination as well as initiative. It is a valuable tool for producing work, both in terms of content and form. It improves pupils' academic performance as their classroom experience also improves substantially.

Motivation and attention levels are increased, contributing to greater effectiveness in the learning process.

Increases students' responsibility and sense of autonomy.

Students use the Tablet as a work tool at home, which gives rise to the incorporation of new learning methodologies, online education, inverted classroom, etc…

It increases interest. With resources as rich and different as videos, websites, graphics and games, traditional subjects become more interesting. Multimedia contents are a very useful tool to bring the different subjects closer to the students in a complete and entertaining way.

Collaborative work is clearly enhanced with the different digital tools. It is easier than ever to create team projects, cooperate and learn from each other.

Close dialogue between students and teachers is encouraged through different channels, in a more spontaneous and less formal way.

Key tips for the correct use of ICTs in class:

In order for ICTs to be of real educational use, they must be used properly and they must get the most out of them. To this end, it is essential that they are used as a means and not as an end. "First you have to think about 'what' you want to teach and 'how' you want to teach it, and then 'with which' medium: the digital whiteboard, the tablet or any other technological medium you consider appropriate,"

Likewise, students must understand that it is a learning tool, not a game, so we also work on responsibility and time management. Students must control the time they spend online, whether on the computer, tablet, mobile phone or any other similar device, mobile or any other similar device.

ICT resources that can be used in class:

In order to be able to implement ICT in the classroom, it is necessary to be trained and to know the tools that new technologies provide us with, as well as to define the needs of the students and the curricular objectives. Only in this way will it be possible to create a flexible learning environment and implement the strategies and tools necessary for them to develop all their capabilities. Some examples of ICT resources are the following:

Visual resources such as videos, images or PDF documents that can be used as a further aid for students to understand the syllabus even better, there are educational tools designed to facilitate the interaction and organization of the class group. Google Classroom, Microsoft Teams are some of the most important in the education sector. They allow for distance work, homework, assignments, deliveries, etc.

Platforms for making video calls and maintaining "presence" in class. In this way we can keep in touch with the students, maintain closer contact, etc.

ICT can be implemented in primary school by

1. Teachers
2. Students
3. Administrative Use

ICT for the teacher:

Teachers can use ICT for improving quality of teaching and learning process. It is well known fact that not a single teacher is capable of giving up to date and complete information in his own subject. The ICT can fill this gap by providing access to different sources of information. It will also provide correct information in different formats with different examples. By using ICT teachers can fulfill high but realistic expectations of students. They can take care to explain the importance of ICT in day to day life. Teachers can promote learning through ICT broadly by making use of it in a range of curriculum areas. Teachers can use a variety of teaching approaches to the whole class using a large electronic screen facility. They can design ICT based materials to meet the needs of individual student effectively which offer diagnostic, learning support, consolidation and extension tasks within curriculum areas and subjects or they can use commercial software for effective teaching. Also they can create presentation for effective teaching. Teachers can use word processing programs to generate crossword puzzles or word searches. They can use educational video games and computer software to teach important concepts. Also they can include specific vocational topics to increase the attendance of children. Teachers can set up tests and assignments online that can be automatically graded, which saves a lot of time doing correcting. After they can generate result by using ICT. Also they can set up websites and online portals for students to access assignments, especially V-VII standards students. Totally we can say that ICT provides variety in the presentation of contents which helps students in concentration, better understanding and long retention of information which is not possible otherwise. It will also encourage the teaching process and students towards positive attitude to learning.

ICT for the student:

ICT can be used to make maximum impact on students in learning the curriculum. ICT motivates to raise student attainment in coursework. Various skills are used in ICT to provide lifelong learning opportunities that can make powerful all learners to develop their own unique intellectual capacity and operate as effective members of a digital society. ICT related activities involved in primary schools will generate high levels of interest, motivation and enjoyment in student. Students will take personal responsibility for their own learning. ICT will increase students overall development instead of curriculum-centric. Students will co-operate

when working in pairs or groups on shared tasks. Students can be able to receive immediate feedback on their answers, observe multiple demonstrations of the same concept and increase interaction with that concept. Many of the concepts that students are learning, presented in the form of computer games, puzzles. But in reality they are learning important educational concepts which are helpful in the future. Due to this personalized learning environment will generate in primary schools. Primary school students who have computers in their classrooms are learning about various aspects of the technological world at an early age. This allows them to become comfortable with more advanced computer related concepts as they get older. Primary school students can create graphs using mathematical data. Using the Internet, primary school students can access photographs of great art, listen to important recordings. They will get connected to whole world by using Internet.

