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## Evaluation of ICT Use in Teaching Learning Process at Secondary Level

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**Abstract:** Students now have quick information availability, study materials, as well an enjoyable chance to put whatever they've learned. It allows pupils to learn about new disciplines and increase their understanding of important issues. The study's main goals focus on secondary schools' ICT use in the teaching and learning process and the factors that affect it. The current study used quantitative analysis of data and is a descriptive survey type of study. All of the secondary school teachers in Rawalpindi city made up the study's population. Rawalpindi city serves as the study's target population. 200 secondary school teachers were chosen as the sample from the target population. The questionnaire was used to collect the data from the respondents. It was concluded that ICT affects the learning of the students in their classroom. According to the study's findings, teaching staff are passionate about by means of ICT technologies in the teaching and learning process.

**Key Words:** Innovative Technology, Pedagogical Techniques, Technological Education

### Introduction

ICT is very vital for the maintenance of teacher education in the 21st century. It cannot take place in a classroom without the ICT teacher's enough knowledge and cannot be called to be comprehensive. There is no doubt that there are a number of impediments to the usage and addition of ICT in educational institutions. Much affects the usage of ICTs within institutions to grow the teaching process successfully. For the improvement of the teaching-learning environment in governmental institutions throughout the past few decades, provincial governments have invested in ICT. Students and the teacher community are both interested in this whole process. In the current modern age, technology can effectively develop both the education and learning environment in the class. Modern

society is inescapably dependent on innovative technology. The problem of the explosion of knowledge in our modern age is one that must be met by the masses and culture. The development of information technology has sparked a quick revolution in technology, society, the economy and politics.

A variety of factors affect how well ICT is used in educational settings to enhance teaching and learning. Technology for acquiring, integrating, storing, and processing communication information is known as information communication technology. This research examines the capacity, ability, adequacy and use of ICT resources in private Punjab schools and, ultimately, their collision with student learning. The use of ICT has revolutionised all areas, including quick access to information, enlistment of internet students, and the reduction of maintaining

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hardcopies on a constant basis is reduced, as is interaction with resourceful people and e-learning. The internet, computers, radio, television, mobile phone, etc. are essential ICT sources and tools.

Students who have access to ICT are better prepared to live in a fast-changing world and to work in new, technologically sophisticated vocations. Technology skills have become as essential to living a complete life as reading, writing, and computing. Aside from being a driver of long-term economic progress, technological skills are at the heart of a more unified, egalitarian, and successful society. ICT investment in elementary education will yield considerable personal, economic, and social benefits. ICT has become an important part of education, company and organisation since its sector is not employed in ICT (information communication technology). It took a few seconds to do the work, which was weary days and hours. This research examines the capacity, ability, adequacy and use of ICT resources in private Punjab schools and, ultimately, their impact on student learning. The internet, computers, radio, television, mobile phone, etc. are essential ICT sources and tools. In current culture, the use of data communication technology is becoming difficult and complex. Digital technologies of exceptionally high quality are required for each individual citizen to progress through the community with other groups and people. ICT has become an important part of education, company and organisation since its sector is not employed in ICT (information communication technology). It took a few seconds to do the work, which was weary days and hours.

Teachers at all levels of education have largely exploited the usage of ICT to provide knowledge and information to pupils. Teachers encourage pupils to use the internet to better comprehend various ideas. The usage of technology is satisfied, and tasks, reports, projects and other papers are prepared. By bringing elements of life to the classroom environment, ICT has an impact on instruction and teaching methods. ICT is considered a potentially strong instructional tool. Consequently, it can be argued that ICT has made an essential contribution to the

enhancement of the overall learning environment.

### **Objectives of the Study**

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Identify the factors used by ICT in the teaching-learning process at the secondary level.