Lastly ICT will enhance the achievement of all students, increase families' involvement in their children's schooling. For students in an environment of good teaching practice, along with the technology, there is improved academic opportunity and success.

ICT for the administration:

Besides the teachers and students, the use of ICT is necessary for administrative use. Administrative staff uses office tools such as MS-Office, Tally etc. to handle financial work, maintain communication, and keep records and process documents. In Right to Education (Sarva Shiksha Abhiyan) teachers has to maintain all records of individual student (Portfolio) in particular format. This portfolio contains some of special work done by student in each subject. It also contains students' cumulative record, formative evaluation and summative evaluation from first standard to eight standard. By using ICT, Administrative staff can maintain pay sheet, balance sheet, audit reports, non-salary grants and other financial work. Also they can maintain student presently report, student evaluation report and overall students record. In summarization, when ICT is used for administration purpose, it can reduce office cost, time and man power and increase efficiency, correctness and re-usability.

Objective of the study:

To study the influence and impact of ICT in primary schools of district Kishtwar with respect to some selected domains.

Sample:

The sample for the present study consisted of 120 teachers selected randomly (Lottery Method) from 20 schools of district Kishtwar. Gender equality was maintained wherever possible.

Tool:

For the present study a non-standardized close ended questionnaire developed by the researcher was used for collection of data.

Statistical Technique:

For the present study percentage method was used for analyzing the data.

Findings:

The major findings of the research are listed below in tabular form followed by interpretation of each statement respectively.

Domain 1	How is ICT taught to classes in your school:	Yes	No
1.	Is ICT taught as a separate subject?	80%	20%
2.	Is ICT taught as integrated subject?	55.83%	44.17%
3.	Is ICT taught as integrated subject because of curriculum requirements?	57.5%	42.5%
4.	Is ICT integrated in several subjects?	91.7%	8.3%
Domain 2	**Experience with ICT for teaching:**	**Yes**	**No**
5.	Is ICT used for preparing lessons?	6.7%	93.3%
6.	Is ICT used in Class teaching in front of the students?	5.8%	94.2%
7.	Are students equipped with computers?	83.34%	16.66%
8.	Are students equipped with Internet?	16.66%	83.34%
Domain 3	**ICT access for teaching:**	**Yes**	**No**
9.	Is there computer laboratory in your school?	83.34%	16.66%
10.	Do only the teachers uses the computer	15%	85%

	and Internet?		
11.	Do, both teacher and students, use computer and Internet?	85%	15%
Domain 4	**Support to teachers for ICT use:**	Yes	No
12.	Is participation in ICT training compulsory for teachers in your school?	12.5%	87.5%
13.	Are there introductory courses on internet use and general applications in your school?	15.83%	84.17%
14.	Are equipment-specific training (interactive, white-board, laptop, tablet, etc.) in your school?	15.83%	84.17%
15.	Do you participate in online communities (e.g., mailing lists, groups, and blogs) for professional discussions with other teachers?	12.5%	87.5%
Domain 5	**ICT based activities and material used for teaching:**	Yes	No
16.	Do you often browse and search the internet to collect information to prepare lessons?	17.5%	82.5%
17.	Do you often create your own digital learning materials for students?	20.83%	79.17%
18.	Do you post homework for students on the school website?	0%	100%
19.	Do you often use ICT to provide feedback and assess students' learning?	19.16%	80.84%
20.	Do you communicate online with parents?	85.83%	14.17%
Domain 6	**ICT in school management:**	Yes	No
21.	Does your school provide an email	85%	15%

	address?		
22.	Does your school provide an email address to students?	11.66%	88.34%
23.	Does your school provide an email address to other staff members?	54.16%	45.84%
24.	Do you use any Electronic Register System in your school?	10%	90%
25.	Do you use any Learning Management System (LMS) in your school?	5.83%	94.17%

Interpretations:

Domain 1:

a) How is ICT taught to classes in your school:

1. Is ICT taught as a separate subject?

   Yes ☐   No   ☐

   Out of total teachers, 80% (96 teachers) were of the view that ICT is taught as a separate subject in their respective schools whereas 20% (24 teachers) were of the view that ICT is not taught as a separate subject in their respective schools.