### **Literature Review**

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Over the last few decades, provincial governments have invested in ICT to develop and promote the learning environment of government institutions. This technique is also important to both educators and learners. ICT may significantly enhance the educational atmosphere in schools in this digital age. The technology of information communication is an integral and unavoidable part of today's era. The issues of the data revolution in our digital age remain, in reality, the responsibility of the population and civilisation. Modern technology provides a supportive environment for teacher instructors and helps students acquire concepts and curriculum understanding. ICT has given a chance to employ the kind of material that expands the gaps in the digital barrier between haves and have-nots. The process of obtaining information and using it to create, process, and store it while utilising hardware, software, the internet, and a worldwide mobile communication network (GSM). It is now more suitable to refer to ICT as opposed to just information technology since the communication component of ICT is now more important than ever before. (Quarshie, 2015) ICT evaluation is now possible because of development, which is having an ever-growing impact on all facets of human endeavour (Abifarina, 2003). The kids will learn these lessons in an engaging atmosphere because the teacher employing ICT in the classroom will be able to offer a well-planned collection of lessons. According to Ojo (2005), the idea that a computer would replace a teacher and make them obsolete is unfounded; all the computer does is support and improve the instructor's lectures.

Technology is changing how we all spend our lives. In the last year, information and communication technology has brought dramatic change to practically every part of

our lives, and nowhere is this transformation more visible than in our classrooms. ICT in education has the potential to improve, enrich, and expand children's learning in elementary schools. When used correctly, it has the potential to significantly revolutionise teaching and learning, transforming the traditional classroom into one in which students learn cooperatively and generate knowledge for themselves. ICT has made learning possible in ways that were not before conceivable. ICT may support students in becoming autonomous learners capable of creating collaborative projects, inquiry, and critical thinking and problem-solving skills. It enables information searches, computer modelling, group collaboration, idea generation, and revision. Computers may be used by teachers to enhance learning opportunities and give pupils access to a range of educational resources, professional advice, and opposing ideas (Quarshie, 2015). According to Idahosa and Ero (2005), the knowledge, skills, understanding, goals, and motivation of learners impact the construction of digital education sessions. Because they are employed to create sustainable development, ICT plays a crucial role in socio-economic development (Quarshie, 2015). In other words, ICT promotes the following, sustaining development.

In the conventional mode of instruction, the instructor is the primary source of information delivery, using specified materials and, on chance, documentation. The lecture-based lecturing style is commonly used. The instructor delivers a speech to a huge class. The education system is teaching assistants, which means that instructors are engaged, and pupils are inactive. Students know and only respond when the professor poses a question. Instructors are now under the conditions to deliver presentations and study guides in order to improve the effectiveness of their instruction. Instructors regulate the classroom atmosphere, which is regimented, and their demeanour is powerful. The attitude and conduct of instructors have a significant impact on learning. Kids will have an interest in their studies and do well if their instructor is motivated and skilled.

ICT presence in education allows students and teachers to develop unique new ways of learning. Students with special needs are no longer disadvantaged because they can develop ICTs for their own learning needs using vital materials and specific ICT tools. ICT increases the higher-order thinking skills of kids. One of the key competencies of the 21st century comprises evaluation, planning, surveillance and others. Students need a variety of ways to discuss, test and accept. The use of up-to-date technology such as computers, peripherals, networking and other technological devices has become a necessity for school pupils and teachers in previous decades. The student may understand education easily with the induction of ICT, which not only increases his knowledge but also saves the basic measure for the completion of the assignment.

Classroom learning is as old as humanity. It is a method through which each civilisation prepares its youth to involve the combination in its chosen setting. This technique is typically carried out in learning organisations in order to fast acclimate millennials to the worldview. The purpose is to empower them to make a living while also making an effort. In primitive communities, this implied adherence to the existing quo. However, as time passes, tendencies alter; and efforts are made to enhance living circumstances.

Students who have access to ICT are better prepared to live in a fast-changing world and to work in new, technologically sophisticated vocations. Technology skills have become as essential to living a complete life as reading, writing, and computing. Aside from being a driver of long-term economic progress, technological skills are at the heart of a more unified, egalitarian, and successful society. ICT investment in elementary education will yield considerable personal, economic, and social benefits. The overall aim must be to make ICT an important component of the teaching and learning process in every school, classroom, and area of the curriculum. If adequately supported at the system level, ICT has the potential to provide unprecedented opportunities to improve education and training quality, access, and equity. Integrating technology into teaching and learning serves as a

motivator and has the potential to meet individual learning requirements across a wide variety of skill levels.