2. Is ICT taught as integrated subject?

   Yes ☐   No   ☐

   Out of total teachers, 55.83% (67 teachers) were of the view that ICT is taught as an integrated subject in their respective schools whereas 44.17% (53 teachers) were of the view that it is not taught as an integrated subject in their respective schools.

3. Is ICT taught as integrated subject because of curriculum requirements?

   Yes ☐   No   ☐

   Out of total teachers, 57.5% (69 teachers) were of the view that ICT is taught as integrated subject because of curriculum requirements in their respective schools whereas 42.5% (51 teachers) were of the view that it is not taught in their respective schools.

4. Is ICT integrated in several subjects?

   Yes ☐   No   ☐

   Out of total teachers, 91.7% (110 teachers) were of the view that ICT is integrated in several subjects in their respective schools whereas 8.3% (10 teachers) were of the view that it is not integrated in several subjects in their respective schools.

Domain 2

b) Experience with ICT for teaching:

5. Is ICT used for preparing lessons?
   Yes☐   ☐   No

   Out of total teachers, 6.7% (08 teachers) were of the view that ICT is used for preparing lessons in their respective schools whereas 93.3% (112 teachers) were of the view that it is not used for preparing lessons in their respective schools.

6. Is ICT used in Class teaching in front of the students?
   Yes☐   No   ☐

   Out of total teachers, 5.8% (07 teachers) were of the view that ICT is used in class teaching in front of the students in their respective schools whereas 94.2% (113 teachers) were of the view that it is not used in class teaching in front of the students in their respective schools.

7. Are students equipped with computers?
   Yes☐   ☐   No

   Out of total teachers, 83.34% (100 teachers) were of the view that students are equipped with computers in their respective schools whereas 16.66% (20 teachers) were of the view that students are not equipped with computers in their respective schools.

8. Are students equipped with Internet?
   Yes☐   ☐   No

   Out of total teachers, 16.66% (20 teachers) were of the view that students are equipped with internet in their respective schools whereas 83.34% (100 teachers) were of the view that students are not equipped with internet in their respective schools.

Domain 3
c) ICT access for teaching:

9. Is there computer laboratory in your school?
   Yes   ☐   No☐

   Out of total teachers, 83.34% (100 teachers) were of the view that there are computer laboratory in their respective schools, whereas 16.66% (20 teachers) were of the view that students are not equipped with internet in their respective schools.
10. Do only the teachers uses the computer and Internet?

Yes   ☐   No ☐

Out of total teachers, 15% (18 teachers) were of the view that yes, only the teachers uses the computer and Internet in their respective schools, whereas 85% (102 teachers) were of the view that not only teachers uses the computer and internet in their respective schools.

11. Do, both teacher and students, use computer and Internet?

Yes   ☐   No ☐

Out of total teachers, 85% (102 teachers) were of the view that yes, teacher and students, use computer and Internet in their respective schools, whereas 15% (18 teachers) were of the view that teacher and students do not use computer and Internet in their respective schools.

Domain 4
d)   Support to teachers for ICT use:

12. Is participation in ICT training compulsory for teachers in your school?

Yes   ☐   No ☐

Out of total teachers, 12.5% (15 teachers) were of the view that yes, there is participation in ICT training compulsory for teachers in their respective schools, whereas 87.5% (105 teachers) were of the view that no there is not any participation in ICT training compulsory for teachers in their respective schools.

13. Are there introductory courses on internet use and general applications in your school?

Yes   ☐   No   ☐

Out of total teachers, 15.83% (19 teachers) were of the view that there are introductory courses on internet use and general applications in their respective schools, whereas 84.17% (101 teachers) were of the view that there are not introductory courses on internet use and general applications in their respective schools.

14. Are equipment-specific training (interactive, white-board, laptop, tablet, etc.) in your school?

Yes   ☐   No   ☐

Out of total teachers, 15.83% (19 teachers) were of the view that there are equipment-specific training (interactive, white-board, laptop, tablet, etc.) in their respective schools, whereas 84.17% (101 teachers) were of the view that there are not equipment-specific training (interactive, white-board, laptop, tablet, etc.) in their respective schools.