According to various studies, using modern technology in education is crucial for providing pupils with the chance to educate and how to work in an electronic age. As previously said, conventional educational environments do not appear to be adequate for teaching learners to operate or be effective in today's businesses. Grimus supports this idea, stating that "by teaching ICT skills at higher educational institutions, students are equipped to confront future advances based on good comprehension." According to the reference, "what is currently understood about learning gives crucial principles for applications of technology that might assist students and instructors achieve the competences needed for the twenty-first century." Initially, information and communication technology (ICT) was used to improve efficiency in the educational process.

The advancement of Information and Communication Technologies (ICTs) has been demonstrated to be of enormous relevance to all mankind, and as such, its advancement has become a global priority. These technologies have become essential in modern societies. Sending an email, watching the news on television, talking on the phone, booking an airline ticket online, reading an e-book, and a variety of other activities all include the use of ICT. ICT is a catch-all word encompassing software, processors, internet, space linkages, and related methods that let users to make, read, evaluate, share, and then use content, ideas, and learning in many manners.

In a deeper context, learning can take place when experiencing induces a somewhat alteration in a diverse range of skills or behaviour. Change can be purposeful or inadvertent, for greater or much worse, accurate or erroneous, knowing or unaware. Change in behaviour is merely the result of experiences and a user's connection with his or her surroundings. Changes brought on by maturity, like getting taller or greying, do not constitute education. Temporary alterations caused by sickness, exhaustion, or starvation

are eliminated from a broad approach to learning. A man who goes two days without sleep doesn't at all eventually feel ravenous, and a guy who is unwell doesn't really develop to run slower. In addition, learning influences how one reacts to famine or disease.

Teachers at all levels of education have largely exploited the usage of ICT to provide knowledge and information to pupils. Teachers encourage pupils to use the internet to better comprehend various ideas. The usage of technology is satisfied, and tasks, reports, projects and other papers are prepared. By bringing elements of life to the classroom environment, ICT affects the teaching and learning processes. ICT is considered a potentially strong instructional tool. Consequently, it can be argued that ICT has made an essential contribution to the enhancement of the overall learning environment.

Ultimately, more focus should be given to the key responsibilities of ICT in offering content creation computer models of excellent classroom practice, supplying individualised education courses, helping educators in resolving disconnection, integrating schools and teachers to a wider educational community on a regular basis, and boosting instructor teamwork. The anticipated and unanticipated impacts of using ICT for teacher training must be examined. Educators are at the heart of any successful society.

Technologies play a vital part in teacher education programmes. Radio, electronic content, broadcast channels, website, and social networking sites such as Instagram, Viber, Quora, Atomizer, Phone, Weibo, and others, provide knowledge to learners and material. ICT is crucial in the 21st era for preserving education systems. An educator cannot perform in his or her classrooms and may not be regarded as effective unless he or she has appropriate ICT skills.

### **Research Methodology**

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The current study used a descriptive survey method and quantitative study. All of the secondary school teachers in Rawalpindi city made up the study's population. Rawalpindi

city serves as the study's target population. The study's sample was drawn from the planned audience. 200 secondary school teachers were chosen as the sample from the target population. The questionnaire asked respondents' perspectives on the variables impacting the usage of information and communication technology to improve the teaching and learning process in secondary schools in Rawalpindi city. The researchers

personally went to the sites and gave the respondents instructions on how to complete the questionnaire.

### Analysis and Interpretation of Data

The following table represents innovative technology used in the teaching and learning process in secondary schools, as well as the factors that affect its use:

**Table 1.** Opinion of Teachers about the Factors Use of ICT for Successful Teaching-Learning Process in Secondary Schools

| S. No | Statement                                                                                                              | SA        | A          | U         | D         | SD       |
|-------|------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------|-----------|----------|
| 1     | Computer self-efficacy among teachers has a stronger effect on student learning and the learning process.              | 44<br>22% | 120<br>60% | -<br>-    | 30<br>15% | 6<br>3%  |
| 2     | Educators with recourse to ICT facilities are more likely to incorporate computers into the lesson.                    | 62<br>31% | 100<br>50% | 10<br>5%  | 12<br>6%  | 16<br>8% |
| 3     | ICT tools will likely be used more successfully by teachers who have got new training.                                 | 70<br>35% | 74<br>37%  | 10<br>5%  | 30<br>15% | 16<br>8% |
| 4     | Teachers' femininity differences influence the use of ICT in education.                                                | 64<br>32% | 34<br>17%  | 42<br>21% | 46<br>23% | 14<br>7% |
| 5     | To improve the teaching-learning process, the school system should change modern ICT tools for outdated teaching aids. | 64<br>32% | 106<br>53% | 4<br>2%   | 16<br>8%  | 14<br>7% |

According to the previous section chart, most instructors (82 per cent) believe teachers with more knowledge use ICT effectively in lesson planning. 81 per cent of teachers believe that instructors have access to ICT and that technology is integrated into the teaching-learning process. 72 per cent of secondary teachers feel that teachers' self-efficacy has a significant effect on the educational procedure. The majority of teachers (82%) feel that the administration has a solid rule to enhance the current state of ICT in high education. The claim that the higher education system assists educators in ICT literacy was dismissed by 95% of faculty members at the secondary level.

### Conclusions and Discussion

The current results of this analysis reveal that teaching staff are passionate about the employment of data and knowledge ICT in the classroom. However, secondary teachers experienced several roadblocks and challenges in implementing technology in the

classroom. It necessitated a significant quantity of income in the type of government investment. According to the survey, teachers in graduate school are more involved in the utilisation of computers and also can improve the use of ICT. It is also determined that gender gaps in instructors have a significant impact on the usage of ICT in the process of teaching and learning. According to the study's conclusions, the administration should replace traditional teaching aids with fresh technologies for improved student learning, and these assistive devices would play a useful role in secondary school teachers' teaching. It's also said that the government's department of education can improve teachers' use of ICT and assist faculty members by holding an ICT training session. According to [Shaikh and Khoja \(2011\)](#), Pakistan should strengthen its educational sector by adopting effective and powerful policies in the country for the better progress and development of Pakistan's younger decades in this technological era. In society, teaching has a prestigious place. Instructors

can stay up-to-date on fresh knowledge and ways of using material removal electronic resources and tools because of ICT. Student teachers will become successful instructors by using and learning about ICT. ICT is one of the key elements for our society to develop so quickly. It may alter the nature of education and the roles that students and teachers play in the transmission of knowledge. Technology is now being used in the classroom by Indian teachers. For teacher education institutes, common media includes laptops, LCD projectors, desktop computers, EDUCOM, learning cards and interactive classes. We can incorporate modern innovative, and useful technology in teaching in the 20th century since academics are now the primary persons who can give students a successful future. The effectiveness of teaching will improve with the use of such technologies in training programs for teachers.

Instructional methods include students and their unique characteristics, the educational technique, the topic to be learned, classroom conditions, instructional gadgets and tools, reasoning, innovation, activities, homework, conversations, technical knowledge, and others.

## **Recommendations**

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1. ICTS (technology facility and network) should be offered in institutions for successful processes of education and learning since it is the first step in giving the young the necessary instruments.
2. There should be skills and knowledge for general growth.
3. An assessment of the school computers to identify which ones need to be maintained and which ones should be updated
4. Further ICT training should be given to teachers so they may get familiar with current technology for teaching knowledge and skills and maybe be a part of the curriculum for their technical education.
5. The findings of the study have once more confirmed the significance of these elements for faculty members. Higher education institutions must increasingly pay attention to the demands of the faculty regarding the usage of technological tools in the classroom.
6. In order to create a climate that is "ICT friendly" for faculty members, the administration needs to consider the implications of this conclusion seriously.



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