15. Do you participate in online communities (e.g., mailing lists, groups, and blogs) for professional discussions with other teachers?

Yes ☐   No ☐

Out of total teachers, 12.5% (15 teachers) were of the view that yes, there is participation in online communities (e.g., mailing lists, groups, and blogs) for professional discussions with other teachers in their respective schools, whereas 87.5% (105 teachers) were of the view that there is not any participation in online communities (e.g., mailing lists, groups, and blogs) for professional discussions with other teachers in their respective schools.

Domain 5
e) ICT based activities and material used for teaching:

16. Do you often browse and search the internet to collect information to prepare lessons?

Yes ☐   N ☐

Out of total teachers, 17.5% (21 teachers) were of the view that they often browse and search the internet to collect information to prepare lessons in their respective schools, whereas 82.5% (99 teachers) were of the view that they did not browse and search the internet to collect information to prepare lessons in their respective schools.

17. Do you often create your own digital learning materials for students?

Yes ☐   N ☐

Out of total teachers, 20.83% (25 teachers) were of the view that they often create their own digital learning materials for students in their respective schools, whereas 79.17% (95 teachers) were of the view that they did not create their own digital learning materials for students in their respective schools.

18. Do you post homework for students on the school website?

Yes ☐   No ☐

Out of total teachers, 0% (00 teacher) were of the view that they post homework for students on the school website in their respective schools, whereas 100% (120 teachers) were of the view that they did not post homework for students on the school website in their respective schools.

19. Do you often use ICT to provide feedback and assess students' learning?

Yes ☐   No ☐

Out of total teachers, 19.16% (23 teachers) was of the view that they often use ICT to provide feedback and assess students' learning in their respective schools, whereas 80.84% (97 teachers) were of the view that they did not often use ICT to provide feedback and assess students' learning in their respective schools.

20. Do you communicate online with parents?

Yes ☐   No   ☐

Out of total teachers, 85.83% (103 teachers) was of the view that they communicate online with parents in their respective schools, whereas 14.17% (27 teachers) were of the view that they did not communicate online with parents in their respective schools.

Domain 6

f) ICT in school management:

21. Does your school provide an email address?

Yes ☐   No   ☐

Out of total teachers, 85% (102 teachers) were of the view that school provide an email address, whereas 15% (18 teachers) were of the view that school did not provide an email address.

Yes ☐   No   ☐
22. Does your school provide an email address to students?

Yes ☐   No   ☐

Out of total teachers, 11.66% (14 teachers) were of the view that school provides an email address to the students, whereas 88.34% (106 teachers) were of the view that school did not provide an email address to the students.

23. Does your school provide an email address to other staff members?

Yes ☐   No   ☐

Out of total teachers, 54.16% (65 teachers) were of the view that school provide an email address to the staff members, whereas 45.84% (55 teachers) were of the view that school did not provide an email address to the other staff members.

24. Do you use any Electronic Register System in your school?

Yes ☐   No   ☐

Out of total teachers, 10% (12 teachers) were of the view that they use Electronic Register System in their school, whereas 90% (108 teachers) were of the view that school did not use any Electronic Register System.

25. Do you use any Learning Management System (LMS) in your school?

Yes ☐   No   ☐

Out of total teachers, 5.83% (07 teachers) were of the view that they use any Learning Management System (LMS) in your school, whereas 94.17% (113 teachers) were of the view that school did not use any Learning Management System (LMS).

Conclusion:

Today's information era is expandable, so in school curriculum lots of information have to be enriched in huge way. Due to that, the basic concept as well as new ideas, innovations, thoughts and research related information; curriculum scope is going on in broad manner. Among this we have to search which information is basic knowledge based and short knowledge based. We have to teach the student how to acquire knowledge self. Making compulsion to the student to acquire all information, instead student has to get all knowledge, skills through self. ICT based education will play vital role for self-learning in primary schools. If ICT is used effectively by the teacher, quality of teaching process will increase significantly. It will also fulfill realistic expectations of students. Overall if ICT is used in primary school, it will beneficial for teachers, students and administration. It will reduce time, cost and work.

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